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Catherine House Old Harborough Road Brixworth NN6 9BX	Norton Juxta + 40% CC with Urban Creep 82326	
Date 15/03/2024	Designed by NN	
File 82326 FULL NETWORK WITH URBAN	Checked by MAS	
Micro Drainage		Network 2020.1.3

Time Area Diagram for Storm

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.864	4-8	0.463

Total Area Contributing (ha) = 1.327

Total Pipe Volume (m³) = 24.712

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Date 15/03/2024	Designed by NN	
File 82326 FULL NETWORK WITH URBAN	Checked by MAS	
Micro Drainage	Network 2020.1.3	

Existing Network Details for Storm

- Indicates pipe length does not match coordinates

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type
S9.000	11.397	0.114	100.0	0.002	4.00	0.0	0.600	o	150	Pipe/Conduit
S9.001	9.676	0.097	99.8	0.009	0.00	0.0	0.600	o	150	Pipe/Conduit
S9.002	8.836	0.089	99.3	0.003	0.00	0.0	0.600	o	150	Pipe/Conduit
S9.003	4.858	0.049	99.1	0.001	0.00	0.0	0.600	o	150	Pipe/Conduit
S9.004	5.546	0.056	99.0	0.020	0.00	0.0	0.600	o	150	Pipe/Conduit
S10.000	5.206	0.418	12.5	0.004	4.00	0.0	0.600	o	150	Pipe/Conduit
S9.005	19.039	0.296	64.3	0.007	0.00	0.0	0.600	o	150	Pipe/Conduit
S11.000	15.806	0.650	24.3	0.001	4.00	0.0	0.600	o	100	Pipe/Conduit
S11.001	30.521	0.306	99.7	0.008	0.00	0.0	0.600	o	150	Pipe/Conduit
S11.002	10.906	0.114	95.7	0.009	0.00	0.0	0.600	o	150	Pipe/Conduit
S11.003	5.735	0.505	11.4	0.008	0.00	0.0	0.600	o	150	Pipe/Conduit
S11.004	6.068	0.284	21.4	0.007	0.00	0.0	0.600	o	150	Pipe/Conduit
S12.000	16.751	0.881	19.0	0.003	5.00	0.0	0.600	o	150	Pipe/Conduit
S12.001	19.110	0.192	99.5	0.009	0.00	0.0	0.600	o	150	Pipe/Conduit
S11.005	7.216	0.491	14.7	0.017	0.00	0.0	0.600	o	150	Pipe/Conduit
S13.000	5.639	0.038	148.4	0.006	5.00	0.0	0.600	o	150	Pipe/Conduit
S13.001	2.479#	0.182	13.6	0.003	0.00	0.0	0.600	o	150	Pipe/Conduit
S13.002	27.520#	1.150	23.9	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit

Network Results Table

PN	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Vel (m/s)	Cap (l/s)
S9.000	109.851	0.002	0.0	1.00	17.8
S9.001	109.737	0.011	0.0	1.01	17.8
S9.002	109.640	0.015	0.0	1.01	17.8
S9.003	109.551	0.016	0.0	1.01	17.8
S9.004	109.502	0.131	0.0	1.01	17.8
S10.000	109.864	0.004	0.0	2.87	50.7
S9.005	109.446	0.142	0.0	1.26	22.2
S11.000	111.750	0.001	0.0	1.57	12.3
S11.001	111.100	0.009	0.0	1.01	17.8
S11.002	110.794	0.018	0.0	1.03	18.2
S11.003	110.680	0.026	0.0	3.01	53.1
S11.004	110.175	0.033	0.0	2.19	38.7
S12.000	110.964	0.003	0.0	2.32	41.0
S12.001	110.083	0.011	0.0	1.01	17.8
S11.005	109.891	0.061	0.0	2.64	46.7
S13.000	110.770	0.006	0.0	0.82	14.5
S13.001	110.732	0.010	0.0	2.74	48.5
S13.002	110.550	0.010	0.0	2.69	106.8

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Date 15/03/2024	Designed by NN	
File 82326 FULL NETWORK WITH URBAN	Checked by MAS	
Micro Drainage		Network 2020.1.3

Existing Network Details for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type
S11.006	8.007	0.250	32.0	0.014	0.00	0.0	0.600	o	150	Pipe/Conduit
S9.006	17.129	0.200	85.6	0.008	0.00	0.0	0.600	o	300	Pipe/Conduit
S9.007	12.213	0.413	29.6	0.007	0.00	0.0	0.600	o	300	Pipe/Conduit
S14.000	23.248	0.233	99.8	0.002	4.00	0.0	0.600	o	150	Pipe/Conduit
S14.001	17.687	0.177	99.9	0.006	0.00	0.0	0.600	o	150	Pipe/Conduit
S14.002	16.625	0.167	99.6	0.006	0.00	0.0	0.600	o	150	Pipe/Conduit
S14.003	10.476	0.275	38.1	0.008	0.00	0.0	0.600	o	150	Pipe/Conduit
S14.004	12.823	0.291	44.1	0.004	0.00	0.0	0.600	o	150	Pipe/Conduit
S15.000	9.258	0.100	92.6	0.002	4.00	0.0	0.600	o	150	Pipe/Conduit
S15.001	5.218	0.280	18.6	0.005	0.00	0.0	0.600	o	150	Pipe/Conduit
S16.000	9.919	0.100	99.2	0.005	4.00	0.0	0.600	o	150	Pipe/Conduit
S15.002	12.502	0.127	98.4	0.009	0.00	0.0	0.600	o	150	Pipe/Conduit
S15.003	24.327	0.446	54.5	0.006	0.00	0.0	0.600	o	150	Pipe/Conduit
S14.005	9.077	0.367	24.7	0.008	0.00	0.0	0.600	o	150	Pipe/Conduit
S17.000	6.098	0.190	32.1	0.012	4.00	0.0	0.600	o	100	Pipe/Conduit
S17.001	5.676	0.310	18.3	0.006	0.00	0.0	0.600	o	100	Pipe/Conduit
S18.000	34.838#	0.697	50.0	0.000	5.00	0.0	0.600	o	225	Pipe/Conduit

Network Results Table

PN	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Vel (m/s)	Cap (l/s)
S11.006	109.400	0.085	0.0	1.79	31.5
S9.006	109.150	0.235	0.0	2.01	142.3
S9.007	108.750	0.241	0.0	2.90	205.1
S14.000	112.000	0.002	0.0	1.01	17.8
S14.001	111.767	0.008	0.0	1.01	17.8
S14.002	111.590	0.015	0.0	1.01	17.8
S14.003	111.423	0.022	0.0	1.64	28.9
S14.004	111.148	0.026	0.0	1.52	26.9
S15.000	111.810	0.002	0.0	1.04	18.5
S15.001	111.710	0.006	0.0	2.34	41.4
S16.000	111.530	0.005	0.0	1.01	17.8
S15.002	111.430	0.020	0.0	1.01	17.9
S15.003	111.303	0.027	0.0	1.36	24.1
S14.005	110.857	0.061	0.0	2.03	35.9
S17.000	110.990	0.012	0.0	1.37	10.7
S17.001	110.800	0.018	0.0	1.81	14.2
S18.000	111.187	0.000	0.0	1.85	73.7

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Date 15/03/2024	Designed by NN	
File 82326 FULL NETWORK WITH URBAN	Checked by MAS	
Micro Drainage		Network 2020.1.3

Existing Network Details for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type
S14.006	14.219	0.563	25.3	0.022	0.00	0.0	0.600	o	225	Pipe/Conduit
S14.007	1.829	0.563	3.3	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit
S14.008	4.294#	0.500	8.6	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit
S14.009	21.148	0.528	40.1	0.009	0.00	0.0	0.600	o	225	Pipe/Conduit
S19.000	9.802	0.109	89.9	0.002	4.00	0.0	0.600	o	150	Pipe/Conduit
S19.001	14.239	0.143	99.6	0.002	0.00	0.0	0.600	o	150	Pipe/Conduit
S19.002	12.772	0.128	99.8	0.003	0.00	0.0	0.600	o	150	Pipe/Conduit
S19.003	7.778	1.270	6.1	0.004	0.00	0.0	0.600	o	150	Pipe/Conduit
S20.000	12.649	0.264	47.9	0.004	4.00	0.0	0.600	o	100	Pipe/Conduit
S21.000	11.544	0.116	99.5	0.002	4.00	0.0	0.600	o	150	Pipe/Conduit
S21.001	4.356	0.044	99.0	0.012	0.00	0.0	0.600	o	150	Pipe/Conduit
S20.001	18.794	1.286	14.6	0.004	0.00	0.0	0.600	o	150	Pipe/Conduit
S19.004	2.976	0.315	9.4	0.002	0.00	0.0	0.600	o	150	Pipe/Conduit
S19.005	17.619	1.050	16.8	0.008	0.00	0.0	0.600	o	225	Pipe/Conduit
S22.000	11.202	0.135	83.0	0.001	4.00	0.0	0.600	o	150	Pipe/Conduit
S22.001	8.373	0.084	99.7	0.004	0.00	0.0	0.600	o	150	Pipe/Conduit
S22.002	0.937	0.010	93.7	0.012	0.00	0.0	0.600	o	150	Pipe/Conduit
S22.003	9.388	0.094	99.9	0.020	0.00	0.0	0.600	o	150	Pipe/Conduit
S22.004	9.590	0.296	32.4	0.002	0.00	0.0	0.600	o	150	Pipe/Conduit

Network Results Table

PN	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Vel (m/s)	Cap (l/s)
S14.006	110.490	0.101	0.0	2.61	103.9
S14.007	109.928	0.101	0.0	7.31	290.6
S14.008	109.365	0.101	0.0	4.49	178.6
S14.009	108.865	0.110	0.0	2.07	82.4
S19.000	109.150	0.002	0.0	1.06	18.7
S19.001	109.041	0.004	0.0	1.01	17.8
S19.002	108.898	0.007	0.0	1.01	17.8
S19.003	108.770	0.011	0.0	4.10	72.4
S20.000	109.050	0.004	0.0	1.12	8.8
S21.000	108.946	0.002	0.0	1.01	17.8
S21.001	108.830	0.013	0.0	1.01	17.8
S20.001	108.786	0.022	0.0	2.65	46.8
S19.004	107.500	0.035	0.0	3.30	58.3
S19.005	107.185	0.043	0.0	3.21	127.6
S22.000	108.835	0.001	0.0	1.10	19.5
S22.001	108.700	0.005	0.0	1.01	17.8
S22.002	108.616	0.017	0.0	1.04	18.4
S22.003	108.606	0.132	0.0	1.01	17.8
S22.004	108.512	0.133	0.0	1.77	31.4

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Date 15/03/2024	Designed by NN	
File 82326 FULL NETWORK WITH URBAN	Checked by MAS	
Micro Drainage		Network 2020.1.3

Existing Network Details for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type
S23.000	11.198	0.525	21.3	0.001	4.00	0.0	0.600	o	100	Pipe/Conduit
S22.005	5.207	1.031	5.1	0.009	0.00	0.0	0.600	o	150	Pipe/Conduit
S22.006	6.019	1.050	5.7	0.009	0.00	0.0	0.600	o	225	Pipe/Conduit
S24.000	8.006	0.081	98.8	0.001	4.00	0.0	0.600	o	150	Pipe/Conduit
S24.001	7.155	0.072	99.4	0.001	0.00	0.0	0.600	o	150	Pipe/Conduit
S24.002	1.647	0.017	96.9	0.015	0.00	0.0	0.600	o	150	Pipe/Conduit
S24.003	16.209	0.676	24.0	0.020	0.00	0.0	0.600	o	150	Pipe/Conduit
S25.000	7.063	0.500	14.1	0.004	4.00	0.0	0.600	o	100	Pipe/Conduit
S25.001	19.580	0.196	99.9	0.002	0.00	0.0	0.600	o	150	Pipe/Conduit
S24.004	6.238	0.469	13.3	0.010	0.00	0.0	0.600	o	150	Pipe/Conduit
S24.005	3.211	0.100	32.1	0.005	0.00	0.0	0.600	o	225	Pipe/Conduit
S19.006	28.927	0.171	169.2	0.020	0.00	0.0	0.600	o	225	Pipe/Conduit
S26.000	21.955	1.124	19.5	0.012	4.00	0.0	0.600	o	225	Pipe/Conduit
S26.001	19.120	1.200	15.9	0.007	0.00	0.0	0.600	o	225	Pipe/Conduit
S26.002	5.131	0.051	100.6	0.009	0.00	0.0	0.600	o	225	Pipe/Conduit
S26.003	29.501	0.295	100.0	0.011	0.00	0.0	0.600	o	225	Pipe/Conduit
S19.007	2.173	0.013	167.2	0.130	0.00	0.0	0.600	o	225	Pipe/Conduit
S19.008	50.535	-2.400	-21.1	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit

