

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		118.450	1200	442100.572	295733.584	1.725
S101	0.113	5.00		117.535	1200	442163.672	295743.132	1.725
S102	0.000			116.830	1200	442201.112	295753.750	1.725
S103	0.123	5.00		116.250	1200	442216.851	295763.486	1.725
S104	0.101	5.00		114.095	1200	442267.351	295803.800	2.025
S105	0.057	5.00	8.8	112.365	1350	442302.339	295842.624	2.250
S106	0.084	5.00		111.760	1350	442316.483	295853.072	2.250
S107	0.127	5.00		110.165	1350	442358.252	295876.365	2.250
S108	0.220	5.00		109.635	1200	442315.056	295987.432	2.085
S109	0.055	5.00		112.090	1200	442288.912	295905.629	1.520
S110	0.215	5.00		109.760	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		108.305	1800	442429.251	295933.043	1.725
S113	0.142	5.00		108.995	1800	442386.023	295898.534	2.495
HW8	0.000			108.600	1800	442406.248	295874.264	2.160
S114	0.139	5.00		116.790	1200	442198.851	295728.118	2.300
S115	0.081	5.00		116.610	1200	442207.408	295711.303	2.311
S116	0.108	5.00		116.215	1350	442230.110	295680.735	2.450
S117	0.141	5.00		114.105	1200	442300.491	295692.636	2.225
S118	0.126	5.00		113.160	1350	442323.796	295709.943	2.250
S119	0.187	5.00		113.280	1350	442304.473	295735.962	3.180
S120	0.077	5.00		111.130	1350	442350.216	295769.934	2.530
S121	0.000			110.840	1350	442367.112	295747.184	2.540
S122	0.060	5.00		110.705	1350	442379.126	295741.418	2.585
S123	0.046	5.00		110.515	1500	442391.724	295743.836	2.717
S124	0.155	5.00		117.745	1200	442197.318	295615.167	2.300
S125	0.182	5.00		115.885	1200	442249.838	295654.171	2.300
S126	0.149	5.00		114.960	1200	442280.267	295613.198	2.625
S127	0.025	5.00		114.585	1350	442290.213	295612.682	2.450
S128	0.124	5.00		113.230	1350	442323.039	295635.466	2.450
S129	0.085	5.00		111.335	1350	442374.262	295673.507	2.450
S130	0.073	5.00		110.810	1350	442393.591	295683.704	2.450
S131	0.039	5.00		109.870	1500	442431.189	295711.626	2.620
S132	0.096	5.00		109.780	1500	442432.541	295720.783	2.580
S133	0.101	5.00		110.145	1500	442406.997	295755.179	3.175
S134	0.000			109.380	1500	442440.644	295780.168	2.680
S135	0.109	5.00		109.255	1500	442443.761	295786.320	2.605
S136	0.000			109.140	1800	442442.862	295792.697	2.540
S137	0.079	5.00		109.085	1800	442421.804	295821.052	2.569
S138	0.186	5.00		112.505	1200	442304.876	295807.843	2.225
S139	0.097	5.00		111.815	1200	442325.160	295803.014	2.300

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		111.470	1200	442334.429	295794.545	2.196
S141	0.034	5.00		111.255	1350	442344.369	295781.162	2.450
S142	0.097	5.00		110.325	1350	442379.915	295807.561	2.403
S143	0.105	5.00		109.400	1800	442415.441	295833.944	2.934
HW9	0.000	5.00		108.600	1800	442425.963	295842.052	2.160
HW10	0.000	5.00		108.600	1800	442432.693	295888.649	2.230
S144	0.000			108.600	2700	442435.778	295898.908	2.280
HW11	0.000			108.600	1200	442441.183	295901.293	2.330

