

16/07/2024

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	100	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	40	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	20.000	Minimum Backdrop Height (m)	0.200
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	x

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S1	0.034	5.00	131.450	1350	447229.161	302807.322	1.116
S2	0.058	5.00	131.000	1350	447237.491	302850.101	0.860
S3		5.00	131.296	1350	447251.855	302854.083	1.106
S4	0.018	5.00	131.050	1350	447237.484	302854.101	0.928
S5	0.074	5.00	130.875	1500	447223.746	302854.508	0.889
S6	0.063	5.00	130.900	1500	447200.281	302863.960	1.019
S7		5.00	131.020	1350	447162.170	302817.869	0.839
S8	0.019	5.00	131.000	1350	447164.996	302822.160	0.842
S9	0.020	5.00	130.975	1350	447169.295	302829.028	0.853
S10	0.032	5.00	130.960	1350	447171.899	302833.107	0.860
S11	0.020	5.00	130.940	1350	447175.556	302838.835	0.870
S12	0.032	5.00	130.910	1350	447179.213	302845.600	0.874
S13	0.007	5.00	130.885	1350	447181.379	302853.288	0.884
S14	0.019	5.00	130.865	1350	447182.843	302858.507	0.888
S15	0.007	5.00	130.850	1350	447185.641	302863.909	0.900
S16	0.019	5.00	130.830	1350	447189.771	302868.560	0.908
S17	0.022	5.00	130.925	1500	447190.674	302873.172	1.099
S18	0.047	5.00	130.990	1500	447168.778	302899.800	1.308
S19		5.00	131.110	1350	447116.264	302871.023	1.148
S20	0.153	5.00	130.935	1350	447156.892	302904.274	1.206
S21	0.062	5.00	131.020	1500	447159.584	302911.013	1.398
S22	0.153	5.00	131.090	1500	447133.555	302942.691	1.639
HW1			130.750	1500	447113.537	302956.278	1.400
S23		5.00	131.045	1350	447158.269	302811.758	0.778
S24	0.050	5.00	131.190	1350	447134.412	302774.392	1.120
S25			131.215	1350	447129.826	302769.301	1.175
S26			131.245	1350	447123.839	302765.972	1.235
S27	0.010	5.00	131.269	1350	447116.338	302763.299	1.294
HW2			131.110	1350	447099.968	302758.795	1.727
S28		5.00	131.135	1350	447106.825	302864.674	1.425
S29			131.120	1350	447096.367	302860.196	1.461
S30			131.110	1350	447087.798	302857.444	1.491
HW3			130.910	1350	447073.530	302851.439	1.527
S31		5.00	130.978	1350	447187.385	302895.784	0.970
S32	0.035	5.00	131.075	1350	447216.466	302919.063	1.233
S33	0.145	5.00	131.065	1350	447211.737	302924.970	1.257
S34	0.042	5.00	131.120	1500	447202.417	302944.632	1.484
S35	0.020	5.00	131.135	1500	447199.367	302948.467	1.519
S36	0.042	5.00	131.152	1500	447194.399	302954.712	1.569
S37	0.020	5.00	131.167	1500	447189.481	302960.895	1.617
S38	0.042	5.00	131.184	1500	447184.514	302967.140	1.667

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Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S39	0.020	5.00	131.197	1500	447179.596	302973.323	1.713
S40	0.032	5.00	131.195	1500	447173.434	302981.071	1.752
S41	0.010	5.00	131.481	1500	447168.516	302987.254	2.071
S42	0.073	5.00	131.479	1500	447158.426	302999.940	2.137
HW4	1.091	5.00	130.750	1350	447119.423	302988.754	1.400
S43 FCU			131.250	3000	447145.804	303013.433	1.990
S44			131.250	1350	447160.683	303027.352	2.058
Ex. MH			131.000	1350	447150.011	303048.849	1.925

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	S1	S2	43.582	0.600	130.334	130.140	0.194	225.0	225	5.84	50.0
1.001	S2	S4	4.000	0.600	130.140	130.122	0.018	225.0	225	5.91	50.0
2.000	S3	S4	14.371	0.600	130.190	130.126	0.064	225.0	225	5.28	50.0
1.002	S4	S5	13.744	0.600	130.122	130.061	0.061	225.0	225	6.18	50.0
1.003	S5	S6	25.297	0.600	129.986	129.881	0.105	240.0	300	6.60	50.0
1.004	S6	S17	13.310	0.600	129.881	129.826	0.055	240.0	300	6.82	50.0
3.000	S7	S8	5.138	0.600	130.181	130.158	0.023	225.0	225	5.10	50.0
3.001	S8	S9	8.103	0.600	130.158	130.122	0.036	225.0	225	5.25	50.0
3.002	S9	S10	4.839	0.600	130.122	130.100	0.022	225.0	225	5.35	50.0
3.003	S10	S11	6.796	0.600	130.100	130.070	0.030	225.0	225	5.48	50.0
3.004	S11	S12	7.690	0.600	130.070	130.036	0.034	225.0	225	5.63	50.0
3.005	S12	S13	7.987	0.600	130.036	130.001	0.035	225.0	225	5.78	50.0
3.006	S13	S14	5.420	0.600	130.001	129.977	0.024	225.0	225	5.88	50.0
3.007	S14	S15	6.084	0.600	129.977	129.950	0.027	225.0	225	6.00	50.0
3.008	S15	S16	6.220	0.600	129.950	129.922	0.028	225.0	225	6.12	50.0
3.009	S16	S17	4.700	0.600	129.922	129.901	0.021	225.0	225	6.21	50.0
1.005	S17	S18	34.474	0.600	129.826	129.682	0.144	240.0	300	7.38	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	0.867	69.0	6.5	0.891	0.635	0.034	0.0	46	0.545
1.001	0.867	69.0	17.5	0.635	0.703	0.092	0.0	77	0.725
2.000	0.867	69.0	0.0	0.881	0.699	0.000	0.0	0	0.000
1.002	0.867	69.0	20.9	0.703	0.589	0.110	0.0	85	0.762
1.003	1.010	142.8	34.9	0.589	0.719	0.184	0.0	100	0.838
1.004	1.010	142.8	46.9	0.719	0.799	0.247	0.0	118	0.908
3.000	0.867	69.0	0.0	0.614	0.617	0.000	0.0	0	0.000
3.001	0.867	69.0	3.6	0.617	0.628	0.019	0.0	35	0.459
3.002	0.867	69.0	7.4	0.628	0.635	0.039	0.0	50	0.569
3.003	0.867	69.0	13.5	0.635	0.645	0.071	0.0	67	0.675
3.004	0.867	69.0	17.3	0.645	0.649	0.091	0.0	77	0.725
3.005	0.867	69.0	23.3	0.649	0.659	0.123	0.0	90	0.785
3.006	0.867	69.0	24.7	0.659	0.663	0.130	0.0	93	0.796
3.007	0.867	69.0	28.3	0.663	0.675	0.149	0.0	101	0.827
3.008	0.867	69.0	29.6	0.675	0.683	0.156	0.0	103	0.836
3.009	0.867	69.0	33.2	0.683	0.799	0.175	0.0	110	0.860
1.005	1.010	142.8	84.2	0.799	1.008	0.444	0.0	166	1.051

