

PFA Consulting		Page 1
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023	Designed by BF/DRB	
File M380-Catch A-V4.7 (S278+FW).MDX	Checked by	
Causeway	Network 2020.1.3	

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for M380-CATCHMENT A-SW.SWS

Pipe Sizes M380-CATCHMENT A-S278 TEMP OUTFALL Manhole Sizes M380-CATCHMENT A-S278 TEMP OUTFALL

FEH Rainfall Model			
Return Period (years)	2	Volumetric Runoff Coeff.	0.750
FEH Rainfall Version	2013	PIMP (%)	100
Site Location	GB 450306 114752	Add Flow / Climate Change (%)	0
Data Type	Point	Minimum Backdrop Height (m)	0.000
Maximum Rainfall (mm/hr)	550	Maximum Backdrop Height (m)	0.000
Maximum Time of Concentration (mins)	30	Min Design Depth for Optimisation (m)	1.500
Foul Sewage (l/s/ha)	0.000	Min Vel for Auto Design only (m/s)	1.00
		Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Time Area Diagram for M380-CATCHMENT A-SW.SWS

Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.000	4-8	0.000	8-12	1.104	12-16	2.456	16-20	2.072	20-24	0.735

Total Area Contributing (ha) = 6.367

Total Pipe Volume (m³) = 2434.039

Network Design Table for M380-CATCHMENT A-SW.SWS

- Indicates pipe length does not match coordinates
 < - Indicates pipe capacity < flow

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	n	HYD SECT	DIA (mm)	Section Type	Auto Design
S1.000	28.548	0.313	91.2	0.023	5.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S1.001	26.956	0.225	119.8	0.059	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S1.002	23.416	0.194	120.7	0.051	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S2.000	24.325	0.670	36.3	0.026	5.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S2.001	23.456	0.655	35.8	0.020	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S2.002	27.383	0.685	40.0	0.009	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S2.003	23.637	0.592	39.9	0.035	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S3.000	11.648	0.357	32.6	0.034	5.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S1.003	16.714	0.410	40.8	0.009	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S1.004	26.934	0.682	39.5	0.054	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S1.005	49.591	1.320	37.6	0.083	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S4.000	15.956	0.145	110.0	0.087	5.00	0.0	0.600		o	150	Pipe/Conduit	⚠
S4.001	53.763	0.683	78.7	0.061	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S1.000	62.33	5.35	26.575	0.023	0.0	0.0	0.0	1.37	54.5	3.9
S1.001	60.48	5.72	26.262	0.082	0.0	0.0	0.0	1.19	47.5	13.4
S1.002	58.97	6.05	25.962	0.133	0.0	0.0	0.0	1.19	47.3	21.2
S2.000	63.16	5.19	28.445	0.026	0.0	0.0	0.0	2.18	86.6	4.4
S2.001	62.24	5.36	27.775	0.046	0.0	0.0	0.0	2.19	87.2	7.8
S2.002	61.15	5.58	27.120	0.055	0.0	0.0	0.0	2.08	82.5	9.1
S2.003	60.24	5.77	26.360	0.090	0.0	0.0	0.0	2.08	82.6	14.7
S3.000	63.71	5.08	26.125	0.034	0.0	0.0	0.0	2.30	91.4	5.9
S1.003	58.47	6.16	25.693	0.266	0.0	0.0	0.0	2.47	174.6	42.1
S1.004	57.70	6.34	25.208	0.320	0.0	0.0	0.0	2.51	177.4	50.0
S1.005	56.38	6.66	24.451	0.403	0.0	0.0	0.0	2.57	181.9	61.5
S4.000	62.69	5.28	24.700	0.087	0.0	0.0	0.0	0.96	16.9	14.8
S4.001	59.73	5.89	24.480	0.148	0.0	0.0	0.0	1.48	58.7	23.9

Network Design Table for M380-CATCHMENT A-SW.SWS

PN	Length (m)	Fall (m)	Slope (1:X)	I. Area (ha)	T. E. (mins)	Base Flow (l/s)	k	n	HYD SECT	DIA (mm)	Section Type	Auto Design
S4.002	9.855	0.082	120.2	0.062	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S4.003	8.711	0.072	121.0	0.000	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S4.004	38.525	0.258	149.3	0.021	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S4.005	14.143	0.115	123.0	0.175	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S4.006	7.359	0.064	115.0	0.016	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S1.006	9.522	0.150	63.5	0.077	0.00	0.0	0.600		o	525	Pipe/Conduit	⚠
S5.000	13.926	0.092	151.4	0.041	5.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S5.001	11.511	0.050	230.2	0.041	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S5.002	11.510	0.065	177.1	0.014	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S5.003	16.954	0.068	249.3	0.025	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠
S5.004	24.908	0.228	109.2	0.040	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠
S1.007	17.181	0.076	226.1	0.064	0.00	0.0	0.600		o	750	Pipe/Conduit	⚠
S1.008	25.441	0.113	225.1	0.024	0.00	0.0	0.600		o	750	Pipe/Conduit	⚠
S6.000	66.664	0.300	222.2	0.304	5.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S1.009	44.468	0.198	224.6	0.045	0.00	0.0	0.600		o	750	Pipe/Conduit	⚠
S7.000	18.164	0.121	150.1	0.065	5.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S7.001	22.544	0.150	150.3	0.030	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S7.002	25.569	0.170	150.4	0.031	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S7.003	12.761	0.075	170.1	0.028	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S7.004	26.123	0.154	169.6	0.007	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S7.005	49.179	0.289	170.2	0.100	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S7.006	11.357	0.067	169.5	0.080	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠
S7.007	9.948	0.059	168.6	0.023	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠
S7.008	11.164	0.066	169.2	0.055	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠
S7.009	26.507	0.410	64.7	0.006	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠
S7.010	19.991	1.037	19.3	0.098	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠
S1.010	33.101	0.147	225.2	0.085	0.00	0.0	0.600		o	750	Pipe/Conduit	⚠
S1.011	26.319	0.117	224.9	0.113	0.00	0.0	0.600		o	750	Pipe/Conduit	⚠
S1.012	19.218	0.085	226.1	0.052	0.00	0.0	0.600		o	900	Pipe/Conduit	⚠