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
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	115.180	0.630	61.8	225	6.07	50.0
10.002	S102	S103	18.507	0.600	115.105	114.525	0.580	31.9	300	6.18	50.0
10.003	S103	S104	64.618	0.600	114.525	112.070	2.455	26.3	300	6.53	50.0
10.004	S104	S105	52.263	0.600	112.070	110.265	1.805	29.0	300	6.83	50.0
10.005	S105	S106	17.584	0.600	110.115	109.510	0.605	29.1	450	6.90	50.0
10.006	S106	S107	47.825	0.600	109.510	107.915	1.595	30.0	450	7.12	50.0
10.007	S107	S113	35.534	0.600	107.915	106.800	1.115	31.9	450	7.28	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	110.570	108.260	2.310	20.3	300	5.22	50.0
12.001	S110	S111	24.680	0.600	108.260	107.315	0.945	26.1	300	5.36	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	31.592	0.600	106.500	106.440	0.060	526.5	750	7.72	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	92.628	0.600	113.765	110.100	3.665	25.3	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	1.500	1.500	0.075	0.0
10.001	1.667	66.3	25.5	1.500	1.425	0.188	0.0
10.002	2.793	197.4	25.5	1.425	1.425	0.188	0.0
10.003	3.076	217.4	42.1	1.425	1.725	0.311	0.0
10.004	2.932	207.3	55.8	1.725	1.800	0.412	0.0
10.005	3.782	601.4	72.4	1.800	1.800	0.469	8.8
10.006	3.723	592.1	83.7	1.800	1.800	0.553	8.8
10.007	3.611	574.3	101.0	1.800	1.745	0.680	8.8
11.000	1.112	78.6	29.8	1.785	1.425	0.220	0.0
12.000	3.509	248.0	7.5	1.220	1.200	0.055	0.0
12.001	3.088	218.3	36.6	1.200	1.420	0.270	0.0
11.001	1.507	239.7	90.3	1.420	1.745	0.666	0.0
13.000	1.056	466.7	32.0	0.975	1.745	0.236	0.0
10.008	1.212	535.6	242.4	1.745	1.410	1.724	8.8
14.000	1.582	111.8	18.8	2.000	2.011	0.139	0.0
14.001	1.579	111.6	29.8	2.011	2.000	0.220	0.0
14.002	4.056	645.1	44.5	2.000	2.730	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	28.338	0.600	108.600	108.300	0.300	94.5	450	6.49	50.0
14.005	S121	S122	13.326	0.600	108.300	108.120	0.180	74.0	450	6.59	50.0
14.006	S122	S123	12.828	0.600	108.120	107.948	0.172	74.6	450	6.68	50.0
14.007	S123	S133	19.024	0.600	107.798	107.120	0.678	28.1	600	6.75	50.0
16.000	S124	S125	65.419	0.600	115.445	113.585	1.860	35.2	300	5.41	50.0
16.001	S125	S126	51.036	0.600	113.585	112.335	1.250	40.8	300	5.75	50.0
16.002	S126	S127	9.959	0.600	112.335	112.285	0.050	199.2	300	5.90	50.0
16.003	S127	S128	39.958	0.600	112.135	110.780	1.355	29.5	450	6.08	50.0
16.004	S128	S129	63.804	0.600	110.780	108.885	1.895	33.7	450	6.38	50.0
16.005	S129	S130	21.854	0.600	108.885	108.360	0.525	41.6	450	6.50	50.0
16.006	S130	S131	46.832	0.600	108.360	107.400	0.960	48.8	450	6.77	50.0
16.007	S131	S132	9.256	0.600	107.250	107.200	0.050	185.1	600	6.85	50.0
16.008	S132	S133	42.844	0.600	107.200	107.120	0.080	535.5	600	7.54	50.0
14.008	S133	S134	41.911	0.600	106.970	106.700	0.270	155.2	750	7.85	50.0
14.009	S134	S135	6.897	0.600	106.700	106.650	0.050	137.9	750	7.90	50.0
14.010	S135	S136	6.440	0.600	106.650	106.600	0.050	128.8	750	7.94	50.0
14.011	S136	S137	35.319	0.600	106.600	106.516	0.084	420.5	750	8.37	50.0
14.012	S137	S143	14.377	0.600	106.516	106.466	0.050	287.5	750	8.52	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	16.671	0.600	109.274	108.955	0.319	52.3	300	5.37	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)
15.000	2.102	83.6	19.1	2.000	1.800	0.141	0.0
15.001	3.221	512.3	36.2	1.800	2.730	0.267	0.0
14.003	3.306	525.8	106.0	2.730	2.080	0.782	0.0
14.004	2.092	332.7	116.4	2.080	2.090	0.859	0.0
14.005	2.365	376.1	116.4	2.090	2.135	0.859	0.0
14.006	2.356	374.7	124.5	2.135	2.117	0.919	0.0
14.007	4.608	1302.9	130.8	2.117	2.425	0.965	0.0
16.000	2.659	188.0	21.0	2.000	2.000	0.155	0.0
16.001	2.467	174.4	45.7	2.000	2.325	0.337	0.0
16.002	1.110	78.5	65.9	2.325	2.000	0.486	0.0
16.003	3.754	597.1	69.3	2.000	2.000	0.511	0.0
16.004	3.513	558.6	86.1	2.000	2.000	0.635	0.0
16.005	3.158	502.2	97.6	2.000	2.000	0.720	0.0
16.006	2.916	463.8	107.5	2.000	2.020	0.793	0.0
16.007	1.786	505.0	112.8	2.020	1.980	0.832	0.0
16.008	1.045	295.5	125.8	1.980	2.425	0.928	0.0
14.008	2.243	991.1	270.2	2.425	1.930	1.994	0.0
14.009	2.381	1051.7	270.2	1.930	1.855	1.994	0.0
14.010	2.464	1088.6	285.0	1.855	1.790	2.103	0.0
14.011	1.358	600.0	285.0	1.790	1.819	2.103	0.0
14.012	1.645	726.7	295.7	1.819	2.184	2.182	0.0
17.000	2.388	95.0	25.2	2.000	2.000	0.186	0.0
17.001	2.183	154.3	38.4	2.000	1.896	0.283	0.0
17.002	2.179	154.1	50.3	1.896	2.000	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	44.277	0.600	108.805	107.922	0.883	50.1	450	5.63	50.0
17.004	S142	S143	44.251	0.600	107.922	106.816	1.106	40.0	450	5.85	50.0
14.013	S143	HW9	13.284	0.600	106.516	106.466	0.050	265.7	750	8.65	50.0
10.010	HW10	S144	10.713	0.600	106.370	106.320	0.050	214.3	900	5.08	50.0
10.011	S144	HW11	5.908	0.600	106.320	106.270	0.050	118.2	300	5.15	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	457.4	54.9	2.000	1.953	0.405	0.0
17.004	3.221	512.3	68.0	1.953	2.134	0.502	0.0
14.013	1.712	756.2	378.0	2.134	1.384	2.789	0.0
10.010	2.136	1359.1	0.0	1.330	1.380	0.000	0.0
10.011	1.445	102.1	0.0	1.980	2.030	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	118.450	116.725	1.500	117.535	115.810	1.500
10.001	38.917	61.8	225	Circular	117.535	115.810	1.500	116.830	115.180	1.425
10.002	18.507	31.9	300	Circular	116.830	115.105	1.425	116.250	114.525	1.425
10.003	64.618	26.3	300	Circular	116.250	114.525	1.425	114.095	112.070	1.725
10.004	52.263	29.0	300	Circular	114.095	112.070	1.725	112.365	110.265	1.800
10.005	17.584	29.1	450	Circular	112.365	110.115	1.800	111.760	109.510	1.800
10.006	47.825	30.0	450	Circular	111.760	109.510	1.800	110.165	107.915	1.800
10.007	35.534	31.9	450	Circular	110.165	107.915	1.800	108.995	106.800	1.745
11.000	47.621	198.4	300	Circular	109.635	107.550	1.785	109.035	107.310	1.425
12.000	46.788	20.3	300	Circular	112.090	110.570	1.220	109.760	108.260	1.200
12.001	24.680	26.1	300	Circular	109.760	108.260	1.200	109.035	107.315	1.420
11.001	66.130	181.2	450	Circular	109.035	107.165	1.420	108.995	106.800	1.745
13.000	55.313	691.4	750	Circular	108.305	106.580	0.975	108.995	106.500	1.745
10.008	31.592	526.5	750	Circular	108.995	106.500	1.745	108.600	106.440	1.410
14.000	18.867	98.8	300	Circular	116.790	114.490	2.000	116.610	114.299	2.011