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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)
1.006	S18	S21	14.500	0.600	129.682	129.622	0.060	240.0	300	7.62	50.0
4.000	S19	S20	52.500	0.600	129.962	129.729	0.233	225.0	225	6.01	50.0
4.001	S20	S21	7.257	0.600	129.729	129.697	0.032	225.0	225	6.15	50.0
1.007	S21	S22	41.000	0.600	129.622	129.451	0.171	240.0	300	8.30	50.0
1.008	S22	HW1	24.194	0.600	129.451	129.350	0.101	240.0	300	8.70	50.0
5.000	S23	S24	44.333	0.600	130.267	130.070	0.197	225.0	225	5.85	50.0
5.001	S24	S25	6.852	0.600	130.070	130.040	0.030	225.0	225	5.98	50.0
5.002	S25	S26	6.850	0.600	130.040	130.010	0.030	225.0	225	6.12	50.0
5.003	S26	S27	7.963	0.600	130.010	129.975	0.035	225.0	225	6.27	50.0
5.004	S27	HW2	16.978	0.600	129.975	129.900	0.075	225.0	225	6.59	50.0
6.000	S28	S29	11.376	0.600	129.710	129.659	0.051	225.0	225	5.22	50.0
6.001	S29	S30	9.000	0.600	129.659	129.619	0.040	225.0	225	5.39	50.0
6.002	S30	HW3	15.480	0.600	129.619	129.550	0.069	225.0	225	5.69	50.0
7.000	S31	S32	37.251	0.600	130.008	129.842	0.166	225.0	225	5.72	50.0
7.001	S32	S33	7.567	0.600	129.842	129.808	0.034	225.0	225	5.86	50.0
7.002	S33	S34	21.759	0.600	129.808	129.711	0.097	225.0	225	6.28	50.0
7.003	S34	S35	4.900	0.600	129.636	129.616	0.020	240.0	300	6.36	50.0
7.004	S35	S36	7.980	0.600	129.616	129.583	0.033	240.0	300	6.49	50.0
7.005	S36	S37	7.900	0.600	129.583	129.550	0.033	240.0	300	6.62	50.0
7.006	S37	S38	7.979	0.600	129.550	129.517	0.033	240.0	300	6.75	50.0
7.007	S38	S39	7.900	0.600	129.517	129.484	0.033	240.0	300	6.88	50.0
7.008	S39	S40	9.900	0.600	129.484	129.443	0.041	240.0	300	7.05	50.0
7.009	S40	S41	7.900	0.600	129.443	129.410	0.033	240.0	300	7.18	50.0
7.010	S41	S42	16.209	0.600	129.410	129.342	0.068	240.0	300	7.45	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.006	1.010	142.8	93.2	1.008	1.098	0.491	0.0	177	1.074
4.000	0.867	69.0	0.0	0.923	0.981	0.000	0.0	0	0.000
4.001	0.867	69.0	29.0	0.981	1.098	0.153	0.0	102	0.830
1.007	1.010	142.8	134.0	1.098	1.339	0.706	0.0	232	1.143
1.008	1.010	142.8	163.0	1.339	1.100	0.859	0.0	300	1.023
5.000	0.867	69.0	0.0	0.553	0.895	0.000	0.0	0	0.000
5.001	0.867	69.0	9.5	0.895	0.950	0.050	0.0	56	0.609
5.002	0.867	69.0	9.5	0.950	1.010	0.050	0.0	56	0.609
5.003	0.867	69.0	9.5	1.010	1.069	0.050	0.0	56	0.609
5.004	0.867	69.0	11.4	1.069	0.985	0.060	0.0	62	0.646
6.000	0.867	69.0	0.0	1.200	1.236	0.000	0.0	0	0.000
6.001	0.867	69.0	0.0	1.236	1.266	0.000	0.0	0	0.000
6.002	0.867	69.0	0.0	1.266	1.135	0.000	0.0	0	0.000
7.000	0.867	69.0	0.0	0.745	1.008	0.000	0.0	0	0.000
7.001	0.867	69.0	6.6	1.008	1.032	0.035	0.0	47	0.551
7.002	0.867	69.0	34.2	1.032	1.184	0.180	0.0	112	0.866
7.003	1.010	142.8	42.1	1.184	1.219	0.222	0.0	112	0.883
7.004	1.010	142.8	45.9	1.219	1.269	0.242	0.0	117	0.903
7.005	1.010	142.8	53.9	1.269	1.317	0.284	0.0	127	0.941
7.006	1.010	142.8	57.7	1.317	1.367	0.304	0.0	133	0.959
7.007	1.010	142.8	65.6	1.367	1.413	0.346	0.0	143	0.989
7.008	1.010	142.8	69.4	1.413	1.452	0.366	0.0	147	1.003
7.009	1.010	142.8	75.5	1.452	1.771	0.398	0.0	155	1.024
7.010	1.010	142.8	77.4	1.771	1.837	0.408	0.0	157	1.030

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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)
7.011	S42	S43 FCU	18.476	0.600	129.342	129.260	0.082	225.0	300	7.74	50.0
1.009	HW4	S43 FCU	36.125	0.600	129.350	129.260	0.090	400.0	450	5.60	50.0
1.010	S43 FCU	S44	20.375	0.600	129.260	129.192	0.068	300.0	375	8.07	50.0
5.013	S44	Ex. MH	24.000	0.600	129.192	129.075	0.117	205.1	375	8.38	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
7.011	1.044	147.6	91.3	1.837	1.690	0.481	0.0	171	1.097
1.009	1.010	160.7	207.0	0.950	1.540	1.091	0.0	450	1.023
1.010	1.041	114.9	298.3	1.615	1.683	1.572	0.0	375	1.054
5.013	1.261	139.3	298.3	1.683	1.550	1.572	0.0	375	1.277

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	43.582	225.0	225	Twin Pipes	131.450	130.334	0.891	131.000	130.140	0.635
1.001	4.000	225.0	225	Twin Pipes	131.000	130.140	0.635	131.050	130.122	0.703
2.000	14.371	225.0	225	Twin Pipes	131.296	130.190	0.881	131.050	130.126	0.699
1.002	13.744	225.0	225	Twin Pipes	131.050	130.122	0.703	130.875	130.061	0.589
1.003	25.297	240.0	300	Twin Pipes	130.875	129.986	0.589	130.900	129.881	0.719
1.004	13.310	240.0	300	Twin Pipes	130.900	129.881	0.719	130.925	129.826	0.799
3.000	5.138	225.0	225	Twin Pipes	131.020	130.181	0.614	131.000	130.158	0.617
3.001	8.103	225.0	225	Twin Pipes	131.000	130.158	0.617	130.975	130.122	0.628
3.002	4.839	225.0	225	Twin Pipes	130.975	130.122	0.628	130.960	130.100	0.635
3.003	6.796	225.0	225	Twin Pipes	130.960	130.100	0.635	130.940	130.070	0.645
3.004	7.690	225.0	225	Twin Pipes	130.940	130.070	0.645	130.910	130.036	0.649
3.005	7.987	225.0	225	Twin Pipes	130.910	130.036	0.649	130.885	130.001	0.659
3.006	5.420	225.0	225	Twin Pipes	130.885	130.001	0.659	130.865	129.977	0.663
3.007	6.084	225.0	225	Twin Pipes	130.865	129.977	0.663	130.850	129.950	0.675
3.008	6.220	225.0	225	Twin Pipes	130.850	129.950	0.675	130.830	129.922	0.683
3.009	4.700	225.0	225	Twin Pipes	130.830	129.922	0.683	130.925	129.901	0.799