Network Results Table

PN	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Vel (m/s)	Cap (l/s)
S23.000	108.741	0.001	0.0	1.68	13.2
S22.005	108.216	0.143	0.0	4.52	79.8
S22.006	107.185	0.152	0.0	5.50	218.7
S24.000	107.550	0.001	0.0	1.01	17.9
S24.001	107.469	0.002	0.0	1.01	17.8
S24.002	107.397	0.016	0.0	1.02	18.0
S24.003	107.380	0.131	0.0	2.07	36.5
S25.000	107.400	0.004	0.0	2.07	16.2
S25.001	106.900	0.006	0.0	1.01	17.8
S24.004	106.704	0.147	0.0	2.78	49.1
S24.005	106.235	0.152	0.0	2.32	92.1
S19.006	106.135	0.462	0.0	1.00	39.9
S26.000	108.634	0.012	0.0	2.97	118.3
S26.001	107.510	0.019	0.0	3.29	131.0
S26.002	106.310	0.028	0.0	1.30	51.8
S26.003	106.259	0.039	0.0	1.31	52.0
S19.007	105.964	0.631	0.0	1.01	40.1
S19.008	105.951	0.631	0.0	0.00	0.0

Existing Network Details for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type
S19.009	5.131#	0.306	16.8	0.020	0.00	0.0	0.600	o	300	Pipe/Conduit
S19.010	11.377	0.007	1625.3	0.020	0.00	0.0	0.600	o	225	Pipe/Conduit
S9.008	4.280#	0.026	164.6	0.020	0.00	0.0	0.600	o	300	Pipe/Conduit
S9.009	7.450	-1.889	-3.9	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit

Network Results Table

PN	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Vel (m/s)	Cap (l/s)
S19.009	108.650	0.746	0.0	3.86	272.7
S19.010	108.344	0.861	0.0	0.32	12.6
S9.008	108.337	1.327	0.0	1.22	86.4
S9.009	108.311	1.327	0.0	0.00	0.0

Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam., L*W (mm)	PN	Pipe Out Invert Level (m)	Diameter (mm)	PN	Pipes In Invert Level (m)	Diameter (mm)	Backdrop (mm)
SD6	109.965	1.621	Sealed Manhole	1200	S19.010	108.344	225	S19.009	108.344	300	
SPond	109.965	1.628	Open Manhole	1200	S9.008	108.337	300	S9.007	108.337	300	
								S14.009	108.337	225	
								S19.010	108.337	225	
S35 Pump	109.900	1.589	Open Manhole	1200	S9.009	108.311	300	S9.008	108.311	300	
SDitch	111.000	0.800	Open Manhole	0		OUTFALL		S9.009	110.200	300	

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
SRE4	1330.543	1934.712	1330.543	1934.712	Required	
S27	1325.464	1944.915	1325.464	1944.915	Required	
S28	1325.494	1954.591	1325.494	1954.591	Required	
S29	1333.456	1958.424	1333.456	1958.424	Required	
S30	1338.200	1959.470	1338.200	1959.470	Required	
S18	1336.990	1952.655	1336.990	1952.655	Required	
S31	1341.595	1955.085	1341.595	1955.085	Required	
SRE2	1354.924	1892.525	1354.924	1892.525	Required	
S19	1344.599	1904.493	1344.599	1904.493	Required	
S22	1333.370	1932.874	1333.370	1932.874	Required	
S23	1343.087	1937.825	1343.087	1937.825	Required	
S24	1348.585	1939.455	1348.585	1939.455	Required	
S9	1368.778	1903.455	1368.778	1903.455	Required	

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Date 15/03/2024 File 82326 FULL NETWORK WITH URBAN	Designed by NN Checked by MAS	
Micro Drainage		Network 2020.1.3

Manhole Schedules for Storm

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S17	1357.781	1916.092	1357.781	1916.092	Required	
S20	1351.530	1934.150	1351.530	1934.150	Required	
S15	1372.395	1906.130	1372.395	1906.130	Required	
S16	1367.950	1909.600	1367.950	1909.600	Required	
S39	1368.489	1911.538	1368.489	1911.538	Required	
S21	1358.054	1937.234	1358.054	1937.234	Required	
S26	1357.891	1945.239	1357.891	1945.239	Required	
SD4	1374.573	1949.126			No Entry	
SRE1	1412.066	1867.592	1412.066	1867.592	Required	
S10	1390.645	1858.556	1390.645	1858.556	Required	
S11	1382.229	1874.112	1382.229	1874.112	Required	
S12	1369.698	1885.038	1369.698	1885.038	Required	
S13	1363.236	1893.285	1363.236	1893.285	Required	
S1	1407.653	1877.533	1407.653	1877.533	Required	
S2	1399.708	1872.781	1399.708	1872.781	Required	
S4	1405.002	1882.026	1405.002	1882.026	Required	
S3	1396.508	1876.903	1396.508	1876.903	Required	
S5	1390.193	1887.693	1390.193	1887.693	Required	

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Manhole Schedules for Storm

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S6	1371.416	1903.160	1371.416	1903.160	Required	
S7	1379.533	1901.620	1379.533	1901.620	Required	
S8	1374.475	1905.025	1374.475	1905.025	Required	
S25	1402.649	1883.405	1402.649	1883.405	Required	
S14	1377.752	1909.660	1377.752	1909.660	Required	
S37	1387.427	1920.080	1387.427	1920.080	Required	
S66	1388.590	1921.492	1388.590	1921.492	Required	
SD5	1392.341	1925.339			No Entry	
SRE5	1321.408	1958.689	1321.408	1958.689	Required	
S40	1319.026	1968.197	1319.026	1968.197	Required	
S43	1319.440	1982.430	1319.440	1982.430	Required	
S44	1331.790	1985.685	1331.790	1985.685	Required	
SRE6	1327.919	1971.102	1327.919	1971.102	Required	
S38	1331.008	1961.327	1331.008	1961.327	Required	
S41	1337.249	1971.038	1337.249	1971.038	Required	
S42	1340.164	1974.275	1340.164	1974.275	Required	
S46	1335.551	1992.494	1335.551	1992.494	Required	
SD1	1338.441	1993.204			No Entry	

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Micro Drainage		Network 2020.1.3

Manhole Schedules for Storm

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
SRE7	1343.849	1973.547	1343.849	1973.547	Required	
S51	1354.718	1976.257	1354.718	1976.257	Required	
S52	1362.842	1978.283	1362.842	1978.283	Required	
S53	1363.751	1978.510	1363.751	1978.510	Required	
S50	1361.656	1987.661	1361.656	1987.661	Required	
SRE8	1341.387	1986.875	1341.387	1986.875	Required	
S48	1352.256	1989.566	1352.256	1989.566	Required	
SD2	1351.069	1994.636			No Entry	
SRE9	1382.049	1982.153	1382.049	1982.153	Required	
S58	1374.263	1980.291	1374.263	1980.291	Required	
S56	1367.347	1982.126	1367.347	1982.126	Required	
S55	1365.737	1981.778	1365.737	1981.778	Required	
S60	1382.518	1994.867	1382.518	1994.867	Required	
S59	1380.928	2001.749	1380.928	2001.749	Required	
S54	1361.814	1997.504	1361.814	1997.504	Required	
SD3	1355.747	1996.055			No Entry	
STank	1355.015	1999.181	1355.015	1999.181	Required	
S32	1353.123	1956.462	1353.123	1956.462	Required	

Manhole Schedules for Storm

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S33	1372.560	1966.671	1372.560	1966.671	Required	
S36	1390.869	1972.180	1390.869	1972.180	Required	
S37	1390.234	1977.272	1390.234	1977.272	Required	
S61	1383.149	2005.909	1383.149	2005.909	Required	
S62 Pump	1385.260	2006.427	1385.260	2006.427	Required	
S34	1375.739	1956.797	1375.739	1956.797	Required	
SD6	1377.412	1952.741			No Entry	
SPond	1386.265	1945.595	1386.265	1945.595	Required	
S35 Pump	1391.267	1948.240	1391.267	1948.240	Required	
SDitch	1395.875	1954.093			No Entry	

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Micro Drainage		Network 2020.1.3

PIPELINE SCHEDULES for Storm

Upstream Manhole

- Indicates pipe length does not match coordinates

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S9.000	o	150	SRE4	110.451	109.851	0.450	Open Manhole	300
S9.001	o	150	S27	110.630	109.737	0.743	Open Manhole	450
S9.002	o	150	S28	110.510	109.640	0.720	Open Manhole	450
S9.003	o	150	S29	110.450	109.551	0.749	Open Manhole	450
S9.004	o	150	S30	110.265	109.502	0.613	Open Manhole	450
S10.000	o	150	S18	110.464	109.864	0.450	Open Manhole	300
S9.005	o	150	S31	110.203	109.446	0.607	Open Manhole	450
S11.000	o	100	SRE2	112.350	111.750	0.500	Open Manhole	300
S11.001	o	150	S19	111.800	111.100	0.550	Open Manhole	450
S11.002	o	150	S22	112.200	110.794	1.256	Open Manhole	600
S11.003	o	150	S23	111.350	110.680	0.520	Open Manhole	450
S11.004	o	150	S24	110.975	110.175	0.650	Open Manhole	450
S12.000	o	150	S9	111.714	110.964	0.600	Open Manhole	450
S12.001	o	150	S17	111.900	110.083	1.667	Open Manhole	600
S11.005	o	150	S20	110.975	109.891	0.934	Open Manhole	450
S13.000	o	150	S15	111.520	110.770	0.600	Open Manhole	450
S13.001	o	150	S16	111.610	110.732	0.728	Open Manhole	450
S13.002	o	225	S39	111.550	110.550	0.775	Open Manhole	600

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S9.000	11.397	100.0	S27	110.630	109.737	0.743	Open Manhole	450
S9.001	9.676	99.8	S28	110.510	109.640	0.720	Open Manhole	450
S9.002	8.836	99.3	S29	110.450	109.551	0.749	Open Manhole	450
S9.003	4.858	99.1	S30	110.265	109.502	0.613	Open Manhole	450
S9.004	5.546	99.0	S31	110.203	109.446	0.607	Open Manhole	450
S10.000	5.206	12.5	S31	110.203	109.446	0.607	Open Manhole	450
S9.005	19.039	64.3	S26	110.335	109.150	1.035	Open Manhole	1200
S11.000	15.806	24.3	S19	111.800	111.100	0.600	Open Manhole	450
S11.001	30.521	99.7	S22	112.200	110.794	1.256	Open Manhole	600
S11.002	10.906	95.7	S23	111.350	110.680	0.520	Open Manhole	450
S11.003	5.735	11.4	S24	110.975	110.175	0.650	Open Manhole	450
S11.004	6.068	21.4	S20	110.975	109.891	0.934	Open Manhole	450
S12.000	16.751	19.0	S17	111.900	110.083	1.667	Open Manhole	600
S12.001	19.110	99.5	S20	110.975	109.891	0.934	Open Manhole	450
S11.005	7.216	14.7	S21	110.738	109.400	1.188	Open Manhole	1200
S13.000	5.639	148.4	S16	111.610	110.732	0.728	Open Manhole	450
S13.001	2.479#	13.6	S39	111.550	110.550	0.850	Open Manhole	600
S13.002	27.520#	23.9	S21	110.738	109.400	1.113	Open Manhole	1200

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Micro Drainage		Network 2020.1.3