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	116.610	114.299	2.011	116.215	113.915	2.000
14.002	92.628	25.3	450	Circular	116.215	113.765	2.000	113.280	110.100	2.730
15.000	29.029	39.0	225	Circular	114.105	111.880	2.000	113.160	111.135	1.800
15.001	32.409	40.0	450	Circular	113.160	110.910	1.800	113.280	110.100	2.730
14.003	56.978	38.0	450	Circular	113.280	110.100	2.730	111.130	108.600	2.080
14.004	28.338	94.5	450	Circular	111.130	108.600	2.080	110.840	108.300	2.090
14.005	13.326	74.0	450	Circular	110.840	108.300	2.090	110.705	108.120	2.135
14.006	12.828	74.6	450	Circular	110.705	108.120	2.135	110.515	107.948	2.117
14.007	19.024	28.1	600	Circular	110.515	107.798	2.117	110.145	107.120	2.425
16.000	65.419	35.2	300	Circular	117.745	115.445	2.000	115.885	113.585	2.000
16.001	51.036	40.8	300	Circular	115.885	113.585	2.000	114.960	112.335	2.325
16.002	9.959	199.2	300	Circular	114.960	112.335	2.325	114.585	112.285	2.000
16.003	39.958	29.5	450	Circular	114.585	112.135	2.000	113.230	110.780	2.000
16.004	63.804	33.7	450	Circular	113.230	110.780	2.000	111.335	108.885	2.000
16.005	21.854	41.6	450	Circular	111.335	108.885	2.000	110.810	108.360	2.000
16.006	46.832	48.8	450	Circular	110.810	108.360	2.000	109.870	107.400	2.020
16.007	9.256	185.1	600	Circular	109.870	107.250	2.020	109.780	107.200	1.980
16.008	42.844	535.5	600	Circular	109.780	107.200	1.980	110.145	107.120	2.425
14.008	41.911	155.2	750	Circular	110.145	106.970	2.425	109.380	106.700	1.930
14.009	6.897	137.9	750	Circular	109.380	106.700	1.930	109.255	106.650	1.855
14.010	6.440	128.8	750	Circular	109.255	106.650	1.855	109.140	106.600	1.790
14.011	35.319	420.5	750	Circular	109.140	106.600	1.790	109.085	106.516	1.819
14.012	14.377	287.5	750	Circular	109.085	106.516	1.819	109.400	106.466	2.184
17.000	20.851	30.2	225	Circular	112.505	110.280	2.000	111.815	109.590	2.000
17.001	12.555	52.1	300	Circular	111.815	109.515	2.000	111.470	109.274	1.896

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	16.671	52.3	300	Circular	111.470	109.274	1.896	111.255	108.955	2.000
17.003	44.277	50.1	450	Circular	111.255	108.805	2.000	110.325	107.922	1.953
17.004	44.251	40.0	450	Circular	110.325	107.922	1.953	109.400	106.816	2.134
14.013	13.284	265.7	750	Circular	109.400	106.516	2.134	108.600	106.466	1.384
10.010	10.713	214.3	900	Circular	108.600	106.370	1.330	108.600	106.320	1.380
10.011	5.908	118.2	300	Circular	108.600	106.320	1.980	108.600	106.270	2.030

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	118.450	1.725	1200		0	10.000	116.725	225
S101	442163.672	295743.132	117.535	1.725	1200		1	10.000	115.810	225
						0	10.001	115.810	225	
S102	442201.112	295753.750	116.830	1.725	1200		1	10.001	115.180	225
						0	10.002	115.105	300	
S103	442216.851	295763.486	116.250	1.725	1200		1	10.002	114.525	300
						0	10.003	114.525	300	
S104	442267.351	295803.800	114.095	2.025	1200		1	10.003	112.070	300
						0	10.004	112.070	300	
S105	442302.339	295842.624	112.365	2.250	1350		1	10.004	110.265	300
						0	10.005	110.115	450	
S106	442316.483	295853.072	111.760	2.250	1350		1	10.005	109.510	450
						0	10.006	109.510	450	
S107	442358.252	295876.365	110.165	2.250	1350		1	10.006	107.915	450
						0	10.007	107.915	450	

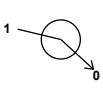
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S108	442315.056	295987.432	109.635	2.085	1200	 0	11.000	107.550	300
S109	442288.912	295905.629	112.090	1.520	1200	 0	12.000	110.570	300
S110	442325.478	295934.819	109.760	1.500	1200	 1 0	12.000	108.260	300
S111	442344.766	295950.216	109.035	1.870	1350	 1 2 0	12.001	108.260	300
S112	442429.251	295933.043	108.305	1.725	1800	 0	12.001	107.315	300
S113	442386.023	295898.534	108.995	2.495	1800	 1 2 3 0	11.000	107.310	300
HW8	442406.248	295874.264	108.600	2.160	1800	 1	11.001	107.165	450
S114	442198.851	295728.118	116.790	2.300	1200	 0	13.000	106.580	750
S115	442207.408	295711.303	116.610	2.311	1200	 1 0	13.000	106.500	750
S116	442230.110	295680.735	116.215	2.450	1350	 1 0	11.001	106.800	450
S117	442300.491	295692.636	114.105	2.225	1200	 0	10.007	106.800	450
S118	442323.796	295709.943	113.160	2.250	1350	 0 1 0	10.008	106.500	750
S119	442304.473	295735.962	113.280	3.180	1350	 1 2 0	10.008	106.440	750