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S1	1350	Manhole	Adoptable	S2	1350	Manhole	Adoptable
1.001	S2	1350	Manhole	Adoptable	S4	1350	Manhole	Adoptable
2.000	S3	1350	Manhole	Adoptable	S4	1350	Manhole	Adoptable
1.002	S4	1350	Manhole	Adoptable	S5	1500	Manhole	Adoptable
1.003	S5	1500	Manhole	Adoptable	S6	1500	Manhole	Adoptable
1.004	S6	1500	Manhole	Adoptable	S17	1500	Manhole	Adoptable
3.000	S7	1350	Manhole	Adoptable	S8	1350	Manhole	Adoptable
3.001	S8	1350	Manhole	Adoptable	S9	1350	Manhole	Adoptable
3.002	S9	1350	Manhole	Adoptable	S10	1350	Manhole	Adoptable
3.003	S10	1350	Manhole	Adoptable	S11	1350	Manhole	Adoptable
3.004	S11	1350	Manhole	Adoptable	S12	1350	Manhole	Adoptable
3.005	S12	1350	Manhole	Adoptable	S13	1350	Manhole	Adoptable
3.006	S13	1350	Manhole	Adoptable	S14	1350	Manhole	Adoptable
3.007	S14	1350	Manhole	Adoptable	S15	1350	Manhole	Adoptable
3.008	S15	1350	Manhole	Adoptable	S16	1350	Manhole	Adoptable
3.009	S16	1350	Manhole	Adoptable	S17	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)
1.005	34.474	240.0	300	Twin Pipes	130.925	129.826	0.799	130.990	129.682	1.008
1.006	14.500	240.0	300	Twin Pipes	130.990	129.682	1.008	131.020	129.622	1.098
4.000	52.500	225.0	225	Twin Pipes	131.110	129.962	0.923	130.935	129.729	0.981
4.001	7.257	225.0	225	Twin Pipes	130.935	129.729	0.981	131.020	129.697	1.098
1.007	41.000	240.0	300	Twin Pipes	131.020	129.622	1.098	131.090	129.451	1.339
1.008	24.194	240.0	300	Twin Pipes	131.090	129.451	1.339	130.750	129.350	1.100
5.000	44.333	225.0	225	Twin Pipes	131.045	130.267	0.553	131.190	130.070	0.895
5.001	6.852	225.0	225	Twin Pipes	131.190	130.070	0.895	131.215	130.040	0.950
5.002	6.850	225.0	225	Twin Pipes	131.215	130.040	0.950	131.245	130.010	1.010
5.003	7.963	225.0	225	Twin Pipes	131.245	130.010	1.010	131.269	129.975	1.069
5.004	16.978	225.0	225	Twin Pipes	131.269	129.975	1.069	131.110	129.900	0.985
6.000	11.376	225.0	225	Twin Pipes	131.135	129.710	1.200	131.120	129.659	1.236
6.001	9.000	225.0	225	Twin Pipes	131.120	129.659	1.236	131.110	129.619	1.266
6.002	15.480	225.0	225	Twin Pipes	131.110	129.619	1.266	130.910	129.550	1.135
7.000	37.251	225.0	225	Twin Pipes	130.978	130.008	0.745	131.075	129.842	1.008
7.001	7.567	225.0	225	Twin Pipes	131.075	129.842	1.008	131.065	129.808	1.032
7.002	21.759	225.0	225	Twin Pipes	131.065	129.808	1.032	131.120	129.711	1.184
7.003	4.900	240.0	300	Twin Pipes	131.120	129.636	1.184	131.135	129.616	1.219
7.004	7.980	240.0	300	Twin Pipes	131.135	129.616	1.219	131.152	129.583	1.269
7.005	7.900	240.0	300	Twin Pipes	131.152	129.583	1.269	131.167	129.550	1.317
7.006	7.979	240.0	300	Twin Pipes	131.167	129.550	1.317	131.184	129.517	1.367
7.007	7.900	240.0	300	Twin Pipes	131.184	129.517	1.367	131.197	129.484	1.413
7.008	9.900	240.0	300	Twin Pipes	131.197	129.484	1.413	131.195	129.443	1.452
7.009	7.900	240.0	300	Twin Pipes	131.195	129.443	1.452	131.481	129.410	1.771
7.010	16.209	240.0	300	Twin Pipes	131.481	129.410	1.771	131.479	129.342	1.837

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.005	S17	1500	Manhole	Adoptable	S18	1500	Manhole	Adoptable
1.006	S18	1500	Manhole	Adoptable	S21	1500	Manhole	Adoptable
4.000	S19	1350	Manhole	Adoptable	S20	1350	Manhole	Adoptable
4.001	S20	1350	Manhole	Adoptable	S21	1500	Manhole	Adoptable
1.007	S21	1500	Manhole	Adoptable	S22	1500	Manhole	Adoptable
1.008	S22	1500	Manhole	Adoptable	HW1	1500	Manhole	Adoptable
5.000	S23	1350	Manhole	Adoptable	S24	1350	Manhole	Adoptable
5.001	S24	1350	Manhole	Adoptable	S25	1350	Manhole	Adoptable
5.002	S25	1350	Manhole	Adoptable	S26	1350	Manhole	Adoptable
5.003	S26	1350	Manhole	Adoptable	S27	1350	Manhole	Adoptable
5.004	S27	1350	Manhole	Adoptable	HW2	1350	Manhole	Adoptable
6.000	S28	1350	Manhole	Adoptable	S29	1350	Manhole	Adoptable
6.001	S29	1350	Manhole	Adoptable	S30	1350	Manhole	Adoptable
6.002	S30	1350	Manhole	Adoptable	HW3	1350	Manhole	Adoptable
7.000	S31	1350	Manhole	Adoptable	S32	1350	Manhole	Adoptable
7.001	S32	1350	Manhole	Adoptable	S33	1350	Manhole	Adoptable
7.002	S33	1350	Manhole	Adoptable	S34	1500	Manhole	Adoptable
7.003	S34	1500	Manhole	Adoptable	S35	1500	Manhole	Adoptable
7.004	S35	1500	Manhole	Adoptable	S36	1500	Manhole	Adoptable
7.005	S36	1500	Manhole	Adoptable	S37	1500	Manhole	Adoptable
7.006	S37	1500	Manhole	Adoptable	S38	1500	Manhole	Adoptable
7.007	S38	1500	Manhole	Adoptable	S39	1500	Manhole	Adoptable
7.008	S39	1500	Manhole	Adoptable	S40	1500	Manhole	Adoptable
7.009	S40	1500	Manhole	Adoptable	S41	1500	Manhole	Adoptable
7.010	S41	1500	Manhole	Adoptable	S42	1500	Manhole	Adoptable