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S11.006	o	150	S21	110.738	109.400	1.188	Open Manhole	1200
S9.006	o	300	S26	110.335	109.150	0.885	Open Manhole	1200
S9.007	o	300	SD4	109.965	108.750	0.915	Sealed Manhole	1200
S14.000	o	150	SRE1	112.600	112.000	0.450	Open Manhole	300
S14.001	o	150	S10	112.850	111.767	0.933	Open Manhole	450
S14.002	o	150	S11	112.450	111.590	0.710	Open Manhole	450
S14.003	o	150	S12	112.125	111.423	0.552	Open Manhole	450
S14.004	o	150	S13	112.000	111.148	0.702	Open Manhole	450
S15.000	o	150	S1	112.567	111.810	0.607	Open Manhole	450
S15.001	o	150	S2	112.564	111.710	0.704	Open Manhole	450
S16.000	o	150	S4	112.285	111.530	0.605	Open Manhole	450
S15.002	o	150	S3	112.596	111.430	1.016	Open Manhole	450
S15.003	o	150	S5	112.150	111.303	0.697	Open Manhole	450
S14.005	o	150	S6	111.807	110.857	0.800	Open Manhole	450
S17.000	o	100	S7	111.690	110.990	0.600	Open Manhole	450
S17.001	o	100	S8	111.555	110.800	0.655	Open Manhole	450

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S11.006	8.007	32.0	S26	110.335	109.150	1.035	Open Manhole	1200
S9.006	17.129	85.6	SD4	109.965	108.950	0.715	Sealed Manhole	1200
S9.007	12.213	29.6	SPond	109.965	108.337	1.328	Open Manhole	1200
S14.000	23.248	99.8	S10	112.850	111.767	0.933	Open Manhole	450
S14.001	17.687	99.9	S11	112.450	111.590	0.710	Open Manhole	450
S14.002	16.625	99.6	S12	112.125	111.423	0.552	Open Manhole	450
S14.003	10.476	38.1	S13	112.000	111.148	0.702	Open Manhole	450
S14.004	12.823	44.1	S6	111.807	110.857	0.800	Open Manhole	450
S15.000	9.258	92.6	S2	112.564	111.710	0.704	Open Manhole	450
S15.001	5.218	18.6	S3	112.596	111.430	1.016	Open Manhole	450
S16.000	9.919	99.2	S3	112.596	111.430	1.016	Open Manhole	450
S15.002	12.502	98.4	S5	112.150	111.303	0.697	Open Manhole	450
S15.003	24.327	54.5	S6	111.807	110.857	0.800	Open Manhole	450
S14.005	9.077	24.7	S14	111.445	110.490	0.805	Open Manhole	1200
S17.000	6.098	32.1	S8	111.555	110.800	0.655	Open Manhole	450
S17.001	5.676	18.3	S14	111.445	110.490	0.855	Open Manhole	1200

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Micro Drainage		Network 2020.1.3

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S18.000	o	225	S25	112.187	111.187	0.775	Open Manhole	600
S14.006	o	225	S14	111.445	110.490	0.730	Open Manhole	1200
S14.007	o	225	S37	110.705	109.928	0.553	Open Manhole	1200
S14.008	o	225	S66	109.965	109.365	0.375	Open Manhole	1200
S14.009	o	225	SD5	109.965	108.865	0.875	Sealed Manhole	1200
S19.000	o	150	SRE5	109.750	109.150	0.450	Open Manhole	300
S19.001	o	150	S40	109.750	109.041	0.559	Open Manhole	450
S19.002	o	150	S43	109.550	108.898	0.502	Open Manhole	450
S19.003	o	150	S44	109.539	108.770	0.619	Open Manhole	450
S20.000	o	100	SRE6	109.650	109.050	0.500	Open Manhole	300
S21.000	o	150	S38	109.696	108.946	0.600	Open Manhole	450
S21.001	o	150	S41	109.700	108.830	0.720	Open Manhole	450
S20.001	o	150	S42	109.550	108.786	0.614	Open Manhole	450
S19.004	o	150	S46	108.100	107.500	0.450	Open Manhole	450
S19.005	o	225	SD1	107.835	107.185	0.425	Sealed Manhole	1200
S22.000	o	150	SRE7	109.435	108.835	0.450	Open Manhole	300
S22.001	o	150	S51	109.451	108.700	0.601	Open Manhole	450
S22.002	o	150	S52	109.451	108.616	0.685	Open Manhole	450

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S18.000	34.838#	50.0	S14	111.445	110.490	0.730	Open Manhole	1200
S14.006	14.219	25.3	S37	110.705	109.928	0.553	Open Manhole	1200
S14.007	1.829	3.3	S66	109.965	109.365	0.375	Open Manhole	1200
S14.008	4.294#	8.6	SD5	109.965	108.865	0.875	Sealed Manhole	1200
S14.009	21.148	40.1	SPond	109.965	108.337	1.403	Open Manhole	1200
S19.000	9.802	89.9	S40	109.750	109.041	0.559	Open Manhole	450
S19.001	14.239	99.6	S43	109.550	108.898	0.502	Open Manhole	450
S19.002	12.772	99.8	S44	109.539	108.770	0.619	Open Manhole	450
S19.003	7.778	6.1	S46	108.100	107.500	0.450	Open Manhole	450
S20.000	12.649	47.9	S42	109.550	108.786	0.664	Open Manhole	450
S21.000	11.544	99.5	S41	109.700	108.830	0.720	Open Manhole	450
S21.001	4.356	99.0	S42	109.550	108.786	0.614	Open Manhole	450
S20.001	18.794	14.6	S46	108.100	107.500	0.450	Open Manhole	450
S19.004	2.976	9.4	SD1	107.835	107.185	0.500	Sealed Manhole	1200
S19.005	17.619	16.8	STank	107.835	106.135	1.475	Open Manhole	1200
S22.000	11.202	83.0	S51	109.451	108.700	0.601	Open Manhole	450
S22.001	8.373	99.7	S52	109.451	108.616	0.685	Open Manhole	450
S22.002	0.937	93.7	S53	109.451	108.606	0.695	Open Manhole	450

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PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S22.003	o	150	S53	109.451	108.606	0.695	Open Manhole	450
S22.004	o	150	S50	109.390	108.512	0.728	Open Manhole	450
S23.000	o	100	SRE8	109.341	108.741	0.500	Open Manhole	300
S22.005	o	150	S48	109.302	108.216	0.936	Open Manhole	450
S22.006	o	225	SD2	107.835	107.185	0.425	Sealed Manhole	1200
S24.000	o	150	SRE9	108.150	107.550	0.450	Open Manhole	300
S24.001	o	150	S58	108.280	107.469	0.661	Open Manhole	450
S24.002	o	150	S56	108.150	107.397	0.603	Open Manhole	450
S24.003	o	150	S55	108.250	107.380	0.720	Open Manhole	450
S25.000	o	100	S60	108.000	107.400	0.500	Open Manhole	300
S25.001	o	150	S59	107.500	106.900	0.450	Open Manhole	450
S24.004	o	150	S54	107.850	106.704	0.996	Open Manhole	450
S24.005	o	225	SD3	107.835	106.235	1.375	Sealed Manhole	1200
S19.006	o	225	STank	107.835	106.135	1.475	Open Manhole	1200
S26.000	o	225	S32	109.984	108.634	1.125	Open Manhole	1200
S26.001	o	225	S33	108.860	107.510	1.125	Open Manhole	1200
S26.002	o	225	S36	107.522	106.310	0.987	Open Manhole	1200
S26.003	o	225	S37	107.565	106.259	1.081	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S22.003	9.388	99.9	S50	109.390	108.512	0.728	Open Manhole	450
S22.004	9.590	32.4	S48	109.302	108.216	0.936	Open Manhole	450
S23.000	11.198	21.3	S48	109.302	108.216	0.986	Open Manhole	450
S22.005	5.207	5.1	SD2	107.835	107.185	0.500	Sealed Manhole	1200
S22.006	6.019	5.7	STank	107.835	106.135	1.475	Open Manhole	1200
S24.000	8.006	98.8	S58	108.280	107.469	0.661	Open Manhole	450
S24.001	7.155	99.4	S56	108.150	107.397	0.603	Open Manhole	450
S24.002	1.647	96.9	S55	108.250	107.380	0.720	Open Manhole	450
S24.003	16.209	24.0	S54	107.850	106.704	0.996	Open Manhole	450
S25.000	7.063	14.1	S59	107.500	106.900	0.500	Open Manhole	450
S25.001	19.580	99.9	S54	107.850	106.704	0.996	Open Manhole	450
S24.004	6.238	13.3	SD3	107.835	106.235	1.450	Sealed Manhole	1200
S24.005	3.211	32.1	STank	107.835	106.135	1.475	Open Manhole	1200
S19.006	28.927	169.2	S61	107.340	105.964	1.151	Open Manhole	1200
S26.000	21.955	19.5	S33	108.860	107.510	1.125	Open Manhole	1200
S26.001	19.120	15.9	S36	107.522	106.310	0.987	Open Manhole	1200
S26.002	5.131	100.6	S37	107.565	106.259	1.081	Open Manhole	1200
S26.003	29.501	100.0	S61	107.340	105.964	1.151	Open Manhole	1200

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PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S19.007	o	225	S61	107.340	105.964	1.151	Open Manhole	1200
S19.008	o	225	S62 Pump	107.240	105.951	1.064	Open Manhole	1200
S19.009	o	300	S34	109.965	108.650	1.015	Open Manhole	1200
S19.010	o	225	SD6	109.965	108.344	1.396	Sealed Manhole	1200
S9.008	o	300	SPond	109.965	108.337	1.328	Open Manhole	1200
S9.009	o	300	S35 Pump	109.900	108.311	1.289	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S19.007	2.173	167.2	S62 Pump	107.240	105.951	1.064	Open Manhole	1200
S19.008	50.535	-21.1	S34	109.965	108.351	1.389	Open Manhole	1200
S19.009	5.131#	16.8	SD6	109.965	108.344	1.321	Sealed Manhole	1200
S19.010	11.377	1625.3	SPond	109.965	108.337	1.403	Open Manhole	1200
S9.008	4.280#	164.6	S35 Pump	109.900	108.311	1.289	Open Manhole	1200
S9.009	7.450	-3.9	SDitch	111.000	110.200	0.500	Open Manhole	0

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Area Summary for Storm

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
9.000	User	-	100	0.002	0.002	0.002
9.001	User	-	100	0.005	0.005	0.005
	User	-	100	0.004	0.004	0.009
9.002	User	-	100	0.003	0.003	0.003
9.003	User	-	100	0.001	0.001	0.001
9.004	-	-	17	0.115	0.020	0.020
10.000	User	-	100	0.004	0.004	0.004
9.005	User	-	100	0.007	0.007	0.007
11.000	User	-	100	0.001	0.001	0.001
11.001	User	-	100	0.008	0.008	0.008
11.002	User	-	100	0.009	0.009	0.009
11.003	User	-	100	0.003	0.003	0.003
	User	-	100	0.005	0.005	0.008
11.004	User	-	100	0.007	0.007	0.007
12.000	User	-	100	0.003	0.003	0.003
12.001	User	-	100	0.009	0.009	0.009
11.005	User	-	100	0.007	0.007	0.007
	User	-	100	0.010	0.010	0.017
13.000	User	-	100	0.006	0.006	0.006
13.001	User	-	100	0.003	0.003	0.003
13.002	-	-	100	0.000	0.000	0.000
11.006	User	-	100	0.014	0.014	0.014
9.006	User	-	100	0.008	0.008	0.008
9.007	User	-	100	0.007	0.007	0.007
14.000	User	-	100	0.002	0.002	0.002
14.001	User	-	100	0.006	0.006	0.006
14.002	User	-	100	0.006	0.006	0.006
14.003	User	-	100	0.008	0.008	0.008
14.004	User	-	100	0.004	0.004	0.004
15.000	User	-	100	0.002	0.002	0.002
15.001	User	-	100	0.005	0.005	0.005
16.000	User	-	100	0.005	0.005	0.005
15.002	User	-	100	0.009	0.009	0.009
15.003	User	-	100	0.005	0.005	0.005
	User	-	100	0.002	0.002	0.006
14.005	User	-	100	0.008	0.008	0.008
17.000	User	-	100	0.012	0.012	0.012
17.001	User	-	100	0.006	0.006	0.006
18.000	-	-	100	0.000	0.000	0.000
14.006	User	-	100	0.022	0.022	0.022
14.007	-	-	100	0.000	0.000	0.000
14.008	-	-	100	0.000	0.000	0.000
14.009	User	-	100	0.009	0.009	0.009
19.000	User	-	100	0.002	0.002	0.002
19.001	User	-	100	0.002	0.002	0.002
19.002	User	-	100	0.003	0.003	0.003
19.003	User	-	100	0.004	0.004	0.004
20.000	User	-	100	0.004	0.004	0.004
21.000	User	-	100	0.002	0.002	0.002
21.001	User	-	100	0.012	0.012	0.012
20.001	User	-	100	0.004	0.004	0.004
19.004	User	-	100	0.002	0.002	0.002
19.005	User	-	100	0.008	0.008	0.008
22.000	User	-	100	0.001	0.001	0.001
22.001	User	-	100	0.004	0.004	0.004
22.002	User	-	100	0.010	0.010	0.010
	User	-	100	0.002	0.002	0.012
22.003	-	-	17	0.115	0.020	0.020
22.004	User	-	100	0.002	0.002	0.002
23.000	User	-	100	0.001	0.001	0.001