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S120	442350.216	295769.934	111.130	2.530	1350	 1	14.003	108.600	450
						0	14.004	108.600	450
S121	442367.112	295747.184	110.840	2.540	1350	 1	14.004	108.300	450
						0	14.005	108.300	450
S122	442379.126	295741.418	110.705	2.585	1350	 1	14.005	108.120	450
						0	14.006	108.120	450
S123	442391.724	295743.836	110.515	2.717	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	442249.838	295654.171	115.885	2.300	1200	 1	16.000	113.585	300
						0	16.001	113.585	300
S126	442280.267	295613.198	114.960	2.625	1200	 1	16.001	112.335	300
						0	16.002	112.335	300
S127	442290.213	295612.682	114.585	2.450	1350	 1	16.002	112.285	300
						0	16.003	112.135	450
S128	442323.039	295635.466	113.230	2.450	1350	 1	16.003	110.780	450
						0	16.004	110.780	450
S129	442374.262	295673.507	111.335	2.450	1350	 1	16.004	108.885	450
						0	16.005	108.885	450
S130	442393.591	295683.704	110.810	2.450	1350	 1	16.005	108.360	450
						0	16.006	108.360	450
S131	442431.189	295711.626	109.870	2.620	1500	 1	16.006	107.400	450
						0	16.007	107.250	600
S132	442432.541	295720.783	109.780	2.580	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	442406.997	295755.179	110.145	3.175	1500		1	16.008	107.120	600
							2	14.007	107.120	600
							0	14.008	106.970	750
S134	442440.644	295780.168	109.380	2.680	1500		1	14.008	106.700	750
							0	14.009	106.700	750
S135	442443.761	295786.320	109.255	2.605	1500		1	14.009	106.650	750
							0	14.010	106.650	750
S136	442442.862	295792.697	109.140	2.540	1800		1	14.010	106.600	750
							0	14.011	106.600	750
S137	442421.804	295821.052	109.085	2.569	1800		1	14.011	106.516	750
							0	14.012	106.516	750
S138	442304.876	295807.843	112.505	2.225	1200		0	17.000	110.280	225
S139	442325.160	295803.014	111.815	2.300	1200		1	17.000	109.590	225
							0	17.001	109.515	300
S140	442334.429	295794.545	111.470	2.196	1200		1	17.001	109.274	300
							0	17.002	109.274	300
S141	442344.369	295781.162	111.255	2.450	1350		1	17.002	108.955	300
							0	17.003	108.805	450
S142	442379.915	295807.561	110.325	2.403	1350		1	17.003	107.922	450
							0	17.004	107.922	450
S143	442415.441	295833.944	109.400	2.934	1800		1	17.004	106.816	450
							2	14.012	106.466	750
							0	14.013	106.516	750
HW9	442425.963	295842.052	108.600	2.160	1800		1	14.013	106.466	750
HW10	442432.693	295888.649	108.600	2.230	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	108.600	2.280	2700		1	10.010	106.320	900
							0	10.011	106.320	300
HW11	442441.183	295901.293	108.600	2.330	1200		1	10.011	106.270	300

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
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)	112	Main Channel n	0.250

Inlets

HW9 | HW8

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	1321.6	0.0	1.800	2784.4	0.0

Results for 1 year Critical Storm Duration. Lowest mass balance: 87.86%

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	0.062	10.6	0.1231	0.0000	OK
15 minute winter	S101	11	115.909	0.099	26.2	0.2425	0.0000	OK
15 minute winter	S102	11	115.178	0.073	25.5	0.0828	0.0000	OK
15 minute winter	S103	11	114.614	0.089	41.9	0.2267	0.0000	OK
15 minute winter	S104	11	112.178	0.108	55.4	0.2297	0.0000	OK
15 minute winter	S105	11	110.225	0.110	71.6	0.2140	0.0000	OK
15 minute winter	S106	11	109.622	0.112	82.6	0.2445	0.0000	OK
15 minute winter	S107	11	108.046	0.131	99.5	0.3362	0.0000	OK
15 minute winter	S108	11	107.681	0.131	31.0	0.4245	0.0000	OK
15 minute winter	S109	10	110.606	0.036	7.8	0.0669	0.0000	OK
15 minute winter	S110	10	108.347	0.087	37.9	0.3478	0.0000	OK
15 minute winter	S111	11	107.362	0.197	91.1	0.6512	0.0000	OK
15 minute winter	S112	12	106.887	0.307	33.3	1.6190	0.0000	OK
15 minute winter	S113	12	106.885	0.385	228.2	1.4171	0.0000	OK
15 minute winter	HW8	12	106.833	0.393	221.8	0.9999	0.0000	OK
15 minute winter	S114	10	114.577	0.087	19.6	0.2040	0.0000	OK
15 minute winter	S115	11	114.408	0.109	30.7	0.1999	0.0000	OK
15 minute winter	S116	11	113.844	0.079	44.8	0.1836	0.0000	OK
15 minute winter	S117	10	111.956	0.076	19.9	0.1827	0.0000	OK
15 minute winter	S118	10	110.991	0.081	37.3	0.2063	0.0000	OK
15 minute winter	S119	11	110.235	0.135	107.1	0.3527	0.0000	OK
15 minute winter	S120	11	108.797	0.197	116.7	0.4016	0.0000	OK
15 minute winter	S121	11	108.498	0.198	116.8	0.2837	0.0000	OK
15 minute winter	S122	11	108.323	0.203	124.3	0.3857	0.0000	OK
15 minute winter	S123	11	107.935	0.137	129.6	0.2875	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	0.820	0.165	0.8172	
15 minute winter	S101	10.001	S102	25.5	1.544	0.385	0.6439	
15 minute winter	S102	10.002	S103	25.6	1.670	0.130	0.2838	
15 minute winter	S103	10.003	S104	42.0	2.095	0.193	1.2978	
15 minute winter	S104	10.004	S105	55.2	2.470	0.266	1.1678	
15 minute winter	S105	10.005	S106	71.6	2.349	0.119	0.5357	
15 minute winter	S106	10.006	S107	82.6	2.389	0.139	1.6558	
15 minute winter	S107	10.007	S113	99.0	2.673	0.172	1.3171	
15 minute winter	S108	11.000	S111	30.1	1.038	0.382	1.3789	
15 minute winter	S109	12.000	S110	7.7	0.739	0.031	0.5078	
15 minute winter	S110	12.001	S111	37.1	2.264	0.170	0.4047	
15 minute winter	S111	11.001	S113	90.9	1.405	0.379	4.2776	
15 minute winter	S112	13.000	S113	27.6	0.185	0.059	10.9683	
15 minute winter	S113	10.008	HW8	221.8	0.995	0.414	7.2796	
15 minute winter	HW8	Flow through pond	HW10	438.5	0.074	0.019	273.6052	
15 minute winter	S114	14.000	S115	19.4	0.968	0.173	0.3779	
15 minute winter	S115	14.001	S116	30.2	1.335	0.271	0.8614	
15 minute winter	S116	14.002	S119	44.8	1.551	0.070	2.7242	
15 minute winter	S117	15.000	S118	19.5	1.692	0.234	0.3353	
15 minute winter	S118	15.001	S119	37.0	1.289	0.072	0.9557	
15 minute winter	S119	14.003	S120	106.5	2.006	0.202	3.0395	
15 minute winter	S120	14.004	S121	116.8	1.745	0.351	1.8974	
15 minute winter	S121	14.005	S122	116.3	1.702	0.309	0.9118	
15 minute winter	S122	14.006	S123	123.5	1.958	0.330	0.8110	
15 minute winter	S123	14.007	S133	129.4	2.753	0.099	0.8976	