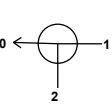
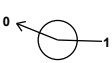
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Pipeline Schedule

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)
7.011	18.476	225.0	300	Twin Pipes	131.479	129.342	1.837	131.250	129.260	1.690
1.009	36.125	400.0	450	Circular	130.750	129.350	0.950	131.250	129.260	1.540
1.010	20.375	300.0	375	Circular	131.250	129.260	1.615	131.250	129.192	1.683
5.013	24.000	205.1	375	Circular	131.250	129.192	1.683	131.000	129.075	1.550

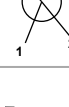
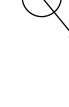
Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
7.011	S42	1500	Manhole	Adoptable	S43 FCU	3000	Manhole	Adoptable
1.009	HW4	1350	Manhole	Adoptable	S43 FCU	3000	Manhole	Adoptable
1.010	S43 FCU	3000	Manhole	Adoptable	S44	1350	Manhole	Adoptable
5.013	S44	1350	Manhole	Adoptable	Ex. MH	1350	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S1	447229.161	302807.322	131.450	1.116	1350				
						0	1.000	130.334	225
S2	447237.491	302850.101	131.000	0.860	1350		1	1.000	130.140
						0	1.001	130.140	225
S3	447251.855	302854.083	131.296	1.106	1350				
						0	2.000	130.190	225
S4	447237.484	302854.101	131.050	0.928	1350		1	2.000	130.126
						2	1.001	130.122	225
						0	1.002	130.122	225
S5	447223.746	302854.508	130.875	0.889	1500		1	1.002	130.061
						0	1.003	129.986	300
S6	447200.281	302863.960	130.900	1.019	1500		1	1.003	129.881
						0	1.004	129.881	300
S7	447162.170	302817.869	131.020	0.839	1350				
						0	3.000	130.181	225
S8	447164.996	302822.160	131.000	0.842	1350		1	3.000	130.158
						0	3.001	130.158	225
S9	447169.295	302829.028	130.975	0.853	1350		1	3.001	130.122
						0	3.002	130.122	225

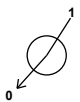
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Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S10	447171.899	302833.107	130.960	0.860	1350	 1	3.002	130.100	225
						0	3.003	130.100	225
S11	447175.556	302838.835	130.940	0.870	1350	 1	3.003	130.070	225
						0	3.004	130.070	225
S12	447179.213	302845.600	130.910	0.874	1350	 1	3.004	130.036	225
						0	3.005	130.036	225
S13	447181.379	302853.288	130.885	0.884	1350	 1	3.005	130.001	225
						0	3.006	130.001	225
S14	447182.843	302858.507	130.865	0.888	1350	 1	3.006	129.977	225
						0	3.007	129.977	225
S15	447185.641	302863.909	130.850	0.900	1350	 1	3.007	129.950	225
						0	3.008	129.950	225
S16	447189.771	302868.560	130.830	0.908	1350	 1	3.008	129.922	225
						0	3.009	129.922	225
S17	447190.674	302873.172	130.925	1.099	1500	 1	3.009	129.901	225
						2	1.004	129.826	300
						0	1.005	129.826	300
S18	447168.778	302899.800	130.990	1.308	1500	 1	1.005	129.682	300
						0	1.006	129.682	300
S19	447116.264	302871.023	131.110	1.148	1350	 0	4.000	129.962	225
						1	4.000	129.729	225
S20	447156.892	302904.274	130.935	1.206	1350	 0	4.001	129.729	225
						1	4.001	129.697	225
S21	447159.584	302911.013	131.020	1.398	1500	 2	1.006	129.622	300
						0	1.007	129.622	300
S22	447133.555	302942.691	131.090	1.639	1500	 1	1.007	129.451	300
						0	1.008	129.451	300

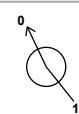
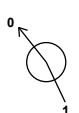
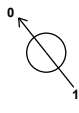
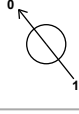
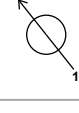
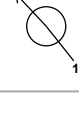
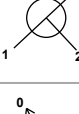
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Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
HW1	447113.537	302956.278	130.750	1.400	1500	 1	1.008	129.350	300
S23	447158.269	302811.758	131.045	0.778	1350	 0	5.000	130.267	225
S24	447134.412	302774.392	131.190	1.120	1350	 0 1	5.000	130.070	225
S25	447129.826	302769.301	131.215	1.175	1350	 0 1	5.001	130.070	225
S26	447123.839	302765.972	131.245	1.235	1350	 0 1	5.002	130.010	225
S27	447116.338	302763.299	131.269	1.294	1350	 0 1	5.003	130.010	225
HW2	447099.968	302758.795	131.110	1.727	1350	 1	5.004	129.975	225
S28	447106.825	302864.674	131.135	1.425	1350	 0	6.000	129.710	225
S29	447096.367	302860.196	131.120	1.461	1350	 0 1	6.001	129.659	225
S30	447087.798	302857.444	131.110	1.491	1350	 0 1	6.002	129.619	225
HW3	447073.530	302851.439	130.910	1.527	1350	 1	6.002	129.550	225
S31	447187.385	302895.784	130.978	0.970	1350	 0	7.000	130.008	225
S32	447216.466	302919.063	131.075	1.233	1350	 0 1	7.001	129.842	225

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Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S33	447211.737	302924.970	131.065	1.257	1350		1	7.001	129.808	225
S34	447202.417	302944.632	131.120	1.484	1500		1	7.002	129.808	225
							0	7.003	129.636	300
S35	447199.367	302948.467	131.135	1.519	1500		1	7.003	129.616	300
							0	7.004	129.616	300
S36	447194.399	302954.712	131.152	1.569	1500		1	7.004	129.583	300
							0	7.005	129.583	300
S37	447189.481	302960.895	131.167	1.617	1500		1	7.005	129.550	300
							0	7.006	129.550	300
S38	447184.514	302967.140	131.184	1.667	1500		1	7.006	129.517	300
							0	7.007	129.517	300
S39	447179.596	302973.323	131.197	1.713	1500		1	7.007	129.484	300
							0	7.008	129.484	300
S40	447173.434	302981.071	131.195	1.752	1500		1	7.008	129.443	300
							0	7.009	129.443	300
S41	447168.516	302987.254	131.481	2.071	1500		1	7.009	129.410	300
							0	7.010	129.410	300
S42	447158.426	302999.940	131.479	2.137	1500		1	7.010	129.342	300
							0	7.011	129.342	300
HW4	447119.423	302988.754	130.750	1.400	1350					
							0	1.009	129.350	450
S43 FCU	447145.804	303013.433	131.250	1.990	3000		1	1.009	129.260	450
							2	7.011	129.260	300
S44	447160.683	303027.352	131.250	2.058	1350		0	1.010	129.260	375
							1	1.010	129.192	375
							0	5.013	129.192	375

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Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
Ex. MH	447150.011	303048.849	131.000	1.925	1350	1	5.013	129.075	375

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)	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
100	40	0	0