Network Results Table

PN	Rain (mm/hr)	T. C. (mins)	US/IL (m)	Σ I. Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S4.002	59.10	6.02	23.797	0.210	0.0	0.0	0.0	1.19	47.4	33.6
S4.003	58.56	6.15	23.715	0.210	0.0	0.0	0.0	1.19	47.2	33.6
S4.004	56.05	6.75	23.643	0.231	0.0	0.0	0.0	1.07	42.5	35.1
S4.005	55.41	6.91	23.310	0.406	0.0	0.0	0.0	1.42	100.1	60.9
S4.006	55.09	7.00	23.195	0.422	0.0	0.0	0.0	1.47	103.6	63.0
S1.006	54.87	7.05	22.906	0.902	0.0	0.0	0.0	2.81	609.3	134.0
S5.000	62.99	5.22	23.559	0.041	0.0	0.0	0.0	1.06	42.2	7.0
S5.001	62.04	5.40	23.392	0.082	0.0	0.0	0.0	1.03	72.9	13.8
S5.002	61.23	5.57	23.342	0.096	0.0	0.0	0.0	1.18	83.3	15.9
S5.003	60.18	5.79	23.127	0.121	0.0	0.0	0.0	1.28	204.1	19.7
S5.004	59.20	6.00	23.059	0.161	0.0	0.0	0.0	1.94	309.3	25.8
S1.007	54.30	7.21	22.531	1.127	0.0	0.0	0.0	1.86	820.4	165.7
S1.008	53.48	7.44	22.455	1.151	0.0	0.0	0.0	1.86	822.1	166.7
S6.000	58.95	6.06	23.092	0.304	0.0	0.0	0.0	1.05	74.3	48.5
S1.009	52.11	7.83	22.342	1.500	0.0	0.0	0.0	1.86	823.2	211.7
S7.000	62.65	5.28	25.192	0.065	0.0	0.0	0.0	1.06	42.3	11.0
S7.001	60.89	5.64	25.071	0.095	0.0	0.0	0.0	1.06	42.3	15.7
S7.002	59.03	6.04	24.921	0.126	0.0	0.0	0.0	1.06	42.3	20.1
S7.003	58.10	6.25	24.751	0.154	0.0	0.0	0.0	1.00	39.7	24.2
S7.004	56.30	6.69	24.676	0.161	0.0	0.0	0.0	1.00	39.8	24.5
S7.005	53.72	7.37	24.447	0.261	0.0	0.0	0.0	1.20	85.0	38.0
S7.006	53.29	7.49	24.083	0.341	0.0	0.0	0.0	1.56	247.9	49.2
S7.007	52.92	7.59	24.016	0.364	0.0	0.0	0.0	1.56	248.6	52.2
S7.008	52.51	7.71	23.957	0.419	0.0	0.0	0.0	1.56	248.2	59.6
S7.009	51.93	7.89	23.891	0.425	0.0	0.0	0.0	2.53	402.7	59.8
S7.010	51.69	7.96	23.481	0.523	0.0	0.0	0.0	4.65	739.1	73.2
S1.010	50.75	8.26	22.144	2.108	0.0	0.0	0.0	1.86	822.1	289.7
S1.011	50.03	8.49	21.997	2.221	0.0	0.0	0.0	1.86	822.5	300.9
S1.012	49.57	8.65	21.730	2.273	0.0	0.0	0.0	2.08	1323.1	305.1

PFA Consulting		Page 3
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023	Designed by BF/DRB	
File M380-Catch A-V4.7 (S278+FW).MDX	Checked by	
Causeway	Network 2020.1.3	