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Area Summary for Storm

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
22.005	User	-	100	0.009	0.009	0.009
22.006	User	-	100	0.009	0.009	0.009
24.000	User	-	100	0.001	0.001	0.001
24.001	User	-	100	0.001	0.001	0.001
24.002	User	-	100	0.006	0.006	0.006
	User	-	100	0.009	0.009	0.015
24.003	-	-	17	0.115	0.020	0.020
25.000	User	-	100	0.004	0.004	0.004
25.001	User	-	100	0.002	0.002	0.002
24.004	User	-	100	0.010	0.010	0.010
24.005	User	-	100	0.005	0.005	0.005
19.006	-	-	17	0.115	0.020	0.020
26.000	User	-	100	0.012	0.012	0.012
26.001	User	-	100	0.007	0.007	0.007
26.002	User	-	100	0.009	0.009	0.009
26.003	User	-	100	0.011	0.011	0.011
19.007	-	-	100	0.130	0.130	0.130
19.008	-	-	100	0.000	0.000	0.000
19.009	-	-	17	0.115	0.020	0.020
19.010	-	-	17	0.115	0.020	0.020
9.008	-	-	17	0.115	0.020	0.020
9.009	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				1.327	0.659	0.659

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
S9.009	SDitch	111.000	110.200	0.000	0	0

Simulation Criteria for Storm

Volumetric Runoff Coeff	1.000	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	0.000
Hot Start (mins)	0	Inlet Coefficient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
Number of Online Controls 4 Number of Storage Structures 17 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	2	Cv (Summer)	1.000
Region	England and Wales	Cv (Winter)	1.000
M5-60 (mm)	20.100	Storm Duration (mins)	30
Ratio R	0.400		

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Online Controls for Storm

Non Return Valve Manhole: S36, DS/PN: S26.002, Volume (m³): 2.1

Non Return Valve Manhole: S61, DS/PN: S19.007, Volume (m³): 3.8

Pump Manhole: S62 Pump, DS/PN: S19.008, Volume (m³): 1.5

Invert Level (m) 105.951

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	7.0000	0.700	7.0000	1.300	7.0000	1.900	7.0000	2.500	7.0000
0.200	7.0000	0.800	7.0000	1.400	7.0000	2.000	7.0000	2.600	7.0000
0.300	7.0000	0.900	7.0000	1.500	7.0000	2.100	7.0000	2.700	7.0000
0.400	7.0000	1.000	7.0000	1.600	7.0000	2.200	7.0000	2.800	7.0000
0.500	7.0000	1.100	7.0000	1.700	7.0000	2.300	7.0000	2.900	7.0000
0.600	7.0000	1.200	7.0000	1.800	7.0000	2.400	7.0000	3.000	7.0000

Pump Manhole: S35 Pump, DS/PN: S9.009, Volume (m³): 2.0

Invert Level (m) 108.311

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	5.1000	0.800	5.1000	2.000	5.1000	4.000	5.1000	7.000	5.1000
0.200	5.1000	1.000	5.1000	2.200	5.1000	4.500	5.1000	7.500	5.1000
0.300	5.1000	1.200	5.1000	2.400	5.1000	5.000	5.1000	8.000	5.1000
0.400	5.1000	1.400	5.1000	2.600	5.1000	5.500	5.1000	8.500	5.1000
0.500	5.1000	1.600	5.1000	3.000	5.1000	6.000	5.1000	9.000	5.1000
0.600	5.1000	1.800	5.1000	3.500	5.1000	6.500	5.1000	9.500	5.1000

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Storage Structures for Storm

Porous Car Park Manhole: S31, DS/PN: S9.005

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	6.7
Membrane Percolation (mm/hr)	1000	Length (m)	10.0
Max Percolation (l/s)	18.6	Slope (1:X)	20.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	109.446	Cap Volume Depth (m)	0.350

Porous Car Park Manhole: S20, DS/PN: S11.005

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	6.6
Membrane Percolation (mm/hr)	1000	Length (m)	10.0
Max Percolation (l/s)	18.3	Slope (1:X)	20.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	109.891	Cap Volume Depth (m)	0.350

Porous Car Park Manhole: S16, DS/PN: S13.001

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	6.6
Membrane Percolation (mm/hr)	1000	Length (m)	10.0
Max Percolation (l/s)	18.3	Slope (1:X)	26.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	110.732	Cap Volume Depth (m)	0.350

Porous Car Park Manhole: S39, DS/PN: S13.002

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	9.0
Membrane Percolation (mm/hr)	1000	Length (m)	14.0
Max Percolation (l/s)	35.0	Slope (1:X)	20.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	110.550	Cap Volume Depth (m)	0.450

Porous Car Park Manhole: S21, DS/PN: S11.006

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	9.0
Membrane Percolation (mm/hr)	1000	Length (m)	14.0
Max Percolation (l/s)	35.0	Slope (1:X)	33.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	109.400	Cap Volume Depth (m)	0.450

Porous Car Park Manhole: S26, DS/PN: S9.006

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	9.0
Membrane Percolation (mm/hr)	1000	Length (m)	14.0
Max Percolation (l/s)	35.0	Slope (1:X)	50.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	109.150	Cap Volume Depth (m)	0.450

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Porous Car Park Manhole: S3, DS/PN: S15.002

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	9.1
Membrane Percolation (mm/hr)	1000	Length (m)	10.0
Max Percolation (l/s)	25.3	Slope (1:X)	25.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	111.430	Cap Volume Depth (m)	0.350

Porous Car Park Manhole: S8, DS/PN: S17.001

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	6.0
Membrane Percolation (mm/hr)	1000	Length (m)	10.0
Max Percolation (l/s)	16.7	Slope (1:X)	20.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	110.800	Cap Volume Depth (m)	0.350

Porous Car Park Manhole: S25, DS/PN: S18.000

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	9.0
Membrane Percolation (mm/hr)	1000	Length (m)	14.0
Max Percolation (l/s)	35.0	Slope (1:X)	46.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	111.187	Cap Volume Depth (m)	0.450

Porous Car Park Manhole: S41, DS/PN: S21.001

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	10.0
Membrane Percolation (mm/hr)	1000	Length (m)	12.3
Max Percolation (l/s)	34.2	Slope (1:X)	33.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	108.830	Cap Volume Depth (m)	0.350

Porous Car Park Manhole: S52, DS/PN: S22.002

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	9.8
Membrane Percolation (mm/hr)	1000	Length (m)	10.0
Max Percolation (l/s)	27.2	Slope (1:X)	72.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	108.616	Cap Volume Depth (m)	0.350

Porous Car Park Manhole: S56, DS/PN: S24.002

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	8.9
Membrane Percolation (mm/hr)	1000	Length (m)	10.0
Max Percolation (l/s)	24.7	Slope (1:X)	31.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	107.397	Cap Volume Depth (m)	0.350

Cellular Storage Manhole: STank, DS/PN: S19.006

Invert Level (m)	106.135	Safety Factor	2.0
Infiltration Coefficient Base (m/hr)	0.00000	Porosity	0.95
Infiltration Coefficient Side (m/hr)	0.00000		

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Cellular Storage Manhole: STank, DS/PN: S19.006

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	74.0	0.0	1.200	74.0	0.0	1.201	0.0	0.0

Porous Car Park Manhole: S32, DS/PN: S26.000

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	9.0
Membrane Percolation (mm/hr)	1000	Length (m)	14.0
Max Percolation (l/s)	35.0	Slope (1:X)	19.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	108.634	Cap Volume Depth (m)	0.450

Porous Car Park Manhole: S33, DS/PN: S26.001

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	9.0
Membrane Percolation (mm/hr)	1000	Length (m)	14.0
Max Percolation (l/s)	35.0	Slope (1:X)	16.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	107.510	Cap Volume Depth (m)	0.450

Bio-Retention Area Manhole: S37, DS/PN: S26.003

Invert Level (m)	106.259	Infiltration Coefficient Side (m/hr)	0.00000
Porosity	1.00	Safety Factor	2.0
Infiltration Coefficient Base (m/hr)	0.00000		

Depth (m)	Area (m ²)	Perimeter (m)	Depth (m)	Area (m ²)	Perimeter (m)	Depth (m)	Area (m ²)	Perimeter (m)
0.000	381.0	130.000	0.250	381.0	130.000	0.251	0.0	130.000

Tank or Pond Manhole: SPond, DS/PN: S9.008

Invert Level (m) 108.337

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	304.0	1.628	304.0

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000
 Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 0.000
 Hot Start Level (mm) 0 Inlet Coefficient 0.800
 Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (l/per/day) 0.000
 Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
 Number of Online Controls 4 Number of Storage Structures 17 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 20.100 Cv (Summer) 1.000
 Region England and Wales Ratio R 0.400 Cv (Winter) 1.000

Margin for Flood Risk Warning (mm) 300.0
 Analysis Timestep 2.5 Second Increment (Extended)
 DTS Status ON
 DVD Status ON
 Inertia Status ON

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440
 Return Period(s) (years) 1, 2, 30, 100
 Climate Change (%) 0, 0, 40, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surchage	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)
S9.000	SRE4	15 Summer	1	+0%	100/15 Summer				109.868	-0.133
S9.001	S27	15 Summer	1	+0%	100/15 Summer				109.771	-0.116
S9.002	S28	15 Summer	1	+0%	30/15 Summer				109.678	-0.112
S9.003	S29	15 Summer	1	+0%	30/15 Summer				109.594	-0.107
S9.004	S30	15 Summer	1	+0%	30/15 Summer				109.565	-0.087
S10.000	S18	15 Summer	1	+0%					109.879	-0.135
S9.005	S31	30 Summer	1	+0%	30/15 Summer				109.504	-0.092
S11.000	SRE2	15 Summer	1	+0%					111.759	-0.091
S11.001	S19	15 Summer	1	+0%					111.129	-0.121
S11.002	S22	15 Summer	1	+0%					110.836	-0.108
S11.003	S23	15 Summer	1	+0%					110.710	-0.120
S11.004	S24	15 Summer	1	+0%	100/15 Summer				110.215	-0.110
S12.000	S9	15 Summer	1	+0%					110.973	-0.141
S12.001	S17	15 Summer	1	+0%	100/15 Summer				110.116	-0.117
S11.005	S20	15 Summer	1	+0%	30/15 Summer				109.940	-0.101
S13.000	S15	15 Summer	1	+0%					110.801	-0.119
S13.001	S16	15 Summer	1	+0%					110.752	-0.130
S13.002	S39	15 Summer	1	+0%					110.562	-0.213
S11.006	S21	30 Summer	1	+0%	30/15 Summer				109.468	-0.082
S9.006	S26	30 Summer	1	+0%	100/480 Summer				109.233	-0.217
S9.007	SD4	30 Summer	1	+0%	30/240 Summer				108.817	-0.233
S14.000	SRE1	15 Summer	1	+0%					112.015	-0.135
S14.001	S10	15 Summer	1	+0%					111.795	-0.122
S14.002	S11	15 Summer	1	+0%					111.627	-0.113
S14.003	S12	15 Summer	1	+0%	100/15 Summer				111.459	-0.114
S14.004	S13	15 Summer	1	+0%	30/15 Summer				111.188	-0.110
S15.000	S1	15 Summer	1	+0%					111.824	-0.136
S15.001	S2	15 Summer	1	+0%					111.727	-0.133
S16.000	S4	15 Summer	1	+0%					111.554	-0.126
S15.002	S3	30 Summer	1	+0%	100/15 Summer				111.471	-0.109