Node S43 FCU Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	129.260	Product Number	CTL-SHE-0214-2350-0900-2350
Design Depth (m)	0.900	Min Outlet Diameter (m)	0.300
Design Flow (l/s)	23.5	Min Node Diameter (mm)	1500

Node HW1 Online Orifice Control

Flap Valve	x	Invert Level (m)	129.350	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.450		

Node HW2 Online Orifice Control

Flap Valve	x	Invert Level (m)	129.383	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.450		

Node HW3 Online Orifice Control

Flap Valve	x	Invert Level (m)	129.383	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.450		

Node HW4 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.02500	Porosity	1.00	Main Channel Length (m)	33.000
Side Inf Coefficient (m/hr)	0.02500	Invert Level (m)	129.350	Main Channel Slope (1:X)	1000.0
Safety Factor	2.0	Time to half empty (mins)	0	Main Channel n	0.020

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Inlets											
HW2			HW3			HW1					
Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	1368.3	0.0	0.400	1671.1	0.0	0.800	2396.8	0.0	1.200	3219.8	0.0
0.100	1420.6	0.0	0.500	1814.7	0.0	0.900	2601.7	0.0	1.300	3427.0	0.0
0.200	1474.7	0.0	0.600	1988.4	0.0	1.000	2807.2	0.0	1.400	3635.0	0.0
0.300	1557.8	0.0	0.700	2192.4	0.0	1.100	3013.2	0.0			

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Results for 1 year Critical Storm Duration. Lowest mass balance: 99.51%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S1	11	130.373	0.039	4.8	0.0559	0.0000	OK
15 minute winter	S2	11	130.213	0.073	12.7	0.1048	0.0000	OK
15 minute winter	S3	12	130.196	0.006	0.2	0.0079	0.0000	OK
15 minute winter	S4	11	130.195	0.073	14.8	0.1040	0.0000	OK
15 minute winter	S5	11	130.069	0.083	24.2	0.1462	0.0000	OK
15 minute winter	S6	11	129.988	0.107	32.6	0.1890	0.0000	OK
15 minute winter	S7	11	130.188	0.007	0.1	0.0096	0.0000	OK
15 minute winter	S8	11	130.188	0.030	2.7	0.0423	0.0000	OK
15 minute winter	S9	11	130.169	0.047	5.4	0.0672	0.0000	OK
15 minute winter	S10	11	130.162	0.062	9.7	0.0882	0.0000	OK
15 minute winter	S11	11	130.141	0.071	12.3	0.1011	0.0000	OK
15 minute winter	S12	11	130.119	0.083	16.6	0.1192	0.0000	OK
15 minute winter	S13	11	130.091	0.090	17.6	0.1292	0.0000	OK
15 minute winter	S14	11	130.072	0.095	20.1	0.1359	0.0000	OK
15 minute winter	S15	11	130.047	0.097	21.0	0.1386	0.0000	OK
15 minute winter	S16	11	130.021	0.099	23.5	0.1415	0.0000	OK
15 minute winter	S17	11	129.962	0.136	58.7	0.2406	0.0000	OK
15 minute winter	S18	12	129.842	0.160	64.3	0.2819	0.0000	OK
15 minute summer	S19	1	129.962	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S20	11	129.823	0.094	21.6	0.1338	0.0000	OK
15 minute winter	S21	12	129.795	0.173	90.5	0.3058	0.0000	OK
15 minute winter	S22	12	129.704	0.253	108.6	0.4473	0.0000	OK
15 minute winter	HW1	12	129.650	0.300	104.5	0.5309	0.0000	OK
15 minute summer	S23	1	130.267	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S24	11	130.120	0.050	7.1	0.0722	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	S1	1.000	S2	4.6	0.300	0.067	0.6878	
15 minute winter	S2	1.001	S4	12.4	0.555	0.179	0.0891	
15 minute winter	S3	2.000	S4	-0.2	-0.025	-0.003	0.1501	
15 minute winter	S4	1.002	S5	14.4	0.674	0.209	0.2941	
15 minute winter	S5	1.003	S6	24.2	0.635	0.170	0.9688	
15 minute winter	S6	1.004	S17	32.4	0.605	0.227	0.7135	
15 minute winter	S7	3.000	S8	-0.1	-0.044	-0.002	0.0174	
15 minute winter	S8	3.001	S9	2.6	0.289	0.037	0.0734	
15 minute winter	S9	3.002	S10	5.3	0.362	0.077	0.0716	
15 minute winter	S10	3.003	S11	9.6	0.495	0.139	0.1322	
15 minute winter	S11	3.004	S12	12.4	0.516	0.180	0.1846	
15 minute winter	S12	3.005	S13	16.7	0.592	0.242	0.2254	
15 minute winter	S13	3.006	S14	17.6	0.572	0.255	0.1668	
15 minute winter	S14	3.007	S15	20.1	0.624	0.292	0.1961	
15 minute winter	S15	3.008	S16	21.0	0.634	0.304	0.2060	
15 minute winter	S16	3.009	S17	23.4	0.748	0.339	0.1471	
15 minute winter	S17	1.005	S18	58.1	0.847	0.407	2.3652	
15 minute winter	S18	1.006	S21	64.1	0.799	0.448	1.1621	
15 minute summer	S19	4.000	S20	0.0	0.000	0.000	0.7832	
15 minute winter	S20	4.001	S21	20.4	0.706	0.295	0.2321	
15 minute winter	S21	1.007	S22	90.8	0.888	0.635	4.3255	
15 minute winter	S22	1.008	HW1	104.5	0.769	0.732	3.2370	
15 minute winter	HW1	Flow through pond	HW4	-67.4	-0.046	0.000	141.2051	
15 minute summer	S23	5.000	S24	0.0	0.000	0.000	0.2846	
15 minute winter	S24	5.001	S25	6.8	0.512	0.098	0.0911	