Network Design Table for M380-CATCHMENT A-SW.SWS

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	n	HYD SECT	DIA (mm)	Section Type	Auto Design
S1.013	58.302	0.259	225.1	0.039	0.00	0.0	0.600		o	900	Pipe/Conduit	⚠
S1.014	24.102	0.139	173.4	0.232	0.00	0.0	0.600		o	900	Pipe/Conduit	⚠
S8.000	18.194	0.642	28.3	0.023	5.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S1.015	85.903	0.197	436.1	0.113	0.00	0.0	0.600		o	900	Pipe/Conduit	⚠
S1.016	10.176	0.046	221.2	0.000	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S1.017	7.577	0.032	236.8	0.000	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S1.018	40.502	0.054	750.0	0.000	0.00	0.0		0.045	3	300	1:3 Swale	⚠
S1.019	9.086	0.038	239.1	0.000	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S1.020	8.000#	0.176	45.5	0.000	0.00	0.0		0.045	3	300	1:3 Swale	⚠
S9.000	32.862	0.540	60.9	0.034	5.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S10.000	14.433	0.143	100.9	0.038	5.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S9.001	18.287	0.219	83.5	0.099	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S9.002	11.426	0.304	37.6	0.015	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S9.003	11.455	0.267	42.9	0.016	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S9.004	36.976	0.961	38.5	0.041	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S11.000	9.559	0.414	23.1	0.082	5.00	0.0	0.600		o	150	Pipe/Conduit	⚠
S12.000	15.521	0.153	101.4	0.032	5.00	0.0	0.600		o	150	Pipe/Conduit	⚠
S11.001	21.433	0.440	48.7	0.012	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S11.002	8.283	0.260	31.9	0.027	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S11.003	30.938	0.565	54.8	0.015	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S11.004	13.620	0.098	139.0	0.034	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S13.000	11.835	0.310	38.2	0.035	5.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S11.005	57.782	1.449	39.9	0.062	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S11.006	19.501	0.413	47.2	0.124	0.00	0.0	0.600		o	375	Pipe/Conduit	⚠
S11.007	3.946	0.062	63.6	0.045	0.00	0.0	0.600		o	375	Pipe/Conduit	⚠
S11.008	4.967	0.095	52.3	0.009	0.00	0.0	0.600		o	375	Pipe/Conduit	⚠

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S1.013	48.24	9.11	21.645	2.312	0.0	0.0	0.0	2.08	1326.0	305.1
S1.014	47.77	9.28	21.386	2.544	0.0	0.0	0.0	2.38	1511.9	329.2
S8.000	63.50	5.12	22.564	0.023	0.0	0.0	0.0	2.47	98.1	4.0
S1.015	45.35	10.24	21.247	2.680	0.0	0.0	0.0	1.49	950.4	329.2
S1.016	44.97	10.40	20.946	2.680	0.0	0.0	0.0	1.05	74.4	329.2
S1.017	44.68	10.53	20.900	2.680	0.0	0.0	0.0	1.02	71.9	329.2
S1.018	37.10	14.66	20.818	2.680	0.0	0.0	0.0	0.16	18.3	329.2
S1.019	36.89	14.81	20.764	2.680	0.0	0.0	0.0	1.01	71.6	329.2
S1.020	36.60	15.02	20.676	2.680	0.0	0.0	0.0	0.66	74.5	329.2
S9.000	62.44	5.33	22.304	0.034	0.0	0.0	0.0	1.68	66.8	5.7
S10.000	63.17	5.18	21.907	0.038	0.0	0.0	0.0	1.30	51.7	6.5
S9.001	61.55	5.50	21.689	0.171	0.0	0.0	0.0	1.72	121.7	28.5
S9.002	61.18	5.58	21.470	0.186	0.0	0.0	0.0	2.57	181.9	30.8
S9.003	60.80	5.66	21.166	0.202	0.0	0.0	0.0	2.41	170.2	33.3
S9.004	59.66	5.90	20.899	0.243	0.0	0.0	0.0	2.54	179.7	39.3
S11.000	63.76	5.08	24.164	0.082	0.0	0.0	0.0	2.10	37.2	14.2
S12.000	62.78	5.26	23.903	0.032	0.0	0.0	0.0	1.00	17.6	5.4
S11.001	61.81	5.45	23.675	0.126	0.0	0.0	0.0	1.88	74.7	21.1
S11.002	61.52	5.51	23.235	0.153	0.0	0.0	0.0	2.33	92.5	25.5
S11.003	60.35	5.75	22.975	0.168	0.0	0.0	0.0	2.13	150.5	27.5
S11.004	59.56	5.92	22.410	0.202	0.0	0.0	0.0	1.33	94.1	32.6
S13.000	63.66	5.09	22.697	0.035	0.0	0.0	0.0	2.12	84.4	6.0
S11.005	57.86	6.31	22.312	0.299	0.0	0.0	0.0	2.50	176.5	46.9
S11.006	57.34	6.43	20.788	0.423	0.0	0.0	0.0	2.64	291.9	65.7
S11.007	57.22	6.46	20.375	0.468	0.0	0.0	0.0	2.27	251.2	72.5
S11.008	57.08	6.49	20.313	0.477	0.0	0.0	0.0	2.51	277.3	73.7

PFA Consulting		Page 4
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023	Designed by BF/DRB	
File M380-Catch A-V4.7 (S278+FW).MDX	Checked by	
Causeway	Network 2020.1.3	