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Flooded		Half Drain		Pipe	Level	
		Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Status	Exceeded
S9.000	SRE4	0.000	0.03			0.5	OK	
S9.001	S27	0.000	0.12			1.8	OK	
S9.002	S28	0.000	0.15			2.3	OK	
S9.003	S29	0.000	0.18			2.5	OK	
S9.004	S30	0.000	0.37			5.4	OK	
S10.000	S18	0.000	0.02			0.8	OK	
S9.005	S31	0.000	0.31		7	6.4	OK	
S11.000	SRE2	0.000	0.02			0.2	OK	
S11.001	S19	0.000	0.08			1.4	OK	
S11.002	S22	0.000	0.17			2.8	OK	
S11.003	S23	0.000	0.09			3.9	OK	
S11.004	S24	0.000	0.15			5.0	OK	
S12.000	S9	0.000	0.01			0.5	OK	
S12.001	S17	0.000	0.11			1.8	OK	
S11.005	S20	0.000	0.23		7	9.2	OK	
S13.000	S15	0.000	0.10			1.1	OK	
S13.001	S16	0.000	0.04		5	1.1	OK	
S13.002	S39	0.000	0.01		4	1.1	OK	
S11.006	S21	0.000	0.42		7	11.5	OK	
S9.006	S26	0.000	0.17		7	17.6	OK	
S9.007	SD4	0.000	0.11			18.4	OK	
S14.000	SRE1	0.000	0.02			0.4	OK	
S14.001	S10	0.000	0.08			1.3	OK	
S14.002	S11	0.000	0.14			2.2	OK	
S14.003	S12	0.000	0.13			3.4	OK	
S14.004	S13	0.000	0.16			3.9	OK	
S15.000	S1	0.000	0.02			0.3	OK	
S15.001	S2	0.000	0.03			1.0	OK	
S16.000	S4	0.000	0.06			1.0	OK	
S15.002	S3	0.000	0.16		6	2.6	OK	

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S15.003	S5	30 Summer	1	+0%	100/15 Summer				111.342
S14.005	S6	15 Summer	1	+0%	30/15 Summer				110.909
S17.000	S7	15 Summer	1	+0%	100/15 Summer				111.024
S17.001	S8	30 Summer	1	+0%	30/15 Summer				110.832
S18.000	S25	15 Summer	1	+0%					111.187
S14.006	S14	15 Summer	1	+0%					110.549
S14.007	S37	15 Summer	1	+0%					109.981
S14.008	S66	15 Summer	1	+0%	100/960 Winter				109.420
S14.009	SD5	15 Summer	1	+0%	30/240 Summer				108.933
S19.000	SRE5	15 Summer	1	+0%					109.166
S19.001	S40	15 Summer	1	+0%					109.061
S19.002	S43	15 Summer	1	+0%					108.924
S19.003	S44	15 Summer	1	+0%					108.787
S20.000	SRE6	15 Summer	1	+0%					109.070
S21.000	S38	15 Summer	1	+0%					108.961
S21.001	S41	30 Summer	1	+0%					108.864
S20.001	S42	30 Summer	1	+0%					108.809
S19.004	S46	30 Summer	1	+0%					107.534
S19.005	SD1	15 Summer	1	+0%					107.215
S22.000	SRE7	15 Summer	1	+0%					108.846
S22.001	S51	15 Summer	1	+0%					108.723
S22.002	S52	30 Summer	1	+0%	100/15 Summer				108.663
S22.003	S53	30 Summer	1	+0%	100/15 Summer				108.661
S22.004	S50	30 Summer	1	+0%					108.553
S23.000	SRE8	15 Summer	1	+0%					108.749
S22.005	S48	30 Summer	1	+0%					108.247
S22.006	SD2	30 Summer	1	+0%					107.217
S24.000	SRE9	15 Summer	1	+0%					107.555
S24.001	S58	15 Summer	1	+0%					107.483
S24.002	S56	30 Summer	1	+0%	100/15 Summer				107.443
S24.003	S55	30 Summer	1	+0%	100/15 Summer				107.418
S25.000	S60	15 Summer	1	+0%					107.415
S25.001	S59	15 Summer	1	+0%	100/15 Summer				106.925
S24.004	S54	30 Summer	1	+0%	30/15 Summer				106.746
S24.005	SD3	60 Summer	1	+0%	30/15 Summer				106.352
S19.006	STank	60 Summer	1	+0%	2/15 Summer				106.351
S26.000	S32	15 Summer	1	+0%					108.654
S26.001	S33	30 Summer	1	+0%					107.528
S26.002	S36	30 Summer	1	+0%	30/120 Summer				106.356
S26.003	S37	120 Summer	1	+0%	30/60 Summer				106.276
S19.007	S61	30 Summer	1	+0%	1/15 Summer				106.355
S19.008	S62 Pump	30 Summer	1	+0%	1/15 Summer	100/180 Winter			106.352
S19.009	S34	15 Summer	1	+0%	30/120 Summer				108.702
S19.010	SD6	360 Summer	1	+0%	1/180 Winter				108.577
S9.008	SPond	360 Summer	1	+0%	30/30 Summer				108.568
S9.009	S35 Pump	360 Summer	1	+0%	2/180 Summer				108.580

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
S15.003	S5	-0.111	0.000	0.15			3.4	OK	
S14.005	S6	-0.098	0.000	0.26			8.1	OK	
S17.000	S7	-0.066	0.000	0.26			2.5	OK	
S17.001	S8	-0.068	0.000	0.21		5	2.6	OK	
S18.000	S25	-0.225	0.000	0.00			0.0	OK	

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Catherine House Old Harborough Road Brixworth NN6 9BX	Norton Juxta + 40% CC with Urban Creep 82326	
Date 15/03/2024	Designed by NN	
File 82326 FULL NETWORK WITH URBAN	Checked by MAS	
Micro Drainage		Network 2020.1.3

1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

		Surcharged	Flooded			Half Drain	Pipe		
	US/MH	Depth	Volume	Flow /	Overflow	Time	Flow		Level
PN	Name	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status	Exceeded
S14.006	S14	-0.166	0.000	0.15			13.6	OK	
S14.007	S37	-0.171	0.000	0.13			13.7	OK	
S14.008	S66	-0.170	0.000	0.14			13.7	OK	
S14.009	SD5	-0.157	0.000	0.20			15.0	OK	
S19.000	SRE5	-0.134	0.000	0.03			0.4	OK	
S19.001	S40	-0.130	0.000	0.04			0.7	OK	
S19.002	S43	-0.124	0.000	0.07			1.2	OK	
S19.003	S44	-0.133	0.000	0.03			1.7	OK	
S20.000	SRE6	-0.080	0.000	0.09			0.8	OK	
S21.000	S38	-0.135	0.000	0.02			0.3	OK	
S21.001	S41	-0.116	0.000	0.11		6	1.5	OK	
S20.001	S42	-0.127	0.000	0.05			2.4	OK	
S19.004	S46	-0.116	0.000	0.11			4.0	OK	
S19.005	SD1	-0.195	0.000	0.04			4.9	OK	
S22.000	SRE7	-0.139	0.000	0.02			0.3	OK	
S22.001	S51	-0.127	0.000	0.05			0.8	OK	
S22.002	S52	-0.103	0.000	0.20		7	2.1	OK	
S22.003	S53	-0.095	0.000	0.28			4.5	OK	
S22.004	S50	-0.109	0.000	0.17			4.7	OK	
S23.000	SRE8	-0.092	0.000	0.02			0.2	OK	
S22.005	S48	-0.119	0.000	0.09			5.9	OK	
S22.006	SD2	-0.193	0.000	0.05			7.0	OK	
S24.000	SRE9	-0.145	0.000	0.01			0.1	OK	
S24.001	S58	-0.136	0.000	0.02			0.3	OK	
S24.002	S56	-0.104	0.000	0.21		7	2.2	OK	
S24.003	S55	-0.112	0.000	0.14			4.9	OK	
S25.000	S60	-0.085	0.000	0.05			0.8	OK	
S25.001	S59	-0.125	0.000	0.06			1.1	OK	
S24.004	S54	-0.108	0.000	0.17			7.1	OK	
S24.005	SD3	-0.108	0.000	0.14			6.4	OK	
S19.006	STank	-0.009	0.000	0.17		34	6.2	OK	
S26.000	S32	-0.205	0.000	0.01		2	1.5	OK	
S26.001	S33	-0.207	0.000	0.02		3	1.9	OK	
S26.002	S36	-0.179	0.000	0.10			3.0	OK	
S26.003	S37	-0.208	0.000	0.02		109	0.7	OK	
S19.007	S61	0.166	0.000	0.31			8.9	SURCHARGED	
S19.008	S62 Pump	0.176	0.000	0.45			7.0	SURCHARGED	1
S19.009	S34	-0.248	0.000	0.07			9.8	OK	
S19.010	SD6	0.008	0.000	0.64			8.5	SURCHARGED*	
S9.008	SPond	-0.069	0.000	0.12			6.6	OK	
S9.009	S35 Pump	-0.031	0.000	0.14			5.1	OK	

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Catherine House Old Harborough Road Brixworth NN6 9BX	Norton Juxta + 40% CC with Urban Creep 82326	
Date 15/03/2024	Designed by NN	
File 82326 FULL NETWORK WITH URBAN	Checked by MAS	
Micro Drainage		Network 2020.1.3

2 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000
 Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 0.000
 Hot Start Level (mm) 0 Inlet Coefficient 0.800
 Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (l/per/day) 0.000
 Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
 Number of Online Controls 4 Number of Storage Structures 17 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 20.100 Cv (Summer) 1.000
 Region England and Wales Ratio R 0.400 Cv (Winter) 1.000

Margin for Flood Risk Warning (mm) 300.0
 Analysis Timestep 2.5 Second Increment (Extended)
 DTS Status ON
 DVD Status ON
 Inertia Status ON

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440
 Return Period(s) (years) 1, 2, 30, 100
 Climate Change (%) 0, 0, 40, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)	Surcharged Depth (m)
S9.000	SRE4	15 Summer	2	+0%	100/15 Summer				109.869	-0.132
S9.001	S27	15 Summer	2	+0%	100/15 Summer				109.776	-0.111
S9.002	S28	15 Summer	2	+0%	30/15 Summer				109.684	-0.106
S9.003	S29	15 Summer	2	+0%	30/15 Summer				109.600	-0.101
S9.004	S30	15 Summer	2	+0%	30/15 Summer				109.575	-0.077
S10.000	S18	15 Summer	2	+0%					109.880	-0.134
S9.005	S31	15 Summer	2	+0%	30/15 Summer				109.515	-0.081
S11.000	SRE2	15 Summer	2	+0%					111.761	-0.089
S11.001	S19	15 Summer	2	+0%					111.133	-0.117
S11.002	S22	15 Summer	2	+0%					110.842	-0.102
S11.003	S23	15 Summer	2	+0%					110.714	-0.116
S11.004	S24	15 Summer	2	+0%	100/15 Summer				110.221	-0.104
S12.000	S9	15 Summer	2	+0%					110.976	-0.138
S12.001	S17	15 Summer	2	+0%	100/15 Summer				110.120	-0.113
S11.005	S20	15 Summer	2	+0%	30/15 Summer				109.948	-0.093
S13.000	S15	15 Summer	2	+0%					110.805	-0.115
S13.001	S16	15 Summer	2	+0%					110.755	-0.127
S13.002	S39	15 Summer	2	+0%					110.566	-0.209
S11.006	S21	15 Summer	2	+0%	30/15 Summer				109.482	-0.068
S9.006	S26	15 Summer	2	+0%	100/480 Summer				109.247	-0.203
S9.007	SD4	15 Summer	2	+0%	30/240 Summer				108.828	-0.222
S14.000	SRE1	15 Summer	2	+0%					112.017	-0.133
S14.001	S10	15 Summer	2	+0%					111.799	-0.118
S14.002	S11	15 Summer	2	+0%					111.633	-0.107
S14.003	S12	15 Summer	2	+0%	100/15 Summer				111.465	-0.108
S14.004	S13	15 Summer	2	+0%	30/15 Summer				111.195	-0.103
S15.000	S1	15 Summer	2	+0%					111.826	-0.134
S15.001	S2	15 Summer	2	+0%					111.729	-0.131
S16.000	S4	15 Summer	2	+0%					111.558	-0.122
S15.002	S3	30 Summer	2	+0%	100/15 Summer				111.479	-0.101