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Results for 1 year Critical Storm Duration. Lowest mass balance: 99.51%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S25	11	130.091	0.051	6.8	0.0724	0.0000	OK
15 minute winter	S26	11	130.060	0.050	6.8	0.0719	0.0000	OK
15 minute winter	S27	11	130.028	0.053	8.1	0.0755	0.0000	OK
240 minute winter	HW2	184	129.549	0.166	1.7	0.2369	0.0000	OK
15 minute summer	S28	1	129.710	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S29	1	129.659	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S30	1	129.619	0.000	0.0	0.0000	0.0000	OK
240 minute winter	HW3	184	129.548	0.165	0.0	0.2365	0.0000	OK
15 minute summer	S31	1	130.008	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S32	11	129.905	0.063	4.9	0.0896	0.0000	OK
15 minute winter	S33	11	129.903	0.095	24.6	0.1362	0.0000	OK
15 minute winter	S34	11	129.748	0.112	29.9	0.1983	0.0000	OK
15 minute winter	S35	11	129.729	0.113	32.6	0.2005	0.0000	OK
15 minute winter	S36	11	129.706	0.123	38.2	0.2175	0.0000	OK
15 minute winter	S37	11	129.679	0.129	40.9	0.2283	0.0000	OK
15 minute winter	S38	11	129.653	0.136	46.3	0.2410	0.0000	OK
15 minute winter	S39	11	129.622	0.138	48.7	0.2445	0.0000	OK
15 minute winter	S40	12	129.592	0.149	52.4	0.2635	0.0000	OK
15 minute winter	S41	12	129.568	0.158	52.7	0.2790	0.0000	OK
15 minute winter	S42	12	129.555	0.213	59.9	0.3760	0.0000	OK
240 minute winter	HW4	184	129.548	0.198	31.5	0.2835	0.0000	OK
240 minute winter	S43 FCU	184	129.546	0.286	18.7	2.0243	0.0000	OK
240 minute winter	S44	184	129.287	0.095	18.6	0.1363	0.0000	OK
240 minute winter	Ex. MH	184	129.166	0.091	18.6	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S25	5.002	S26	6.8	0.515	0.099	0.0907	
15 minute winter	S26	5.003	S27	6.8	0.499	0.099	0.1087	
15 minute winter	S27	5.004	HW2	7.9	0.578	0.115	0.2329	
240 minute winter	HW2	Flow through pond	HW4	10.0	0.012	0.000	257.7145	
15 minute summer	S28	6.000	S29	0.0	0.000	0.000	0.0000	
15 minute summer	S29	6.001	S30	0.0	0.000	0.000	0.0000	
15 minute summer	S30	6.002	HW3	0.0	0.000	0.000	0.0000	
240 minute winter	HW3	Flow through pond	HW4	10.0	0.012	0.000	257.7145	
15 minute summer	S31	7.000	S32	0.0	0.000	0.000	0.3197	
15 minute winter	S32	7.001	S33	5.0	0.245	0.073	0.1888	
15 minute winter	S33	7.002	S34	24.3	0.787	0.352	0.6712	
15 minute winter	S34	7.003	S35	29.9	0.619	0.209	0.2373	
15 minute winter	S35	7.004	S36	32.6	0.632	0.228	0.4117	
15 minute winter	S36	7.005	S37	38.2	0.679	0.267	0.4441	
15 minute winter	S37	7.006	S38	40.7	0.677	0.285	0.4799	
15 minute winter	S38	7.007	S39	46.0	0.732	0.322	0.4968	
15 minute winter	S39	7.008	S40	48.2	0.736	0.338	0.6586	
15 minute winter	S40	7.009	S41	51.4	0.788	0.360	0.5729	
15 minute winter	S41	7.010	S42	51.0	0.710	0.357	1.4753	
15 minute winter	S42	7.011	S43 FCU	57.8	0.608	0.392	2.2597	
240 minute winter	HW4	1.009	S43 FCU	16.3	0.206	0.101	3.1362	
240 minute winter	HW4	Infiltration		0.0				
240 minute winter	S43 FCU	1.010	S44	18.6	0.790	0.162	0.4810	
240 minute winter	S44	5.013	Ex. MH	18.6	0.873	0.134	0.5125	319.3

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Results for 30 year Critical Storm Duration. Lowest mass balance: 99.51%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S1	13	130.397	0.063	11.8	0.0903	0.0000	OK
15 minute winter	S2	13	130.398	0.258	31.5	0.3689	0.0000	SURCHARGED
15 minute winter	S3	13	130.400	0.210	10.3	0.2999	0.0000	OK
15 minute winter	S4	13	130.394	0.272	36.0	0.3892	0.0000	SURCHARGED
15 minute winter	S5	13	130.384	0.398	59.2	0.7024	0.0000	SURCHARGED
15 minute winter	S6	13	130.374	0.493	69.4	0.8706	0.0000	SURCHARGED
15 minute winter	S7	13	130.420	0.239	11.8	0.3418	0.0000	SURCHARGED
15 minute winter	S8	13	130.423	0.265	10.6	0.3786	0.0000	SURCHARGED
15 minute winter	S9	13	130.419	0.297	23.1	0.4251	0.0000	SURCHARGED
15 minute winter	S10	13	130.420	0.320	23.0	0.4585	0.0000	SURCHARGED
15 minute winter	S11	13	130.418	0.348	29.2	0.4978	0.0000	SURCHARGED
15 minute winter	S12	13	130.412	0.376	39.4	0.5378	0.0000	SURCHARGED
15 minute winter	S13	13	130.410	0.409	37.3	0.5847	0.0000	SURCHARGED
15 minute winter	S14	13	130.402	0.425	40.9	0.6080	0.0000	SURCHARGED
15 minute winter	S15	13	130.389	0.439	41.7	0.6278	0.0000	SURCHARGED
15 minute winter	S16	13	130.380	0.458	46.3	0.6552	0.0000	SURCHARGED
15 minute winter	S17	13	130.368	0.542	114.2	0.9581	0.0000	SURCHARGED
15 minute winter	S18	13	130.288	0.606	120.9	1.0708	0.0000	SURCHARGED
15 minute winter	S19	11	130.316	0.354	26.8	0.5062	0.0000	SURCHARGED
15 minute summer	S20	12	130.250	0.521	50.4	0.7460	0.0000	SURCHARGED
15 minute winter	S21	13	130.237	0.615	150.1	1.0866	0.0000	SURCHARGED
15 minute winter	S22	12	130.018	0.567	186.8	1.0011	0.0000	SURCHARGED
240 minute winter	HW1	232	129.800	0.450	53.7	0.7958	0.0000	OK
15 minute summer	S23	1	130.267	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S24	11	130.153	0.083	17.3	0.1190	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	S1	1.000	S2	11.4	0.370	0.165	2.1301	
15 minute winter	S2	1.001	S4	29.8	0.685	0.432	0.3182	
15 minute winter	S3	2.000	S4	-10.3	-0.179	-0.149	1.1256	
15 minute winter	S4	1.002	S5	37.6	0.845	0.545	1.0932	
15 minute winter	S5	1.003	S6	49.1	0.707	0.344	3.5628	
15 minute winter	S6	1.004	S17	62.4	0.677	0.437	1.8746	
15 minute winter	S7	3.000	S8	-11.8	-0.352	-0.171	0.4087	
15 minute winter	S8	3.001	S9	8.9	0.310	0.129	0.6445	
15 minute winter	S9	3.002	S10	-16.6	0.364	-0.241	0.3849	
15 minute winter	S10	3.003	S11	22.3	0.534	0.323	0.5406	
15 minute winter	S11	3.004	S12	28.3	0.555	0.410	0.6117	
15 minute winter	S12	3.005	S13	34.9	0.658	0.506	0.6353	
15 minute winter	S13	3.006	S14	34.7	0.634	0.504	0.4311	
15 minute winter	S14	3.007	S15	39.4	0.709	0.572	0.4839	
15 minute winter	S15	3.008	S16	40.1	0.728	0.581	0.4948	
15 minute winter	S16	3.009	S17	44.6	0.886	0.647	0.3738	
15 minute winter	S17	1.005	S18	105.6	0.890	0.740	4.8553	
15 minute winter	S18	1.006	S21	109.0	0.774	0.763	2.0422	
15 minute winter	S19	4.000	S20	-26.8	-0.438	-0.389	4.1760	
15 minute summer	S20	4.001	S21	47.6	0.790	0.691	0.5772	
15 minute winter	S21	1.007	S22	151.0	1.072	1.057	5.7744	
15 minute winter	S22	1.008	HW1	187.1	1.329	1.310	3.4074	
240 minute winter	HW1	Flow through pond	HW4	16.1	0.015	0.000	651.5432	
15 minute summer	S23	5.000	S24	0.0	0.000	0.000	0.5711	
15 minute winter	S24	5.001	S25	16.7	0.628	0.241	0.1827	