Results for 1 year Critical Storm Duration. Lowest mass balance: 87.86%

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	0.1688	0.0000	OK
15 minute winter	S125	10	113.689	0.104	47.2	0.2827	0.0000	OK
15 minute winter	S126	11	112.570	0.235	66.9	0.5323	0.0000	OK
15 minute winter	S127	11	112.238	0.103	69.7	0.1690	0.0000	OK
15 minute winter	S128	11	110.898	0.118	86.3	0.2879	0.0000	OK
15 minute winter	S129	11	109.026	0.141	97.5	0.3004	0.0000	OK
15 minute winter	S130	11	108.511	0.151	106.8	0.3058	0.0000	OK
15 minute winter	S131	12	107.501	0.251	110.6	0.5175	0.0000	OK
15 minute winter	S132	12	107.470	0.270	122.4	0.6778	0.0000	OK
15 minute winter	S133	12	107.254	0.284	261.2	0.6819	0.0000	OK
15 minute winter	S134	12	107.093	0.393	264.6	0.6945	0.0000	OK
15 minute winter	S135	13	107.059	0.409	272.2	1.0658	0.0000	OK
15 minute winter	S136	13	107.032	0.431	270.1	1.0982	0.0000	OK
15 minute winter	S137	13	106.987	0.471	273.1	1.4879	0.0000	OK
15 minute winter	S138	10	110.364	0.084	26.2	0.2352	0.0000	OK
15 minute winter	S139	10	109.627	0.111	39.6	0.2200	0.0000	OK
15 minute winter	S140	10	109.403	0.129	51.7	0.2494	0.0000	OK
15 minute winter	S141	10	108.912	0.107	55.9	0.1824	0.0000	OK
15 minute winter	S142	11	108.036	0.114	69.1	0.2557	0.0000	OK
15 minute winter	S143	13	106.958	0.492	338.1	1.6037	0.0000	OK
15 minute winter	HW9	13	106.891	0.451	336.2	1.1481	0.0000	OK
240 minute winter	HW10	196	106.750	0.380	85.9	0.9671	0.0000	OK
240 minute winter	S144	196	106.750	0.430	34.9	2.4603	0.0000	SURCHARGED
15 minute summer	HW11	1	106.270	0.000	32.5	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S124	16.000	S125	21.5	1.289	0.114	1.1024	
15 minute winter	S125	16.001	S126	45.9	1.141	0.263	2.0645	
15 minute winter	S126	16.002	S127	66.4	1.211	0.846	0.5446	
15 minute winter	S127	16.003	S128	69.9	2.315	0.117	1.2074	
15 minute winter	S128	16.004	S129	86.2	2.286	0.154	2.4107	
15 minute winter	S129	16.005	S130	97.1	2.180	0.193	0.9741	
15 minute winter	S130	16.006	S131	105.4	2.347	0.227	2.1093	
15 minute winter	S131	16.007	S132	109.7	0.949	0.217	1.0846	
15 minute winter	S132	16.008	S133	122.5	1.121	0.414	4.6859	
15 minute winter	S133	14.008	S134	264.6	1.395	0.267	8.0919	
15 minute winter	S134	14.009	S135	260.2	1.108	0.247	1.6512	
15 minute winter	S135	14.010	S136	270.1	1.106	0.248	1.6353	
15 minute winter	S136	14.011	S137	265.7	0.973	0.443	9.7682	
15 minute winter	S137	14.012	S143	274.7	0.920	0.378	4.2921	
15 minute winter	S138	17.000	S139	25.9	1.984	0.272	0.2719	
15 minute winter	S139	17.001	S140	39.3	1.491	0.255	0.3314	
15 minute winter	S140	17.002	S141	51.1	1.874	0.332	0.4555	
15 minute winter	S141	17.003	S142	55.7	1.861	0.122	1.3290	
15 minute winter	S142	17.004	S143	69.4	2.251	0.135	1.4969	
15 minute winter	S143	14.013	HW9	336.2	1.303	0.445	3.5025	
15 minute winter	HW9	Flow through pond	HW10	438.5	0.074	0.019	273.6052	
240 minute winter	HW10	10.010	S144	34.9	0.337	0.026	2.9623	
240 minute winter	S144	Hydro-Brake®	HW11	34.7				811.6