Network Design Table for M380-CATCHMENT A-SW.SWS

PN	Length (m)	Fall (m)	Slope (1:X)	I. Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	n	HYD SECT	DIA (mm)	Section Type	Auto Design
S11.009	14.725	0.172	85.6	0.018	0.00	0.0	0.600		o	375	Pipe/Conduit	⚠
S11.010	7.909	0.026	304.2	0.012	0.00	0.0	0.600		o	375	Pipe/Conduit	⚠
S14.000	12.385	0.039	317.6	0.008	5.00	0.0	0.600		o	375	Pipe/Conduit	⚠
S11.011	50.303	0.157	320.4	0.038	0.00	0.0	0.600		o	375	Pipe/Conduit	⚠
S9.005	13.484#	0.363	37.1	0.142	0.00	0.0	0.600		o	375	Pipe/Conduit	⚠
S15.000	35.896	1.035	34.7	0.017	5.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S15.001	8.580	0.211	40.7	0.067	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S15.002	21.319	0.466	45.7	0.010	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S15.003	9.260	0.299	31.0	0.038	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S15.004	22.422	0.400	56.1	0.011	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S15.005	8.504	0.226	37.6	0.000	0.00	0.0	0.600		o	300	Pipe/Conduit	✅
S16.000	10.382	0.047	220.9	0.110	5.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S15.006	41.037	0.170	241.4	0.005	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S15.007	9.158	0.036	254.4	0.095	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S17.000	19.893	0.225	88.4	0.000	5.00	0.0	0.600		o	150	Pipe/Conduit	⚠
S17.001	19.602	0.321	61.1	0.038	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S17.002	16.804	0.098	171.5	0.039	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S18.000	9.247	0.111	83.3	0.018	5.00	0.0	0.600		o	150	Pipe/Conduit	⚠
S17.003	28.520	0.658	43.3	0.034	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S17.004	13.311	0.329	40.5	0.019	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S17.005	18.021	0.499	36.1	0.012	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S19.000	10.328	0.074	139.6	0.037	5.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S19.001	10.369	0.424	24.5	0.023	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S17.006	20.226	0.247	81.9	0.039	0.00	0.0	0.600		o	375	Pipe/Conduit	⚠
S17.007	13.512	0.105	128.7	0.062	0.00	0.0	0.600		o	375	Pipe/Conduit	⚠

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I. Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S11.009	56.57	6.62	20.218	0.495	0.0	0.0	0.0	1.96	216.4	75.8
S11.010	56.06	6.74	20.046	0.507	0.0	0.0	0.0	1.03	114.2	77.0
S14.000	63.07	5.20	20.059	0.008	0.0	0.0	0.0	1.01	111.7	1.4
S11.011	52.98	7.58	20.020	0.553	0.0	0.0	0.0	1.01	111.2	79.3
S9.005	52.72	7.65	19.863	0.938	0.0	0.0	0.0	2.98	329.3	133.9
S15.000	62.73	5.27	22.990	0.017	0.0	0.0	0.0	2.23	88.6	2.9
S15.001	62.38	5.34	21.955	0.084	0.0	0.0	0.0	2.06	81.8	14.2
S15.002	61.61	5.49	21.744	0.094	0.0	0.0	0.0	2.33	164.7	15.7
S15.003	61.34	5.54	21.278	0.132	0.0	0.0	0.0	2.84	200.4	21.9
S15.004	60.49	5.72	20.979	0.143	0.0	0.0	0.0	2.10	148.7	23.4
S15.005	60.23	5.78	20.579	0.143	0.0	0.0	0.0	2.57	181.7	23.4
S16.000	63.28	5.16	20.400	0.110	0.0	0.0	0.0	1.05	74.5	18.9
S15.006	57.23	6.46	20.353	0.258	0.0	0.0	0.0	1.01	71.2	40.0
S15.007	56.59	6.61	20.183	0.353	0.0	0.0	0.0	0.98	69.4	54.1
S17.000	62.52	5.31	23.694	0.000	0.0	0.0	0.0	1.07	18.9	0.0
S17.001	61.54	5.50	23.469	0.038	0.0	0.0	0.0	1.68	66.7	6.3
S17.002	60.19	5.79	23.148	0.077	0.0	0.0	0.0	1.00	39.6	12.6
S18.000	63.41	5.14	23.236	0.018	0.0	0.0	0.0	1.10	19.5	3.1
S17.003	59.09	6.02	23.050	0.129	0.0	0.0	0.0	1.99	79.2	20.6
S17.004	58.62	6.13	22.392	0.148	0.0	0.0	0.0	2.06	82.0	23.5
S17.005	58.02	6.27	22.063	0.160	0.0	0.0	0.0	2.18	86.8	25.1
S19.000	63.33	5.16	22.137	0.037	0.0	0.0	0.0	1.10	43.9	6.3
S19.001	62.98	5.22	22.063	0.060	0.0	0.0	0.0	2.66	105.6	10.2
S17.006	57.31	6.44	21.489	0.259	0.0	0.0	0.0	2.00	221.3	40.2
S17.007	56.73	6.58	21.242	0.321	0.0	0.0	0.0	1.60	176.2	49.3

PFA Consulting		Page 5
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023	Designed by BF/DRB	
File M380-Catch A-V4.7 (S278+FW).MDX	Checked by	
Causeway	Network 2020.1.3	