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Results for 30 year Critical Storm Duration. Lowest mass balance: 99.51%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S25	11	130.123	0.083	16.7	0.1192	0.0000	OK
15 minute winter	S26	11	130.093	0.083	16.7	0.1188	0.0000	OK
15 minute winter	S27	11	130.061	0.086	20.1	0.1235	0.0000	OK
240 minute winter	HW2	228	129.802	0.419	3.8	0.5992	0.0000	OK
240 minute winter	S28	224	129.798	0.088	0.6	0.1258	0.0000	OK
240 minute winter	S29	224	129.798	0.139	1.2	0.1987	0.0000	OK
240 minute winter	S30	232	129.798	0.179	1.6	0.2557	0.0000	OK
240 minute winter	HW3	232	129.797	0.414	3.2	0.5920	0.0000	OK
15 minute winter	S31	13	130.037	0.029	4.7	0.0413	0.0000	OK
15 minute winter	S32	12	130.038	0.196	16.1	0.2799	0.0000	OK
15 minute winter	S33	12	130.031	0.223	60.1	0.3189	0.0000	OK
15 minute winter	S34	12	129.981	0.345	72.7	0.6104	0.0000	SURCHARGED
15 minute winter	S35	12	129.974	0.357	72.4	0.6317	0.0000	SURCHARGED
15 minute winter	S36	12	129.960	0.377	79.2	0.6666	0.0000	SURCHARGED
15 minute winter	S37	12	129.942	0.392	81.7	0.6926	0.0000	SURCHARGED
15 minute winter	S38	11	129.924	0.407	93.4	0.7197	0.0000	SURCHARGED
15 minute winter	S39	11	129.899	0.415	99.0	0.7335	0.0000	SURCHARGED
15 minute winter	S40	11	129.868	0.425	108.5	0.7508	0.0000	SURCHARGED
15 minute winter	S41	11	129.834	0.424	111.2	0.7490	0.0000	SURCHARGED
240 minute winter	S42	232	129.796	0.454	28.3	0.8029	0.0000	SURCHARGED
240 minute winter	HW4	232	129.798	0.448	74.1	0.6409	0.0000	OK
240 minute winter	S43 FCU	232	129.796	0.536	27.8	3.7910	0.0000	SURCHARGED
120 minute summer	S44	94	129.300	0.108	23.5	0.1539	0.0000	OK
60 minute winter	Ex. MH	53	129.178	0.103	23.5	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	S25	5.002	S26	16.7	0.629	0.243	0.1825	
15 minute winter	S26	5.003	S27	16.8	0.615	0.243	0.2174	
15 minute winter	S27	5.004	HW2	19.9	0.739	0.289	0.4581	
240 minute winter	HW2	Flow through pond	HW4	16.1	0.015	0.000	651.5432	
240 minute winter	S28	6.000	S29	1.0	0.037	0.015	0.4558	
240 minute winter	S29	6.001	S30	1.6	0.041	0.024	0.5352	
240 minute winter	S30	6.002	HW3	2.3	0.040	0.033	1.1392	
240 minute winter	HW3	Flow through pond	HW4	16.1	0.015	0.000	651.5432	
15 minute winter	S31	7.000	S32	-4.7	-0.128	-0.068	1.4107	
15 minute winter	S32	7.001	S33	16.9	0.368	0.245	0.5778	
15 minute winter	S33	7.002	S34	58.2	0.989	0.843	1.7290	
15 minute winter	S34	7.003	S35	65.5	0.676	0.459	0.6901	
15 minute winter	S35	7.004	S36	66.5	0.682	0.465	1.1239	
15 minute winter	S36	7.005	S37	76.1	0.740	0.533	1.1126	
15 minute winter	S37	7.006	S38	81.3	0.730	0.569	1.1238	
15 minute winter	S38	7.007	S39	92.5	0.790	0.647	1.1126	
15 minute winter	S39	7.008	S40	98.3	0.785	0.688	1.3943	
15 minute winter	S40	7.009	S41	107.9	0.833	0.755	1.1126	
15 minute winter	S41	7.010	S42	110.9	0.787	0.776	2.2829	
240 minute winter	S42	7.011	S43 FCU	27.8	0.338	0.188	2.6021	
240 minute winter	HW4	1.009	S43 FCU	22.9	0.197	0.143	5.7208	
240 minute winter	HW4	Infiltration		0.0				
240 minute winter	S43 FCU	1.010	S44	23.5	0.839	0.204	0.5705	
120 minute summer	S44	5.013	Ex. MH	23.5	0.930	0.169	0.6059	428.9