Results for 30 year Critical Storm Duration. Lowest mass balance: 87.86%

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	0.1986	0.0000	OK
15 minute winter	S101	11	115.995	0.185	64.5	0.4524	0.0000	OK
15 minute winter	S102	11	115.226	0.121	62.6	0.1366	0.0000	OK
15 minute winter	S103	11	114.669	0.144	102.7	0.3683	0.0000	OK
15 minute winter	S104	11	112.256	0.185	136.0	0.3949	0.0000	OK
15 minute winter	S105	11	110.291	0.176	163.8	0.3417	0.0000	OK
15 minute winter	S106	11	109.689	0.179	191.3	0.3903	0.0000	OK
15 minute winter	S107	11	108.111	0.196	233.0	0.5023	0.0000	OK
15 minute winter	S108	11	107.792	0.242	76.1	0.7827	0.0000	OK
15 minute winter	S109	10	110.626	0.056	19.0	0.1031	0.0000	OK
15 minute winter	S110	10	108.397	0.137	93.2	0.5464	0.0000	OK
15 minute winter	S111	11	107.530	0.365	226.1	1.2098	0.0000	OK
15 minute winter	S112	12	107.227	0.647	81.6	3.4147	0.0000	OK
15 minute winter	S113	12	107.227	0.727	559.5	2.6773	0.0000	OK
360 minute winter	HW8	344	107.200	0.760	84.2	1.9348	0.0000	OK
15 minute winter	S114	10	114.641	0.151	48.1	0.3540	0.0000	OK
15 minute winter	S115	10	114.487	0.188	75.6	0.3445	0.0000	OK
15 minute winter	S116	11	113.889	0.124	110.8	0.2868	0.0000	OK
15 minute winter	S117	10	112.009	0.129	48.8	0.3096	0.0000	OK
15 minute winter	S118	10	111.037	0.127	91.6	0.3228	0.0000	OK
15 minute winter	S119	11	110.321	0.221	264.8	0.5751	0.0000	OK
15 minute winter	S120	11	108.985	0.385	287.4	0.7852	0.0000	OK
15 minute winter	S121	11	108.690	0.390	287.6	0.5586	0.0000	OK
15 minute winter	S122	11	108.497	0.377	306.1	0.7154	0.0000	OK
15 minute summer	S123	11	108.018	0.220	306.6	0.4641	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	25.4	0.991	0.407	1.6462	
15 minute winter	S101	10.001	S102	62.6	1.853	0.944	1.3144	
15 minute winter	S102	10.002	S103	62.6	2.090	0.317	0.5549	
15 minute winter	S103	10.003	S104	103.1	2.609	0.474	2.5573	
15 minute winter	S104	10.004	S105	136.4	3.080	0.658	2.3153	
15 minute winter	S105	10.005	S106	163.9	2.818	0.273	1.0231	
15 minute winter	S106	10.006	S107	191.6	3.063	0.324	2.9933	
15 minute winter	S107	10.007	S113	233.2	2.895	0.406	3.9022	
15 minute winter	S108	11.000	S111	73.5	1.270	0.935	2.7660	
15 minute winter	S109	12.000	S110	18.8	0.969	0.076	0.9403	
15 minute winter	S110	12.001	S111	93.1	2.611	0.427	1.0363	
15 minute winter	S111	11.001	S113	223.3	1.620	0.932	9.6228	
15 minute winter	S112	13.000	S113	74.9	0.220	0.160	23.2313	
15 minute winter	S113	10.008	HW8	550.4	1.288	1.028	13.6279	
360 minute winter	HW8	Flow through pond	HW10	122.5	0.024	0.005	1304.4800	
15 minute winter	S114	14.000	S115	47.6	1.159	0.426	0.7742	
15 minute winter	S115	14.001	S116	74.1	1.661	0.664	1.6993	
15 minute winter	S116	14.002	S119	110.2	1.979	0.171	5.2208	
15 minute winter	S117	15.000	S118	48.1	2.116	0.575	0.6592	
15 minute winter	S118	15.001	S119	91.1	1.636	0.178	1.8296	
15 minute winter	S119	14.003	S120	262.3	2.365	0.499	6.3139	
15 minute winter	S120	14.004	S121	287.6	1.981	0.864	4.1151	
15 minute winter	S121	14.005	S122	286.6	1.992	0.762	1.9188	
15 minute winter	S122	14.006	S123	305.0	2.382	0.814	1.6332	
15 minute summer	S123	14.007	S133	310.7	2.754	0.238	3.4135	