Network Design Table for M380-CATCHMENT A-SW.SWS

PN	Length (m)	Fall (m)	Slope (1:X)	I. Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	n	HYD SECT	DIA (mm)	Section Type	Auto Design
S17.008	16.297	0.114	143.0	0.038	0.00	0.0	0.600		o	375	Pipe/Conduit	⚠
S17.009	14.567	0.176	82.8	0.040	0.00	0.0	0.600		o	375	Pipe/Conduit	⚠
S17.010	14.882	0.775	19.2	0.024	0.00	0.0	0.600		o	375	Pipe/Conduit	⚠
S15.008	9.874	0.027	365.7	0.008	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠
S15.009	8.787	0.127	69.2	0.032	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠
S15.010	10.835	0.077	140.7	0.013	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠
S15.011	15.755	0.049	321.5	0.011	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠
S15.012	13.831#	0.168	82.3	0.000	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠
S20.000	37.361	0.387	96.5	0.008	5.00	0.0	0.600		o	150	Pipe/Conduit	⚠
S20.001	14.941	0.134	111.5	0.161	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S20.002	47.282	0.388	121.9	0.009	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S21.000	26.930	0.267	100.9	0.011	5.00	0.0	0.600		o	150	Pipe/Conduit	⚠
S21.001	20.549	0.122	168.4	0.036	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S21.002	10.051	0.135	74.5	0.036	0.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S21.003	38.528	0.230	167.5	0.008	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S22.000	28.841	0.297	97.1	0.036	5.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S23.000	9.236	0.463	19.9	0.025	5.00	0.0	0.600		o	150	Pipe/Conduit	⚠
S22.001	44.777	0.829	54.0	0.033	0.00	0.0	0.600		o	300	Pipe/Conduit	⚠
S24.000	12.264	0.143	85.8	0.033	5.00	0.0	0.600		o	150	Pipe/Conduit	⚠
S22.002	25.202	0.108	233.4	0.072	0.00	0.0	0.600		o	375	Pipe/Conduit	⚠
S22.003	14.752	0.044	335.3	0.019	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠
S22.004	18.636	0.058	321.3	0.042	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠
S22.005	30.121	0.097	310.5	0.054	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠
S25.000	27.977	0.636	44.0	0.123	5.00	0.0	0.600		o	225	Pipe/Conduit	⚠
S22.006	10.222	0.037	276.3	0.023	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠
S22.007	33.156	0.416	79.7	0.021	0.00	0.0	0.600		o	450	Pipe/Conduit	⚠

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I. Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S17.008	56.01	6.76	21.137	0.359	0.0	0.0	0.0	1.51	167.1	54.5
S17.009	55.53	6.88	21.023	0.399	0.0	0.0	0.0	1.99	220.1	60.0
S17.010	55.30	6.94	20.847	0.423	0.0	0.0	0.0	4.15	458.5	63.4
S15.008	54.71	7.10	19.997	0.784	0.0	0.0	0.0	1.06	168.1	116.2
S15.009	54.49	7.16	19.970	0.816	0.0	0.0	0.0	2.45	389.2	120.4
S15.010	54.10	7.26	19.843	0.829	0.0	0.0	0.0	1.71	272.3	121.5
S15.011	53.27	7.49	19.766	0.840	0.0	0.0	0.0	1.13	179.5	121.5
S15.012	52.91	7.60	19.717	0.840	0.0	0.0	0.0	2.24	356.6	121.5
S20.000	61.03	5.61	20.901	0.008	0.0	0.0	0.0	1.02	18.1	1.3
S20.001	60.23	5.78	20.364	0.169	0.0	0.0	0.0	1.49	105.2	27.6
S20.002	57.76	6.33	20.230	0.178	0.0	0.0	0.0	1.42	100.6	27.8
S21.000	61.82	5.45	21.063	0.011	0.0	0.0	0.0	1.00	17.7	1.8
S21.001	60.17	5.79	20.746	0.047	0.0	0.0	0.0	1.00	39.9	7.7
S21.002	59.66	5.90	20.624	0.083	0.0	0.0	0.0	1.52	60.3	13.4
S21.003	57.34	6.43	20.414	0.091	0.0	0.0	0.0	1.21	85.7	14.1
S22.000	62.25	5.36	22.393	0.036	0.0	0.0	0.0	1.33	52.8	6.1
S23.000	63.80	5.07	22.559	0.025	0.0	0.0	0.0	2.27	40.0	4.3
S22.001	60.54	5.71	22.021	0.094	0.0	0.0	0.0	2.14	151.5	15.4
S24.000	63.15	5.19	21.485	0.033	0.0	0.0	0.0	1.09	19.2	5.6
S22.002	58.91	6.07	21.117	0.199	0.0	0.0	0.0	1.18	130.5	31.7
S22.003	57.94	6.29	21.009	0.218	0.0	0.0	0.0	1.10	175.7	34.2
S22.004	56.79	6.56	20.965	0.260	0.0	0.0	0.0	1.13	179.5	40.0
S22.005	55.07	7.00	20.907	0.314	0.0	0.0	0.0	1.15	182.6	46.8
S25.000	62.90	5.24	21.671	0.123	0.0	0.0	0.0	1.98	78.6	21.0
S22.006	54.55	7.14	20.810	0.460	0.0	0.0	0.0	1.22	193.7	68.0
S22.007	53.66	7.38	20.773	0.481	0.0	0.0	0.0	2.28	362.4	69.9