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Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.51%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S1	10	131.063	0.729	21.4	1.0425	0.0000	SURCHARGED
15 minute winter	S2	10	131.000	0.860	67.5	1.2307	2.0419	FLOOD
15 minute winter	S3	10	131.098	0.908	3.8	1.2990	0.0000	FLOOD RISK
15 minute winter	S4	10	131.001	0.879	66.0	1.2578	0.0000	FLOOD RISK
15 minute winter	S5	10	130.875	0.889	107.1	1.5709	13.9304	FLOOD
15 minute winter	S6	10	130.867	0.986	77.7	1.7417	0.0000	FLOOD RISK
15 minute winter	S7	11	130.969	0.788	25.6	1.1276	0.0000	FLOOD RISK
15 minute winter	S8	10	130.976	0.818	28.7	1.1706	0.0000	FLOOD RISK
15 minute winter	S9	10	130.965	0.843	23.7	1.2068	0.0000	FLOOD RISK
30 minute winter	S10	18	130.960	0.860	41.7	1.2307	0.2441	FLOOD
15 minute summer	S11	11	130.940	0.870	52.9	1.2450	0.1903	FLOOD
15 minute winter	S12	11	130.910	0.874	69.6	1.2507	3.1957	FLOOD
15 minute winter	S13	10	130.885	0.884	50.1	1.2650	1.0683	FLOOD
30 minute winter	S14	18	130.865	0.888	55.2	1.2707	3.7145	FLOOD
15 minute winter	S15	10	130.850	0.900	48.1	1.2879	0.4601	FLOOD
15 minute winter	S16	10	130.830	0.908	105.6	1.2993	18.5419	FLOOD
15 minute winter	S17	10	130.849	1.023	117.3	1.8083	0.0000	FLOOD RISK
15 minute winter	S18	10	130.854	1.172	128.8	2.0715	0.0000	FLOOD RISK
15 minute summer	S19	11	130.946	0.984	57.4	1.4075	0.0000	FLOOD RISK
15 minute summer	S20	11	130.929	1.200	91.5	1.7174	0.0000	FLOOD RISK
15 minute summer	S21	11	130.837	1.215	186.6	2.1473	0.0000	FLOOD RISK
15 minute winter	S22	11	130.489	1.038	280.4	1.8340	0.0000	SURCHARGED
360 minute winter	HW1	352	130.156	0.806	68.7	1.4247	0.0000	OK
15 minute summer	S23	1	130.267	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S24	11	130.191	0.120	31.4	0.1724	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	S1	1.000	S2	31.0	0.403	0.450	3.4666	
15 minute winter	S2	1.001	S4	51.0	0.743	0.740	0.3182	
15 minute winter	S3	2.000	S4	6.6	0.156	0.095	1.1431	
15 minute winter	S4	1.002	S5	63.3	0.869	0.918	1.0932	
15 minute winter	S5	1.003	S6	55.0	0.713	0.385	3.5628	
15 minute winter	S6	1.004	S17	77.8	0.679	0.545	1.8746	
15 minute winter	S7	3.000	S8	-25.6	-0.322	-0.372	0.4087	
15 minute winter	S8	3.001	S9	-17.5	0.310	-0.254	0.6445	
15 minute winter	S9	3.002	S10	24.5	0.362	0.355	0.3849	
30 minute winter	S10	3.003	S11	37.4	0.535	0.542	0.5406	
15 minute summer	S11	3.004	S12	49.8	0.626	0.722	0.6117	
15 minute winter	S12	3.005	S13	46.1	0.669	0.668	0.6353	
15 minute winter	S13	3.006	S14	46.4	0.635	0.673	0.4311	
30 minute winter	S14	3.007	S15	42.8	0.693	0.621	0.4839	
15 minute winter	S15	3.008	S16	52.2	0.723	0.756	0.4948	
15 minute winter	S16	3.009	S17	58.4	0.884	0.846	0.3738	
15 minute winter	S17	1.005	S18	120.8	0.916	0.846	4.8553	
15 minute winter	S18	1.006	S21	132.5	0.941	0.927	2.0422	
15 minute summer	S19	4.000	S20	-57.4	-0.745	-0.832	4.1760	
15 minute summer	S20	4.001	S21	88.6	1.114	1.284	0.5772	
15 minute summer	S21	1.007	S22	188.7	1.340	1.321	5.7744	
15 minute winter	S22	1.008	HW1	275.9	1.959	1.932	3.4074	
360 minute winter	HW1	Flow through pond	HW4	-25.7	0.015	0.000	1373.9152	
15 minute summer	S23	5.000	S24	0.0	0.000	0.000	0.9257	
15 minute winter	S24	5.001	S25	30.2	0.705	0.437	0.2965	

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Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.51%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S25	11	130.161	0.121	30.2	0.1725	0.0000	OK
360 minute winter	S26	352	130.155	0.145	4.3	0.2068	0.0000	OK
360 minute winter	S27	352	130.155	0.180	5.2	0.2569	0.0000	OK
360 minute winter	HW2	352	130.155	0.772	5.2	1.1052	0.0000	OK
360 minute winter	S28	352	130.155	0.445	0.6	0.6371	0.0000	SURCHARGED
360 minute winter	S29	352	130.155	0.496	0.8	0.7097	0.0000	SURCHARGED
360 minute winter	S30	352	130.155	0.536	1.6	0.7668	0.0000	SURCHARGED
360 minute winter	HW3	352	130.154	0.771	0.7	1.1032	0.0000	OK
15 minute winter	S31	11	130.978	0.970	42.1	1.3881	1.0315	FLOOD
15 minute winter	S32	11	130.985	1.143	56.5	1.6350	0.0000	FLOOD RISK
15 minute winter	S33	11	130.983	1.174	96.9	1.6807	0.0000	FLOOD RISK
15 minute winter	S34	12	130.815	1.179	116.8	2.0839	0.0000	SURCHARGED
15 minute winter	S35	12	130.792	1.176	122.2	2.0787	0.0000	SURCHARGED
15 minute winter	S36	12	130.756	1.173	142.0	2.0727	0.0000	SURCHARGED
15 minute winter	S37	12	130.704	1.154	148.8	2.0395	0.0000	SURCHARGED
15 minute winter	S38	12	130.643	1.126	168.9	1.9896	0.0000	SURCHARGED
15 minute winter	S39	12	130.562	1.078	176.0	1.9052	0.0000	SURCHARGED
15 minute winter	S40	12	130.457	1.014	192.6	1.7921	0.0000	SURCHARGED
15 minute winter	S41	12	130.347	0.937	198.4	1.6557	0.0000	SURCHARGED
15 minute winter	S42	12	130.161	0.819	234.9	1.4467	0.0000	SURCHARGED
360 minute winter	HW4	352	130.155	0.805	108.4	1.1519	0.0000	SURCHARGED
360 minute winter	S43 FCU	352	130.154	0.893	38.5	6.3159	0.0000	SURCHARGED
15 minute winter	S44	9	129.300	0.108	23.5	0.1540	0.0000	OK
15 minute summer	Ex. MH	16	129.178	0.103	23.5	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	S25	5.002	S26	30.3	0.706	0.439	0.2953	
360 minute winter	S26	5.003	S27	4.3	0.437	0.062	0.4851	
360 minute winter	S27	5.004	HW2	5.2	0.513	0.075	1.2521	
360 minute winter	HW2	Flow through pond	HW4	-25.7	0.015	0.000	1373.9152	
360 minute winter	S28	6.000	S29	-0.6	-0.026	-0.009	0.9049	
360 minute winter	S29	6.001	S30	-0.8	-0.030	-0.012	0.7159	
360 minute winter	S30	6.002	HW3	-1.6	-0.028	-0.024	1.2313	
360 minute winter	HW3	Flow through pond	HW4	-25.7	0.015	0.000	1373.9152	
15 minute winter	S31	7.000	S32	-42.1	-0.643	-0.611	2.9630	
15 minute winter	S32	7.001	S33	-35.8	0.483	-0.519	0.6019	
15 minute winter	S33	7.002	S34	90.9	1.143	1.318	1.7308	
15 minute winter	S34	7.003	S35	110.4	0.784	0.773	0.6901	
15 minute winter	S35	7.004	S36	117.1	0.832	0.820	1.1239	
15 minute winter	S36	7.005	S37	137.0	0.973	0.959	1.1126	
15 minute winter	S37	7.006	S38	144.2	1.024	1.009	1.1238	
15 minute winter	S38	7.007	S39	166.0	1.179	1.162	1.1126	
15 minute winter	S39	7.008	S40	176.9	1.256	1.239	1.3943	
15 minute winter	S40	7.009	S41	193.5	1.374	1.355	1.1126	
15 minute winter	S41	7.010	S42	199.1	1.414	1.394	2.2829	
15 minute winter	S42	7.011	S43 FCU	235.4	1.672	1.595	2.6021	
360 minute winter	HW4	1.009	S43 FCU	21.5	0.136	0.134	5.7238	
360 minute winter	HW4	Infiltration		0.0				
360 minute winter	S43 FCU	1.010	S44	23.5	0.839	0.204	0.5704	
15 minute winter	S44	5.013	Ex. MH	23.5	0.930	0.169	0.6059	346.4