Results for 30 year Critical Storm Duration. Lowest mass balance: 87.86%

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	0.2677	0.0000	OK
15 minute winter	S125	11	113.771	0.186	115.9	0.5037	0.0000	OK
15 minute winter	S126	11	112.925	0.590	162.3	1.3366	0.0000	SURCHARGED
15 minute winter	S127	11	112.303	0.168	170.6	0.2744	0.0000	OK
15 minute winter	S128	11	110.969	0.189	211.3	0.4615	0.0000	OK
15 minute winter	S129	11	109.130	0.245	239.5	0.5210	0.0000	OK
15 minute winter	S130	11	108.610	0.250	263.7	0.5060	0.0000	OK
15 minute winter	S131	12	108.101	0.851	278.6	1.7575	0.0000	SURCHARGED
15 minute winter	S132	12	108.068	0.868	284.8	2.1794	0.0000	SURCHARGED
15 minute winter	S133	12	107.969	0.999	620.2	2.4006	0.0000	SURCHARGED
15 minute winter	S134	12	107.814	1.114	619.4	1.9681	0.0000	SURCHARGED
15 minute winter	S135	12	107.746	1.096	647.9	2.8550	0.0000	SURCHARGED
15 minute winter	S136	12	107.674	1.074	646.3	2.7336	0.0000	SURCHARGED
15 minute winter	S137	12	107.525	1.009	666.2	3.1883	0.0000	SURCHARGED
15 minute winter	S138	10	110.427	0.147	64.3	0.4109	0.0000	OK
15 minute winter	S139	10	109.722	0.207	97.1	0.4087	0.0000	OK
15 minute winter	S140	10	109.514	0.240	126.9	0.4628	0.0000	OK
15 minute winter	S141	10	108.980	0.175	137.1	0.2983	0.0000	OK
15 minute winter	S142	11	108.097	0.175	169.8	0.3924	0.0000	OK
15 minute winter	S143	12	107.425	0.959	846.3	3.1270	0.0000	SURCHARGED
15 minute winter	HW9	12	107.270	0.829	845.5	2.1110	0.0000	OK
360 minute winter	HW10	352	107.197	0.827	122.5	2.1056	0.0000	OK
360 minute winter	S144	352	107.197	0.877	35.8	5.0228	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	1.607	0.282	2.2243	
15 minute winter	S125	16.001	S126	112.8	1.751	0.647	2.9647	
15 minute winter	S126	16.002	S127	162.5	2.308	2.071	0.6942	
15 minute winter	S127	16.003	S128	170.9	2.925	0.286	2.3360	
15 minute winter	S128	16.004	S129	211.8	2.800	0.379	4.8281	
15 minute winter	S129	16.005	S130	239.9	2.687	0.478	1.9509	
15 minute winter	S130	16.006	S131	265.9	2.668	0.573	5.7988	
15 minute winter	S131	16.007	S132	258.7	1.131	0.512	2.6072	
15 minute winter	S132	16.008	S133	285.1	1.350	0.965	12.0682	
15 minute winter	S133	14.008	S134	619.4	1.509	0.625	18.4459	
15 minute winter	S134	14.009	S135	618.4	1.405	0.588	3.0355	
15 minute winter	S135	14.010	S136	646.3	1.469	0.594	2.8344	
15 minute winter	S136	14.011	S137	644.9	1.465	1.075	15.5446	
15 minute winter	S137	14.012	S143	665.3	1.512	0.915	6.3276	
15 minute winter	S138	17.000	S139	63.6	2.445	0.669	0.5417	
15 minute winter	S139	17.001	S140	96.5	1.716	0.625	0.7042	
15 minute winter	S140	17.002	S141	125.3	2.260	0.813	0.9249	
15 minute winter	S141	17.003	S142	136.4	2.410	0.298	2.5101	
15 minute winter	S142	17.004	S143	169.6	2.498	0.331	4.7687	
15 minute winter	S143	14.013	HW9	845.5	1.921	1.118	5.8466	
15 minute winter	HW9	Flow through pond	HW10	1201.6	0.112	0.053	657.2712	
360 minute winter	HW10	10.010	S144	35.8	0.337	0.026	6.6392	
360 minute winter	S144	Hydro-Brake®	HW11	34.8				1060.2