PFA Consulting		Page 6
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023	Designed by BF/DRB	
File M380-Catch A-V4.7 (S278+FW).MDX	Checked by	
Causeway	Network 2020.1.3	

Network Design Table for M380-CATCHMENT A-SW.SWS

PN	Length (m)	Fall (m)	Slope (1:X)	I. Area (ha)	T. E. (mins)	Base Flow (l/s)	k (mm)	n	HYD SECT	DIA (mm)	Section Type	Auto Design	
S22.008	22.498	0.297	75.8	0.199	0.00	0.0	0.600		o	450	Pipe/Conduit	🔴	
S26.000	23.275	0.567	41.0	0.033	5.00	0.0	0.600		o	225	Pipe/Conduit	🔴	
S27.000	12.132	0.071	170.9	0.010	5.00	0.0	0.600		o	225	Pipe/Conduit	🔴	
S27.001	20.642	0.121	170.6	0.014	0.00	0.0	0.600		o	225	Pipe/Conduit	🔴	
S26.001	39.547	0.212	186.5	0.105	0.00	0.0	0.600		o	300	Pipe/Conduit	🔴	
S26.002	29.887	0.136	219.8	0.125	0.00	0.0	0.600		o	300	Pipe/Conduit	🔴	
S21.004	34.492	0.069	499.9	0.187	0.00	0.0	0.600		o	600	Pipe/Conduit	🔴	
S21.005	12.517	0.025	500.7	0.032	0.00	0.0	0.600		o	600	Pipe/Conduit	🔴	
S21.006	14.415	0.029	497.1	0.030	0.00	0.0	0.600		o	600	Pipe/Conduit	🔴	
S21.007	19.439	0.039	498.4	0.039	0.00	0.0	0.600		o	600	Pipe/Conduit	🔴	
S21.008	14.965	0.030	498.8	0.010	0.00	0.0	0.600		o	600	Pipe/Conduit	🔴	
S21.009	15.540	0.031	501.3	0.025	0.00	0.0	0.600		o	600	Pipe/Conduit	🔴	
S21.010	6.730	0.014	480.7	0.000	0.00	0.0	0.600		o	600	Pipe/Conduit	🟢	
S21.011	34.996	0.073	479.4	0.099	0.00	0.0	0.600		o	600	Pipe/Conduit	🔴	
S28.000	12.117	0.030	403.9	0.049	5.00	0.0	0.600		o	450	Pipe/Conduit	🔴	
S28.001	15.863	0.040	396.6	0.067	0.00	0.0	0.600		o	450	Pipe/Conduit	🔴	
S28.002	20.449	0.030	681.6	0.017	0.00	0.0	0.600		o	750	Pipe/Conduit	🔴	
S28.003	17.526	0.025	701.0	0.030	0.00	0.0	0.600		o	750	Pipe/Conduit	🔴	
S28.004	35.127	0.220	159.7	0.000	0.00	0.0	0.600		o	750	Pipe/Conduit	🔴	
S21.012	33.982	0.050	679.6	0.000	0.00	0.0	0.600		o	750	Pipe/Conduit	🔴	
S21.013	5.369	0.029	185.1	0.000	0.00	0.0	0.600		o	750	Pipe/Conduit	🔴	
S20.003	10.375#	0.021	494.0	0.088	0.00	0.0	0.600		o	750	Pipe/Conduit	🔴	
S1.021	8.756	0.036	243.2	0.000	0.00	0.0	0.600		o	375	Pipe/Conduit	🔴	
S1.022	6.724	0.021	320.2	0.000	0.00	0.0	0.600		o	375	Pipe/Conduit	🔴	
S1.023	38.389	0.077	498.6	0.000	0.00	0.0		0.045	3	¥=	150	1:3 Swale	🔴
S1.024	42.072	0.084	500.9	0.000	0.00	0.0		0.045	3	¥=	150	1:3 Swale	🔴
S1.025	7.094	0.014	506.7	0.000	0.00	0.0		0.045	3	¥=	150	1:3 Swale	🔴
S1.026	5.150	0.010	515.0	0.000	0.00	0.0		0.045	3	¥=	150	1:3 Swale	🔴