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Catherine House Old Harborough Road Brixworth NN6 9BX	Norton Juxta + 40% CC with Urban Creep 82326	
Date 15/03/2024	Designed by NN	
File 82326 FULL NETWORK WITH URBAN	Checked by MAS	
Micro Drainage		Network 2020.1.3

2 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Flooded		Half Drain		Pipe	Level	
		Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	Status	Exceeded	
S9.000	SRE4	0.000	0.04		0.6	OK		
S9.001	S27	0.000	0.15		2.4	OK		
S9.002	S28	0.000	0.19		3.0	OK		
S9.003	S29	0.000	0.23		3.2	OK		
S9.004	S30	0.000	0.47		6.9	OK		
S10.000	S18	0.000	0.03		1.1	OK		
S9.005	S31	0.000	0.41		6	8.5	OK	
S11.000	SRE2	0.000	0.03		0.3	OK		
S11.001	S19	0.000	0.11		1.8	OK		
S11.002	S22	0.000	0.22		3.6	OK		
S11.003	S23	0.000	0.12		5.1	OK		
S11.004	S24	0.000	0.20		6.4	OK		
S12.000	S9	0.000	0.02		0.6	OK		
S12.001	S17	0.000	0.14		2.3	OK		
S11.005	S20	0.000	0.30		7	11.9	OK	
S13.000	S15	0.000	0.12		1.5	OK		
S13.001	S16	0.000	0.06		5	1.5	OK	
S13.002	S39	0.000	0.01		4	1.5	OK	
S11.006	S21	0.000	0.56		6	15.4	OK	
S9.006	S26	0.000	0.23		7	23.9	OK	
S9.007	SD4	0.000	0.15		24.7	OK		
S14.000	SRE1	0.000	0.03		0.5	OK		
S14.001	S10	0.000	0.10		1.7	OK		
S14.002	S11	0.000	0.17		2.9	OK		
S14.003	S12	0.000	0.17		4.4	OK		
S14.004	S13	0.000	0.21		5.1	OK		
S15.000	S1	0.000	0.03		0.4	OK		
S15.001	S2	0.000	0.04		1.4	OK		
S16.000	S4	0.000	0.08		1.2	OK		
S15.002	S3	0.000	0.23		6	3.7	OK	

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Catherine House Old Harborough Road Brixworth NN6 9BX		Norton Juxta + 40% CC with Urban Creep 82326
Date 15/03/2024 File 82326 FULL NETWORK WITH URBAN		Designed by NN Checked by MAS
Micro Drainage		Network 2020.1.3



2 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S15.003	S5	30 Summer	2	+0%	100/15 Summer				111.350
S14.005	S6	30 Summer	2	+0%	30/15 Summer				110.919
S17.000	S7	15 Summer	2	+0%	100/15 Summer				111.030
S17.001	S8	30 Summer	2	+0%	30/15 Summer				110.838
S18.000	S25	15 Summer	2	+0%					111.187
S14.006	S14	30 Summer	2	+0%					110.559
S14.007	S37	30 Summer	2	+0%					109.991
S14.008	S66	30 Summer	2	+0%	100/960 Winter				109.430
S14.009	SD5	30 Summer	2	+0%	30/240 Summer				108.943
S19.000	SRE5	15 Summer	2	+0%					109.168
S19.001	S40	15 Summer	2	+0%					109.064
S19.002	S43	15 Summer	2	+0%					108.929
S19.003	S44	15 Summer	2	+0%					108.788
S20.000	SRE6	15 Summer	2	+0%					109.073
S21.000	S38	15 Summer	2	+0%					108.962
S21.001	S41	30 Summer	2	+0%					108.872
S20.001	S42	30 Summer	2	+0%					108.815
S19.004	S46	30 Summer	2	+0%					107.542
S19.005	SD1	30 Summer	2	+0%					107.222
S22.000	SRE7	15 Summer	2	+0%					108.849
S22.001	S51	15 Summer	2	+0%					108.726
S22.002	S52	30 Summer	2	+0%	100/15 Summer				108.673
S22.003	S53	30 Summer	2	+0%	100/15 Summer				108.671
S22.004	S50	30 Summer	2	+0%					108.560
S23.000	SRE8	15 Summer	2	+0%					108.751
S22.005	S48	30 Summer	2	+0%					108.251
S22.006	SD2	30 Summer	2	+0%					107.222
S24.000	SRE9	15 Summer	2	+0%					107.557
S24.001	S58	15 Summer	2	+0%					107.485
S24.002	S56	15 Summer	2	+0%	100/15 Summer				107.451
S24.003	S55	15 Summer	2	+0%	100/15 Summer				107.425
S25.000	S60	15 Summer	2	+0%					107.417
S25.001	S59	15 Summer	2	+0%	100/15 Summer				106.929
S24.004	S54	15 Summer	2	+0%	30/15 Summer				106.753
S24.005	SD3	60 Summer	2	+0%	30/15 Summer				106.421
S19.006	STank	60 Summer	2	+0%	2/15 Summer				106.420
S26.000	S32	15 Summer	2	+0%					108.660
S26.001	S33	30 Summer	2	+0%					107.533
S26.002	S36	15 Summer	2	+0%	30/120 Summer				106.365
S26.003	S37	120 Summer	2	+0%	30/60 Summer				106.296
S19.007	S61	60 Summer	2	+0%	1/15 Summer				106.403
S19.008	S62 Pump	60 Summer	2	+0%	1/15 Summer	100/180 Winter			106.399
S19.009	S34	15 Summer	2	+0%	30/120 Summer				108.705
S19.010	SD6	360 Winter	2	+0%	1/180 Winter				108.644
S9.008	SPond	360 Winter	2	+0%	30/30 Summer				108.635
S9.009	S35 Pump	360 Winter	2	+0%	2/180 Summer				108.787

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
S15.003	S5	-0.103	0.000	0.21			4.9	OK	
S14.005	S6	-0.088	0.000	0.35			11.0	OK	
S17.000	S7	-0.060	0.000	0.33			3.2	OK	
S17.001	S8	-0.062	0.000	0.30		5	3.8	OK	
S18.000	S25	-0.225	0.000	0.00			0.0	OK	

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Catherine House Old Harborough Road Brixworth NN6 9BX	Norton Juxta + 40% CC with Urban Creep 82326	
Date 15/03/2024	Designed by NN	
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Micro Drainage		Network 2020.1.3

2 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

		Surcharged	Flooded			Half Drain	Pipe		
	US/MH	Depth	Volume	Flow /	Overflow	Time	Flow		Level
PN	Name	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status	Exceeded
S14.006	S14	-0.156	0.000	0.20			18.3	OK	
S14.007	S37	-0.162	0.000	0.17			18.4	OK	
S14.008	S66	-0.160	0.000	0.18			18.4	OK	
S14.009	SD5	-0.147	0.000	0.26			19.8	OK	
S19.000	SRE5	-0.132	0.000	0.03			0.5	OK	
S19.001	S40	-0.127	0.000	0.06			0.9	OK	
S19.002	S43	-0.119	0.000	0.09			1.5	OK	
S19.003	S44	-0.132	0.000	0.04			2.3	OK	
S20.000	SRE6	-0.077	0.000	0.12			1.0	OK	
S21.000	S38	-0.134	0.000	0.03			0.4	OK	
S21.001	S41	-0.108	0.000	0.17		6	2.2	OK	
S20.001	S42	-0.121	0.000	0.08			3.7	OK	
S19.004	S46	-0.108	0.000	0.17			6.0	OK	
S19.005	SD1	-0.188	0.000	0.06			7.3	OK	
S22.000	SRE7	-0.136	0.000	0.02			0.3	OK	
S22.001	S51	-0.124	0.000	0.07			1.1	OK	
S22.002	S52	-0.093	0.000	0.27		7	2.9	OK	
S22.003	S53	-0.085	0.000	0.38			6.0	OK	
S22.004	S50	-0.102	0.000	0.22			6.2	OK	
S23.000	SRE8	-0.090	0.000	0.02			0.3	OK	
S22.005	S48	-0.115	0.000	0.12			7.9	OK	
S22.006	SD2	-0.188	0.000	0.06			9.3	OK	
S24.000	SRE9	-0.143	0.000	0.01			0.1	OK	
S24.001	S58	-0.134	0.000	0.03			0.4	OK	
S24.002	S56	-0.096	0.000	0.27		6	2.9	OK	
S24.003	S55	-0.105	0.000	0.19			6.5	OK	
S25.000	S60	-0.083	0.000	0.07			1.0	OK	
S25.001	S59	-0.121	0.000	0.08			1.4	OK	
S24.004	S54	-0.101	0.000	0.23			9.6	OK	
S24.005	SD3	-0.039	0.000	0.18			8.0	OK	
S19.006	STank	0.060	0.000	0.23		38	8.6	SURCHARGED	
S26.000	S32	-0.199	0.000	0.02		3	2.7	OK	
S26.001	S33	-0.202	0.000	0.02		6	2.6	OK	
S26.002	S36	-0.170	0.000	0.13			4.0	OK	
S26.003	S37	-0.188	0.000	0.05		87	2.4	OK	
S19.007	S61	0.214	0.000	0.30			8.6	SURCHARGED	
S19.008	S62 Pump	0.223	0.000	0.45			7.0	SURCHARGED	1
S19.009	S34	-0.245	0.000	0.08			10.7	OK	
S19.010	SD6	0.075	0.000	0.62			8.2	SURCHARGED*	
S9.008	SPond	-0.002	0.000	0.13			7.1	OK	
S9.009	S35 Pump	0.176	0.000	0.14			5.1	SURCHARGED	

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Date 15/03/2024	Designed by NN	
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Micro Drainage		Network 2020.1.3

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000
 Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 0.000
 Hot Start Level (mm) 0 Inlet Coefficient 0.800
 Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (l/per/day) 0.000
 Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
 Number of Online Controls 4 Number of Storage Structures 17 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 20.100 Cv (Summer) 1.000
 Region England and Wales Ratio R 0.400 Cv (Winter) 1.000

Margin for Flood Risk Warning (mm) 300.0
 Analysis Timestep 2.5 Second Increment (Extended)
 DTS Status ON
 DVD Status ON
 Inertia Status ON

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440
 Return Period(s) (years) 1, 2, 30, 100
 Climate Change (%) 0, 0, 40, 40

WARNING: Half Drain Time has not been calculated as the structure is too full.