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 87.86%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S100	12	117.333	0.608	47.1	1.2170	0.0000	SURCHARGED
15 minute winter	S101	12	116.925	1.115	108.4	2.7208	0.0000	SURCHARGED
15 minute winter	S102	12	115.265	0.160	98.2	0.1813	0.0000	OK
15 minute winter	S103	11	114.721	0.196	169.0	0.5020	0.0000	OK
15 minute winter	S104	12	112.691	0.621	228.6	1.3224	0.0000	SURCHARGED
15 minute winter	S105	10	110.349	0.234	254.8	0.4536	0.0000	OK
15 minute winter	S106	10	109.736	0.226	309.0	0.4932	0.0000	OK
15 minute winter	S107	12	108.647	0.732	388.2	1.8742	0.0000	SURCHARGED
15 minute winter	S108	12	109.560	2.010	138.3	6.5152	0.0000	FLOOD RISK
15 minute winter	S109	10	110.645	0.075	34.6	0.1389	0.0000	OK
15 minute winter	S110	12	109.449	1.188	169.4	4.7515	0.0000	SURCHARGED
15 minute winter	S111	12	108.953	1.788	349.2	5.9244	0.0000	FLOOD RISK
15 minute winter	S112	12	108.077	1.497	148.3	7.9074	0.0000	FLOOD RISK
15 minute winter	S113	12	108.073	1.573	900.6	5.7929	0.0000	SURCHARGED
15 minute winter	HW8	12	107.810	1.370	893.3	3.4864	0.0000	OK
15 minute winter	S114	11	114.934	0.444	87.4	1.0390	0.0000	SURCHARGED
15 minute winter	S115	11	114.790	0.491	132.8	0.8992	0.0000	SURCHARGED
15 minute winter	S116	11	113.932	0.167	195.0	0.3866	0.0000	OK
15 minute winter	S117	11	112.219	0.339	88.6	0.8126	0.0000	SURCHARGED
15 minute winter	S118	13	111.564	0.654	157.8	1.6691	0.0000	SURCHARGED
15 minute winter	S119	13	111.502	1.402	464.0	3.6559	0.0000	SURCHARGED
15 minute winter	S120	13	110.655	2.055	408.5	4.1927	0.0000	SURCHARGED
15 minute winter	S121	13	110.080	1.780	390.8	2.5475	0.0000	SURCHARGED
15 minute winter	S122	12	109.733	1.613	415.0	3.0589	0.0000	SURCHARGED
15 minute winter	S123	12	109.358	1.560	434.9	3.2855	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	41.5	1.151	0.665	2.5381	
15 minute winter	S101	10.001	S102	98.2	2.469	1.482	1.5321	
15 minute winter	S102	10.002	S103	98.3	2.355	0.498	0.8001	
15 minute winter	S103	10.003	S104	168.8	2.739	0.776	3.8533	
15 minute winter	S104	10.004	S105	210.9	3.211	1.017	3.6802	
15 minute winter	S105	10.005	S106	256.2	3.147	0.426	1.4349	
15 minute winter	S106	10.006	S107	308.4	3.028	0.521	5.6899	
15 minute winter	S107	10.007	S113	358.1	2.905	0.624	5.6301	
15 minute winter	S108	11.000	S111	118.5	1.683	1.507	3.3534	
15 minute winter	S109	12.000	S110	34.3	1.021	0.138	1.9684	
15 minute winter	S110	12.001	S111	140.9	2.580	0.645	1.7379	
15 minute winter	S111	11.001	S113	344.5	2.175	1.438	10.4779	
15 minute winter	S112	13.000	S113	129.0	0.293	0.276	24.3444	
15 minute winter	S113	10.008	HW8	893.3	2.030	1.668	13.9043	
15 minute winter	HW8	Flow through pond	HW10	1890.5	0.138	0.083	1187.5801	
15 minute winter	S114	14.000	S115	82.8	1.249	0.740	1.3286	
15 minute winter	S115	14.001	S116	131.1	1.864	1.175	2.6181	
15 minute winter	S116	14.002	S119	195.4	2.071	0.303	9.8187	
15 minute winter	S117	15.000	S118	82.8	2.274	0.990	1.1545	
15 minute winter	S118	15.001	S119	157.8	1.796	0.308	5.1350	
15 minute winter	S119	14.003	S120	362.9	2.414	0.690	9.0278	
15 minute winter	S120	14.004	S121	390.8	2.467	1.175	4.4900	
15 minute winter	S121	14.005	S122	393.4	2.483	1.046	2.1114	
15 minute winter	S122	14.006	S123	418.3	2.640	1.116	2.0325	
15 minute winter	S123	14.007	S133	438.3	2.782	0.336	5.3586	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 87.86%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S124	11	115.616	0.171	97.4	0.4237	0.0000	OK
15 minute winter	S125	12	115.048	1.463	207.2	3.9701	0.0000	SURCHARGED
15 minute winter	S126	11	113.495	1.160	263.4	2.6294	0.0000	SURCHARGED
15 minute winter	S127	10	112.352	0.217	276.3	0.3545	0.0000	OK
15 minute winter	S128	13	111.316	0.536	350.3	1.3093	0.0000	SURCHARGED
15 minute winter	S129	12	110.670	1.785	375.0	3.7931	0.0000	SURCHARGED
15 minute winter	S130	12	110.317	1.957	377.2	3.9665	0.0000	SURCHARGED
15 minute winter	S131	12	109.539	2.289	392.2	4.7259	0.0000	SURCHARGED
15 minute winter	S132	12	109.459	2.259	437.2	5.6735	0.0000	SURCHARGED
15 minute winter	S133	12	109.225	2.255	909.4	5.4196	0.0000	SURCHARGED
15 minute winter	S134	12	108.893	2.193	906.8	3.8743	0.0000	SURCHARGED
15 minute winter	S135	12	108.748	2.098	960.0	5.4621	0.0000	SURCHARGED
15 minute winter	S136	12	108.589	1.989	957.0	5.0612	0.0000	SURCHARGED
15 minute winter	S137	12	108.257	1.741	995.5	5.5029	0.0000	SURCHARGED
15 minute winter	S138	11	111.576	1.296	116.9	3.6323	0.0000	SURCHARGED
15 minute winter	S139	11	110.502	0.987	162.4	1.9490	0.0000	SURCHARGED
15 minute winter	S140	11	110.092	0.818	213.2	1.5800	0.0000	SURCHARGED
15 minute winter	S141	11	109.036	0.231	232.7	0.3952	0.0000	OK
15 minute winter	S142	12	108.357	0.435	290.4	0.9729	0.0000	OK
15 minute winter	S143	12	108.035	1.569	1299.3	5.1156	0.0000	SURCHARGED
600 minute winter	HW9	570	107.844	1.404	194.6	3.5725	0.0000	OK
480 minute winter	HW10	464	107.801	1.431	240.2	3.6414	0.0000	SURCHARGED
480 minute winter	S144	464	107.801	1.481	35.7	8.4784	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	92.8	1.648	0.494	3.6590	
15 minute winter	S125	16.001	S126	181.2	2.574	1.039	3.5939	
15 minute winter	S126	16.002	S127	261.5	3.715	3.333	0.6942	
15 minute winter	S127	16.003	S128	276.9	3.152	0.464	4.5135	
15 minute winter	S128	16.004	S129	324.7	2.925	0.581	10.1093	
15 minute winter	S129	16.005	S130	349.9	2.651	0.697	3.4626	
15 minute winter	S130	16.006	S131	373.1	2.632	0.804	7.4202	
15 minute winter	S131	16.007	S132	390.2	1.385	0.773	2.6072	
15 minute winter	S132	16.008	S133	434.8	1.544	1.472	12.0682	
15 minute winter	S133	14.008	S134	906.8	2.060	0.915	18.4459	
15 minute winter	S134	14.009	S135	910.3	2.069	0.866	3.0355	
15 minute winter	S135	14.010	S136	957.0	2.175	0.879	2.8344	
15 minute winter	S136	14.011	S137	956.8	2.174	1.595	15.5446	
15 minute winter	S137	14.012	S143	994.7	2.260	1.369	6.3276	
15 minute winter	S138	17.000	S139	105.0	2.641	1.106	0.8293	
15 minute winter	S139	17.001	S140	161.2	2.289	1.045	0.8841	
15 minute winter	S140	17.002	S141	212.6	3.019	1.380	1.1621	
15 minute winter	S141	17.003	S142	233.1	2.572	0.510	5.1900	
15 minute winter	S142	17.004	S143	269.8	2.523	0.527	6.9737	
15 minute winter	S143	14.013	HW9	1298.7	2.951	1.717	5.8466	
600 minute winter	HW9	Flow through pond	HW10	219.2	0.024	0.010	2622.6340	
480 minute winter	HW10	10.010	S144	35.7	0.334	0.026	6.7896	
480 minute winter	S144	Hydro-Brake®	HW11	34.8				1302.9