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S22.008	53.10	7.54	20.357	0.680	0.0	0.0	0.0	2.34	371.8	97.8
S26.000	63.15	5.19	21.200	0.033	0.0	0.0	0.0	2.05	81.4	5.6
S27.000	63.08	5.20	20.825	0.010	0.0	0.0	0.0	1.00	39.7	1.7
S27.001	61.33	5.55	20.754	0.024	0.0	0.0	0.0	1.00	39.7	4.0
S26.001	58.66	6.12	20.558	0.162	0.0	0.0	0.0	1.15	81.1	25.7
S26.002	56.67	6.59	20.346	0.287	0.0	0.0	0.0	1.06	74.7	44.0
S21.004	51.33	8.07	19.910	1.245	0.0	0.0	0.0	1.08	306.0	173.1
S21.005	50.72	8.27	19.841	1.277	0.0	0.0	0.0	1.08	305.8	175.4
S21.006	50.04	8.49	19.816	1.307	0.0	0.0	0.0	1.09	306.9	177.1
S21.007	49.15	8.79	19.787	1.346	0.0	0.0	0.0	1.08	306.5	179.2
S21.008	48.50	9.02	19.748	1.356	0.0	0.0	0.0	1.08	306.3	179.2
S21.009	47.84	9.26	19.718	1.381	0.0	0.0	0.0	1.08	305.6	179.2
S21.010	47.57	9.36	19.687	1.381	0.0	0.0	0.0	1.10	312.1	179.2
S21.011	46.21	9.89	19.673	1.480	0.0	0.0	0.0	1.11	312.6	185.2
S28.000	63.09	5.20	19.945	0.049	0.0	0.0	0.0	1.01	159.9	8.4
S28.001	61.75	5.46	19.915	0.116	0.0	0.0	0.0	1.01	161.4	19.4
S28.002	60.21	5.78	19.875	0.133	0.0	0.0	0.0	1.06	470.2	21.7
S28.003	58.94	6.06	19.845	0.163	0.0	0.0	0.0	1.05	463.5	26.0
S28.004	57.79	6.32	19.820	0.163	0.0	0.0	0.0	2.21	977.3	26.0
S21.012	44.93	10.42	19.600	1.643	0.0	0.0	0.0	1.07	470.9	199.9
S21.013	44.83	10.46	19.550	1.643	0.0	0.0	0.0	2.05	907.2	199.9
S20.003	44.51	10.60	19.521	1.909	0.0	0.0	0.0	1.25	553.2	230.1
S1.021	36.42	15.14	19.105	6.367	0.0	0.0	0.0	1.16	127.8	628.0
S1.022	36.27	15.25	19.069	6.367	0.0	0.0	0.0	1.01	111.2	628.0
S1.023	32.19	18.66	19.043	6.367	0.0	0.0	0.0	0.19	16.9	628.0
S1.024	28.79	22.41	18.966	6.367	0.0	0.0	0.0	0.19	16.9	628.0
S1.025	28.30	23.04	18.882	6.367	0.0	0.0	0.0	0.19	16.8	628.0
S1.026	27.95	23.51	18.868	6.367	0.0	0.0	0.0	0.18	16.6	628.0

PFA Consulting		Page 7
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023 File M380-Catch A-V4.7 (S278+FW).MDX	Designed by BF/DRB Checked by	
Causeway	Network 2020.1.3	

Network Design Table for M380-CATCHMENT A-SW.SWS

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	n	HYD SECT	DIA (mm)	Section Type	Auto Design	
S1.027	21.812	1.288	16.9	0.000	0.00	0.0		0.045	3	¥=/	150	1:3 Swale	

Network Results Table

PN	Rain (mm/hr)	T. C. (mins)	US/IL (m)	Σ I. Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S1.027	27.69	23.86	18.858	6.367	0.0	0.0	0.0	1.02	91.7	628.0

PFA Consulting		Page 8
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023 File M380-Catch A-V4.7 (S278+FW).MDX	Designed by BF/DRB Checked by	
Causeway	Network 2020.1.3	

PIPELINE SCHEDULES for M380-CATCHMENT A-SW.SWS

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. (mm)	L*W
S1.000	o	225	S988	28.000	26.575	1.200	Open Manhole		1200
S1.001	o	225	S989	27.700	26.262	1.213	Open Manhole		1200
S1.002	o	225	S990	27.550	25.962	1.363	Open Manhole		1800
S2.000	o	225	S1000	29.870	28.445	1.200	Open Manhole		1200
S2.001	o	225	S1001	29.525	27.775	1.525	Open Manhole		1200
S2.002	o	225	S1002	28.930	27.120	1.585	Open Manhole		1200
S2.003	o	225	S1003	28.225	26.360	1.640	Open Manhole		1200
S3.000	o	225	S980	27.550	26.125	1.200	Open Manhole		1500
S1.003	o	300	S1004	27.260	25.693	1.267	Open Manhole		1800
S1.004	o	300	S1005	26.950	25.208	1.442	Open Manhole		1500
S1.005	o	300	S1006	25.960	24.451	1.209	Open Manhole		1800
S4.000	o	150	S1040	26.400	24.700	1.550	Open Manhole		1200
S4.001	o	225	S1041	26.170	24.480	1.465	Open Manhole		1200
S4.002	o	225	S1042	25.290	23.797	1.268	Open Manhole		1200
S4.003	o	225	S1043	25.215	23.715	1.275	Open Manhole		1200
S4.004	o	225	S1044	25.220	23.643	1.352	Open Manhole		1200
S4.005	o	300	S1045	25.310	23.310	1.700	Open Manhole		1200
S4.006	o	300	S1046	25.115	23.195	1.620	Open Manhole		1200
S1.006	o	525	S1007	25.050	22.906	1.619	Open Manhole		1500
S5.000	o	225	S1050	25.208	23.559	1.424	Open Manhole		1200
S5.001	o	300	S1051	25.006	23.392	1.314	Open Manhole		1200
S5.002	o	300	S1052	24.945	23.342	1.303	Open Manhole		1200
S5.003	o	450	S1053	24.885	23.127	1.308	Open Manhole		1350
S5.004	o	450	S1054	24.800	23.059	1.291	Open Manhole		1350
S1.007	o	750	S1008	24.900	22.531	1.619	Open Manhole		1800
S1.008	o	750	S1009	24.690	22.455	1.485	Open Manhole		1800