PN	US/MH		Return Period	Climate Change	First (X) SurchARGE	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level	Surcharged Depth
	Name	Storm							(m)	(m)
S9.000	SRE4	15 Summer	30	+40%	100/15 Summer				109.889	-0.112
S9.001	S27	15 Summer	30	+40%	100/15 Summer				109.876	-0.011
S9.002	S28	15 Summer	30	+40%	30/15 Summer				109.856	0.066
S9.003	S29	15 Summer	30	+40%	30/15 Summer				109.826	0.125
S9.004	S30	15 Summer	30	+40%	30/15 Summer				109.807	0.155
S10.000	S18	15 Summer	30	+40%	30/15 Summer				109.890	-0.124
S9.005	S31	15 Summer	30	+40%	30/15 Summer				109.701	0.105
S11.000	SRE2	15 Summer	30	+40%					111.767	-0.083
S11.001	S19	15 Summer	30	+40%					111.163	-0.087
S11.002	S22	15 Summer	30	+40%					110.894	-0.050
S11.003	S23	15 Summer	30	+40%					110.747	-0.083
S11.004	S24	15 Summer	30	+40%	100/15 Summer				110.268	-0.057
S12.000	S9	15 Summer	30	+40%					110.984	-0.130
S12.001	S17	15 Summer	30	+40%	100/15 Summer				110.154	-0.079
S11.005	S20	15 Summer	30	+40%	30/15 Summer				110.075	0.034
S13.000	S15	15 Summer	30	+40%					110.829	-0.091
S13.001	S16	15 Summer	30	+40%					110.781	-0.101
S13.002	S39	15 Summer	30	+40%					110.587	-0.188
S11.006	S21	15 Summer	30	+40%	30/15 Summer				109.721	0.171
S9.006	S26	15 Summer	30	+40%	100/480 Summer				109.316	-0.134
S9.007	SD4	960 Winter	30	+40%	30/240 Summer				109.305	0.255
S14.000	SRE1	15 Summer	30	+40%					112.028	-0.122
S14.001	S10	15 Summer	30	+40%					111.827	-0.090
S14.002	S11	15 Summer	30	+40%					111.674	-0.066
S14.003	S12	15 Summer	30	+40%	100/15 Summer				111.506	-0.067
S14.004	S13	15 Summer	30	+40%	30/15 Summer				111.325	0.027
S15.000	S1	15 Summer	30	+40%					111.836	-0.124

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Catherine House Old Harborough Road Brixworth NN6 9BX	Norton Juxta + 40% CC with Urban Creep 82326	
Date 15/03/2024	Designed by NN	
File 82326 FULL NETWORK WITH URBAN	Checked by MAS	
Micro Drainage		Network 2020.1.3

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Flooded		Flow / Cap.	Overflow (l/s)	Half Drain		Pipe Flow (l/s)	Status	Level Exceeded
		Volume (m³)	Flow			Time (mins)				
S9.000	SRE4	0.000	0.10					1.6	OK	
S9.001	S27	0.000	0.47					7.4	OK	
S9.002	S28	0.000	0.55					8.6	SURCHARGED	
S9.003	S29	0.000	0.67					9.4	SURCHARGED	
S9.004	S30	0.000	1.50					22.0	SURCHARGED	
S10.000	S18	0.000	0.07					2.9	OK	
S9.005	S31	0.000	1.14			4		23.6	SURCHARGED	
S11.000	SRE2	0.000	0.07					0.8	OK	
S11.001	S19	0.000	0.36					6.2	OK	
S11.002	S22	0.000	0.77					12.6	OK	
S11.003	S23	0.000	0.41					17.9	OK	
S11.004	S24	0.000	0.70					22.7	OK	
S12.000	S9	0.000	0.04					1.7	OK	
S12.001	S17	0.000	0.45					7.5	OK	
S11.005	S20	0.000	0.91			3		36.4	SURCHARGED	
S13.000	S15	0.000	0.33					3.9	OK	
S13.001	S16	0.000	0.23			4		6.3	OK	
S13.002	S39	0.000	0.06			4		6.2	OK	
S11.006	S21	0.000	1.27			5		34.9	SURCHARGED	
S9.006	S26	0.000	0.59			6		60.3	OK	
S9.007	SD4	0.000	0.03					5.4	SURCHARGED*	
S14.000	SRE1	0.000	0.08					1.3	OK	
S14.001	S10	0.000	0.33					5.5	OK	
S14.002	S11	0.000	0.60					9.9	OK	
S14.003	S12	0.000	0.58					15.1	OK	
S14.004	S13	0.000	0.68					16.7	SURCHARGED	
S15.000	S1	0.000	0.07					1.1	OK	

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Catherine House Old Harborough Road Brixworth NN6 9BX	Norton Juxta + 40% CC with Urban Creep 82326	
Date 15/03/2024	Designed by NN	
File 82326 FULL NETWORK WITH URBAN	Checked by MAS	
Micro Drainage		Network 2020.1.3

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S15.001	S2	15 Summer	30	+40%					111.746
S16.000	S4	15 Summer	30	+40%					111.576
S15.002	S3	15 Summer	30	+40%	100/15 Summer				111.536
S15.003	S5	15 Summer	30	+40%	100/15 Summer				111.425
S14.005	S6	15 Summer	30	+40%	30/15 Summer				111.183
S17.000	S7	15 Summer	30	+40%	100/15 Summer				111.063
S17.001	S8	15 Summer	30	+40%	30/15 Summer				110.903
S18.000	S25	15 Summer	30	+40%					111.187
S14.006	S14	15 Summer	30	+40%					110.631
S14.007	S37	15 Summer	30	+40%					110.054
S14.008	S66	15 Summer	30	+40%	100/960 Winter				109.496
S14.009	SD5	960 Winter	30	+40%	30/240 Summer				109.305
S19.000	SRE5	15 Summer	30	+40%					109.180
S19.001	S40	15 Summer	30	+40%					109.082
S19.002	S43	15 Summer	30	+40%					108.954
S19.003	S44	15 Summer	30	+40%					108.804
S20.000	SRE6	15 Summer	30	+40%					109.089
S21.000	S38	15 Summer	30	+40%					108.972
S21.001	S41	15 Summer	30	+40%					108.921
S20.001	S42	15 Summer	30	+40%					108.845
S19.004	S46	15 Summer	30	+40%					107.590
S19.005	SD1	15 Summer	30	+40%					107.261
S22.000	SRE7	15 Summer	30	+40%					108.857
S22.001	S51	15 Summer	30	+40%					108.772
S22.002	S52	15 Summer	30	+40%	100/15 Summer				108.762
S22.003	S53	15 Summer	30	+40%	100/15 Summer				108.753
S22.004	S50	15 Summer	30	+40%					108.597
S23.000	SRE8	15 Summer	30	+40%					108.757
S22.005	S48	15 Summer	30	+40%					108.279
S22.006	SD2	15 Summer	30	+40%					107.254
S24.000	SRE9	15 Summer	30	+40%					107.566
S24.001	S58	15 Summer	30	+40%					107.517
S24.002	S56	15 Summer	30	+40%	100/15 Summer				107.514
S24.003	S55	15 Summer	30	+40%	100/15 Summer				107.473
S25.000	S60	15 Summer	30	+40%					107.429
S25.001	S59	30 Summer	30	+40%	100/15 Summer				107.007
S24.004	S54	30 Summer	30	+40%	30/15 Summer				106.994
S24.005	SD3	60 Summer	30	+40%	30/15 Summer				106.868
S19.006	STank	60 Summer	30	+40%	2/15 Summer				106.863
S26.000	S32	15 Summer	30	+40%					108.675
S26.001	S33	15 Summer	30	+40%					107.560
S26.002	S36	120 Winter	30	+40%	30/120 Summer				106.556
S26.003	S37	120 Winter	30	+40%	30/60 Summer				106.556
S19.007	S61	30 Summer	30	+40%	1/15 Summer				106.758
S19.008	S62	Pump 60 Summer	30	+40%	1/15 Summer	100/180 Winter			106.752
S19.009	S34	960 Winter	30	+40%	30/120 Summer				109.314
S19.010	SD6	960 Winter	30	+40%	1/180 Winter				109.311
S9.008	SPond	960 Winter	30	+40%	30/30 Summer				109.304
S9.009	S35	Pump 960 Winter	30	+40%	2/180 Summer				109.325

PN	US/MH Name	Surcharged Flooded			Half Drain		Pipe Flow (l/s)	Status	Level Exceeded
		Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	Time (mins)			
S15.001	S2	-0.114	0.000	0.13			4.4	OK	
S16.000	S4	-0.104	0.000	0.21			3.3	OK	

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Catherine House Old Harborough Road Brixworth NN6 9BX	Norton Juxta + 40% CC with Urban Creep 82326	
Date 15/03/2024	Designed by NN	
File 82326 FULL NETWORK WITH URBAN	Checked by MAS	
Micro Drainage	Network 2020.1.3	

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Half Drain	Pipe	Status	Level Exceeded
		Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)		
S15.002	S3	-0.044	0.000	0.82			4 13.4		OK
S15.003	S5	-0.028	0.000	0.74			17.1		OK
S14.005	S6	0.176	0.000	1.22			38.5	SURCHARGED	
S17.000	S7	-0.027	0.000	0.89			8.5		OK
S17.001	S8	0.003	0.000	0.93		3	11.8	SURCHARGED	
S18.000	S25	-0.225	0.000	0.00			0.0		OK
S14.006	S14	-0.084	0.000	0.69			62.9		OK
S14.007	S37	-0.098	0.000	0.60			63.1		OK
S14.008	S66	-0.094	0.000	0.63			63.2		OK
S14.009	SD5	0.215	0.000	0.05			4.1	SURCHARGED*	
S19.000	SRE5	-0.120	0.000	0.09			1.4		OK
S19.001	S40	-0.109	0.000	0.17			2.7		OK
S19.002	S43	-0.094	0.000	0.30			4.8		OK
S19.003	S44	-0.116	0.000	0.12			7.5		OK
S20.000	SRE6	-0.061	0.000	0.32			2.7		OK
S21.000	S38	-0.124	0.000	0.07			1.1		OK
S21.001	S41	-0.059	0.000	0.66		4	8.6		OK
S20.001	S42	-0.091	0.000	0.32			13.9		OK
S19.004	S46	-0.060	0.000	0.65			22.7		OK
S19.005	SD1	-0.149	0.000	0.24			27.8		OK
S22.000	SRE7	-0.128	0.000	0.05			0.9		OK
S22.001	S51	-0.078	0.000	0.22			3.5		OK
S22.002	S52	-0.004	0.000	0.98		5	10.6		OK
S22.003	S53	-0.003	0.000	1.01			15.8	OK	
S22.004	S50	-0.065	0.000	0.60			16.8		OK
S23.000	SRE8	-0.084	0.000	0.06			0.8		OK
S22.005	S48	-0.087	0.000	0.37			23.3		OK
S22.006	SD2	-0.156	0.000	0.20			29.2		OK
S24.000	SRE9	-0.134	0.000	0.03			0.4		OK
S24.001	S58	-0.102	0.000	0.08			1.2		OK
S24.002	S56	-0.033	0.000	0.94		4	10.2		OK
S24.003	S55	-0.057	0.000	0.68			23.1		OK
S25.000	S60	-0.071	0.000	0.18			2.7		OK
S25.001	S59	-0.043	0.000	0.20			3.4		OK
S24.004	S54	0.140	0.000	0.63			26.1	SURCHARGED	
S24.005	SD3	0.408	0.000	0.47			21.1	SURCHARGED*	
S19.006	STank	0.503	0.000	0.96		34	35.7	SURCHARGED	
S26.000	S32	-0.184	0.000	0.08		5	8.1		OK
S26.001	S33	-0.175	0.000	0.11		5	13.0		OK
S26.002	S36	0.021	0.000	0.16			5.1	SURCHARGED	
S26.003	S37	0.072	0.000	0.19			9.3	SURCHARGED	
S19.007	S61	0.569	0.000	0.35			9.9	SURCHARGED	
S19.008	S62 Pump	0.576	0.000	0.45			7.0	SURCHARGED	1
S19.009	S34	0.364	0.000	0.06			7.7	SURCHARGED	
S19.010	SD6	0.742	0.000	0.63			8.3	SURCHARGED*	
S9.008	SPond	0.667	0.000	0.12			6.7	SURCHARGED	
S9.009	S35 Pump	0.714	0.000	0.14			5.1	SURCHARGED	

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Catherine House Old Harborough Road Brixworth NN6 9BX	Norton Juxta + 40% CC with Urban Creep 82326	
Date 15/03/2024	Designed by NN	
File 82326 FULL NETWORK WITH URBAN	Checked by MAS	
Micro Drainage		Network 2020.1.3

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000
 Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 0.000
 Hot Start Level (mm) 0 Inlet Coefficient 0.800
 Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (l/per/day) 0.000
 Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
 Number of Online Controls 4 Number of Storage Structures 17 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 20.100 Cv (Summer) 1.000
 Region England and Wales Ratio R 0.400 Cv (Winter) 1.000

Margin for Flood Risk Warning (mm) 300.0
 Analysis Timestep 2.5 Second Increment (Extended)
 DTS Status ON
 DVD Status ON
 Inertia Status ON

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440
 Return Period(s) (years) 1, 2, 30, 100
 Climate Change (%) 0, 0, 40, 40

WARNING: Half Drain Time has not been calculated as the structure is too full.

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water	Surcharged
									Level (m)	Depth (m)
S9.000	SRE4	15 Summer	100	+40%	100/15 Summer				110.147	0.146
S9.001	S27	15 Summer	100	+40%	100/15 Summer				110.139	0.252
S9.002	S28	15 Summer	100	+40%	30/15 Summer				110.102	0.312
S9.003	S29	15 Summer	100	+40%	30/15 Summer				110.045	0.344
S9.004	S30	15 Summer	100	+40%	30/15 Summer				110.000	0.348
S10.000	S18	15 Summer	100	+40%					109.895	-0.119
S9.005	S31	15 Summer	100	+40%	30/15 Summer				109.808	0.212
S11.000	SRE2	15 Summer	100	+40%					111.770	-0.080
S11.001	S19	15 Summer	100	+40%					111.173	-0.077
S11.002	S22	15 Summer	100	+40%					110.917	-0.027
S11.003	S23	15 Summer	100	+40%					110.758	-0.072
S11.004	S24	15 Summer	100	+40%	100/15 Summer				110.412	0.087
S12.000	S9	15 Summer	100	+40%					110.987	-0.127
S12.001	S17	15 Summer	100	+40%	100/15 Summer				110.268	0.035
S11.005	S20	15 Summer	100	+40%	30/15 Summer				110.223	0.182
S13.000	S15	15 Summer	100	+40%					110.838	-0.082
S13.001	S16	15 Summer	100	+40%					110.789	-0.093
S13.002	S39	15 Summer	100	+40%					110.593	-0.182
S11.006	S21	15 Summer	100	+40%	30/15 Summer				109.795	0.245
S9.006	S26	960 Winter	100	+40%	100/480 Summer				109.596	0.146
S9.007	SD4	960 Winter	100	+40%	30/240 Summer				109.597	0.547
S14.000	SRE1	15 Summer	100	+40%					112.032	-0.118
S14.001	S10	15 Summer	100	+40%					111.836	-0.081
S14.002	S11	15 Summer	100	+40%					111.715	-0.025
S14.003	S12	15 Summer	100	+40%	100/15 Summer				111.647	0.074
S14.004	S13	15 Summer	100	+40%	30/15 Summer				111.521	0.223
S15.000	S1	15 Summer	100	+40%					111.840	-0.120

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Catherine House Old Harborough Road Brixworth NN6 9BX	Norton Juxta + 40% CC with Urban Creep 82326	
Date 15/03/2024 File 82326 FULL NETWORK WITH URBAN	Designed by NN Checked by MAS	
Micro Drainage		Network 2020.1.3

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Flooded		Flow / Cap.	Overflow (l/s)	Half Drain		Pipe Flow (l/s)	Status	Level Exceeded
		Volume (m³)	Flow			Time (mins)				
S9.000	SRE4	0.000	0.11					1.8	SURCHARGED	
S9.001	S27	0.000	0.58					9.2	SURCHARGED	
S9.002	S28	0.000	0.74					11.6	SURCHARGED	
S9.003	S29	0.000	0.92					12.8	SURCHARGED	
S9.004	S30	0.000	1.91					28.1	FLOOD RISK	
S10.000	S18	0.000	0.09					3.8	OK	
S9.005	S31	0.000	1.28				5	26.6	SURCHARGED	
S11.000	SRE2	0.000	0.09					1.0	OK	
S11.001	S19	0.000	0.47					8.0	OK	
S11.002	S22	0.000	1.00					16.2	OK	
S11.003	S23	0.000	0.53					23.2	OK	
S11.004	S24	0.000	0.89					28.8	SURCHARGED	
S12.000	S9	0.000	0.06					2.2	OK	
S12.001	S17	0.000	0.56					9.3	SURCHARGED	
S11.005	S20	0.000	0.98				4	39.0	SURCHARGED	
S13.000	S15	0.000	0.43					5.1	OK	
S13.001	S16	0.000	0.30				4	8.1	OK	
S13.002	S39	0.000	0.08				4	8.0	OK	
S11.006	S21	0.000	1.37				5	37.6	SURCHARGED	
S9.006	S26	0.000	0.06				228	6.6	SURCHARGED	
S9.007	SD4	0.000	0.04					6.8	SURCHARGED*	
S14.000	SRE1	0.000	0.10					1.7	OK	
S14.001	S10	0.000	0.43					7.2	OK	
S14.002	S11	0.000	0.76					12.5	OK	
S14.003	S12	0.000	0.67					17.4	SURCHARGED	
S14.004	S13	0.000	0.82					20.2	SURCHARGED	
S15.000	S1	0.000	0.09					1.5	OK	

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Catherine House Old Harborough Road Brixworth NN6 9BX	Norton Juxta + 40% CC with Urban Creep 82326	
Date 15/03/2024	Designed by NN	
File 82326 FULL NETWORK WITH URBAN	Checked by MAS	
Micro Drainage		Network 2020.1.3

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S15.001	S2	15 Summer	100	+40%					111.752
S16.000	S4	15 Summer	100	+40%					111.622
S15.002	S3	15 Summer	100	+40%	100/15 Summer				111.610
S15.003	S5	15 Summer	100	+40%	100/15 Summer				111.541
S14.005	S6	15 Summer	100	+40%	30/15 Summer				111.324
S17.000	S7	15 Summer	100	+40%	100/15 Summer				111.224
S17.001	S8	15 Summer	100	+40%	30/15 Summer				110.986
S18.000	S25	15 Summer	100	+40%					111.187
S14.006	S14	15 Summer	100	+40%					110.646
S14.007	S37	15 Summer	100	+40%					110.067
S14.008	S66	960 Winter	100	+40%	100/960 Winter				109.597
S14.009	SD5	960 Winter	100	+40%	30/240 Summer				109.597
S19.000	SRE5	15 Summer	100	+40%					109.183
S19.001	S40	15 Summer	100	+40%					109.088
S19.002	S43	15 Summer	100	+40%					108.963
S19.003	S44	15 Summer	100	+40%					108.809
S20.000	SRE6	15 Summer	100	+40%					109.095
S21.000	S38	15 Summer	100	+40%					108.977
S21.001	S41	15 Summer	100	+40%					108.938
S20.001	S42	15 Summer	100	+40%					108.854
S19.004	S46	15 Summer	100	+40%					107.607
S19.005	SD1	15 Summer	100	+40%					107.273
S22.000	SRE7	15 Summer	100	+40%					108.860
S22.001	S51	15 Summer	100	+40%					108.816
S22.002	S52	15 Summer	100	+40%	100/15 Summer				108.805
S22.003	S53	15 Summer	100	+40%	100/15 Summer				108.791
S22.004	S50	15 Summer	100	+40%					108.608
S23.000	SRE8	15 Summer	100	+40%					108.760
S22.005	S48	15 Summer	100	+40%					108.286
S22.006	SD2	15 Summer	100	+40%					107.261
S24.000	SRE9	15 Summer	100	+40%					107.573
S24.001	S58	15 Summer	100	+40%					107.567
S24.002	S56	15 Summer	100	+40%	100/15 Summer				107.564
S24.003	S55	15 Summer	100	+40%	100/15 Summer				107.552
S25.000	S60	15 Summer	100	+40%					107.433
S25.001	S59	30 Summer	100	+40%	100/15 Summer				107.307
S24.004	S54	30 Summer	100	+40%	30/15 Summer				107.291
S24.005	SD3	180 Winter	100	+40%	30/15 Summer				107.256
S19.006	STank	180 Winter	100	+40%	2/15 Summer				107.255
S26.000	S32	15 Summer	100	+40%					108.681
S26.001	S33	15 Summer	100	+40%					107.567
S26.002	S36	180 Winter	100	+40%	30/120 Summer				107.247
S26.003	S37	180 Winter	100	+40%	30/60 Summer				107.247
S19.007	S61	180 Winter	100	+40%	1/15 Summer				107.244
S19.008	S62	Pump 180 Winter	100	+40%	1/15 Summer	100/180 Winter			107.241
S19.009	S34	960 Winter	100	+40%	30/120 Summer				109.610
S19.010	SD6	960 Winter	100	+40%	1/180 Winter				109.607
S9.008	SPond	960 Winter	100	+40%	30/30 Summer				109.597
S9.009	S35	Pump 960 Winter	100	+40%	2/180 Summer				109.617

PN	US/MH Name	Surcharged Flooded			Half Drain		Pipe Flow (l/s)	Status	Level Exceeded
		Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	Time (mins)			
S15.001	S2	-0.108	0.000	0.17			5.7	OK	
S16.000	S4	-0.058	0.000	0.27			4.2	OK	

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Catherine House Old Harborough Road Brixworth NN6 9BX	Norton Juxta + 40% CC with Urban Creep 82326	
Date 15/03/2024	Designed by NN	
File 82326 FULL NETWORK WITH URBAN	Checked by MAS	
Micro Drainage		Network 2020.1.3

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Half Drain	Pipe	Status	Level Exceeded
		Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)		
S15.002	S3	0.030	0.000	0.89			3 14.5	SURCHARGED	
S15.003	S5	0.088	0.000	0.77			17.8	SURCHARGED	
S14.005	S6	0.317	0.000	1.35			42.7	SURCHARGED	
S17.000	S7	0.134	0.000	1.14			10.9	SURCHARGED	
S17.001	S8	0.086	0.000	1.05		3	13.3	SURCHARGED	
S18.000	S25	-0.225	0.000	0.00			0.0	OK	
S14.006	S14	-0.069	0.000	0.80			72.4	OK	
S14.007	S37	-0.085	0.000	0.69			72.8	OK	
S14.008	S66	0.007	0.000	0.05			4.8	SURCHARGED	
S14.009	SD5	0.507	0.000	0.07			5.2	SURCHARGED*	
S19.000	SRE5	-0.117	0.000	0.11			1.9	OK	
S19.001	S40	-0.103	0.000	0.21			3.5	OK	
S19.002	S43	-0.085	0.000	0.39			6.2	OK	
S19.003	S44	-0.111	0.000	0.16			9.8	OK	
S20.000	SRE6	-0.055	0.000	0.42			3.5	OK	
S21.000	S38	-0.119	0.000	0.09			1.5	OK	
S21.001	S41	-0.042	0.000	0.84		4	11.1	OK	
S20.001	S42	-0.082	0.000	0.41			17.9	OK	
S19.004	S46	-0.043	0.000	0.83			29.3	OK	
S19.005	SD1	-0.137	0.000	0.32			36.0	OK	
S22.000	SRE7	-0.125	0.000	0.07			1.2	OK	
S22.001	S51	-0.034	0.000	0.28			4.3	OK	
S22.002	S52	0.039	0.000	1.06		6	11.5	SURCHARGED	
S22.003	S53	0.035	0.000	1.16			18.3	SURCHARGED	
S22.004	S50	-0.054	0.000	0.70			19.4	OK	
S23.000	SRE8	-0.081	0.000	0.08			1.0	OK	
S22.005	S48	-0.080	0.000	0.42			27.0	OK	
S22.006	SD2	-0.149	0.000	0.24			34.8	OK	
S24.000	SRE9	-0.127	0.000	0.03			0.5	OK	
S24.001	S58	-0.052	0.000	0.09			1.4	OK	
S24.002	S56	0.017	0.000	1.01		4	10.9	SURCHARGED	
S24.003	S55	0.022	0.000	0.79			26.8	SURCHARGED	
S25.000	S60	-0.067	0.000	0.23			3.5	OK	
S25.001	S59	0.257	0.000	0.25			4.1	FLOOD RISK	
S24.004	S54	0.437	0.000	0.83			34.0	SURCHARGED	
S24.005	SD3	0.796	0.000	0.22			9.9	SURCHARGED*	
S19.006	STank	0.895	0.000	0.72		118	26.6	SURCHARGED	
S26.000	S32	-0.178	0.000	0.10		5	10.5	OK	
S26.001	S33	-0.168	0.000	0.14		5	16.9	OK	
S26.002	S36	0.712	0.000	0.15			4.9	FLOOD RISK	
S26.003	S37	0.763	0.000	0.18			8.9	SURCHARGED	
S19.007	S61	1.055	0.000	0.47			13.4	FLOOD RISK	
S19.008	S62 Pump	1.065	0.673	0.45			7.0	FLOOD	1
S19.009	S34	0.660	0.000	0.06			7.9	SURCHARGED	
S19.010	SD6	1.038	0.000	0.66			8.8	SURCHARGED*	
S9.008	SPond	0.960	0.000	0.12			6.7	SURCHARGED	
S9.009	S35 Pump	1.006	0.000	0.14			5.1	FLOOD RISK	