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM. (mm)	L*W
S1.000	28.548	91.2	S989	27.700	26.262	1.213	Open Manhole		1200
S1.001	26.956	119.8	S990	27.550	26.037	1.288	Open Manhole		1800
S1.002	23.416	120.7	S1004	27.260	25.768	1.267	Open Manhole		1800
S2.000	24.325	36.3	S1001	29.525	27.775	1.525	Open Manhole		1200
S2.001	23.456	35.8	S1002	28.930	27.120	1.585	Open Manhole		1200
S2.002	27.383	40.0	S1003	28.225	26.435	1.565	Open Manhole		1200
S2.003	23.637	39.9	S1004	27.260	25.768	1.267	Open Manhole		1800
S3.000	11.648	32.6	S1004	27.260	25.768	1.267	Open Manhole		1800
S1.003	16.714	40.8	S1005	26.950	25.283	1.367	Open Manhole		1500
S1.004	26.934	39.5	S1006	25.960	24.526	1.134	Open Manhole		1800
S1.005	49.591	37.6	S1007	25.050	23.131	1.619	Open Manhole		1500
S4.000	15.956	110.0	S1041	26.170	24.555	1.465	Open Manhole		1200
S4.001	53.763	78.7	S1042	25.290	23.797	1.268	Open Manhole		1200
S4.002	9.855	120.2	S1043	25.215	23.715	1.275	Open Manhole		1200
S4.003	8.711	121.0	S1044	25.220	23.643	1.352	Open Manhole		1200
S4.004	38.525	149.3	S1045	25.310	23.385	1.700	Open Manhole		1200
S4.005	14.143	123.0	S1046	25.115	23.195	1.620	Open Manhole		1200
S4.006	7.359	115.0	S1007	25.050	23.131	1.619	Open Manhole		1500
S1.006	9.522	63.5	S1008	24.900	22.756	1.619	Open Manhole		1800
S5.000	13.926	151.4	S1051	25.006	23.467	1.314	Open Manhole		1200
S5.001	11.511	230.2	S1052	24.945	23.342	1.303	Open Manhole		1200
S5.002	11.510	177.1	S1053	24.885	23.277	1.308	Open Manhole		1350
S5.003	16.954	249.3	S1054	24.800	23.059	1.291	Open Manhole		1350
S5.004	24.908	109.2	S1008	24.900	22.831	1.619	Open Manhole		1800
S1.007	17.181	226.1	S1009	24.690	22.455	1.485	Open Manhole		1800
S1.008	25.441	225.1	S1010	24.750	22.342	1.658	Open Manhole		1800

PFA Consulting		Page 9
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023 File M380-Catch A-V4.7 (S278+FW).MDX	Designed by BF/DRB Checked by	
Causeway	Network 2020.1.3	

PIPELINE SCHEDULES for M380-CATCHMENT A-SW.SWS

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C. Level (m)	I. Level (m)	D. Depth (m)	MH Connection	MH DIAM., (mm)	L*W
S6.000	o	300	S1060	26.097	23.092	2.705	Open Manhole		1200
S1.009	o	750	S1010	24.750	22.342	1.658	Open Manhole		1800
S7.000	o	225	S1070	26.242	25.192	0.825	Open Manhole		1200
S7.001	o	225	S1071	26.395	25.071	1.099	Open Manhole		1200
S7.002	o	225	S1072	27.477	24.921	2.331	Open Manhole		1200
S7.003	o	225	S1073	28.150	24.751	3.174	Open Manhole		1200
S7.004	o	225	S1074	28.423	24.676	3.522	Open Manhole		1200
S7.005	o	300	S1075	29.003	24.447	4.256	Open Manhole		1200
S7.006	o	450	S1076	27.350	24.083	2.817	Open Manhole		1350
S7.007	o	450	S1077	26.816	24.016	2.350	Open Manhole		1350
S7.008	o	450	S1078	26.402	23.957	1.995	Open Manhole		1350
S7.009	o	450	S1079	26.065	23.891	1.724	Open Manhole		1350
S7.010	o	450	S1080	25.389	23.481	1.458	Open Manhole		1350
S1.010	o	750	S1011	25.092	22.144	2.198	Open Manhole		1800
S1.011	o	750	S1012	25.346	21.997	2.599	Open Manhole		1800
S1.012	o	900	S1014	25.568	21.730	2.938	Open Manhole		1800
S1.013	o	900	S1016	25.300	21.645	2.755	Open Manhole		1800
S1.014	o	900	S1018	23.845	21.386	1.559	Open Manhole		1800
S8.000	o	225	S1091	24.214	22.564	1.425	Open Manhole		1200
S1.015	o	900	S1019	23.962	21.247	1.815	Open Manhole		1800
S1.016	o	300	S1020-Basin A2	22.350	20.946	1.104	Open Manhole		1800
S1.017	o	300	S1021-Con	22.043	20.900	0.843	Open Manhole		2100
S1.018	3	300	S1022	22.030	20.818	1.062	Junction		
S1.019	o	300	S1023	21.545	20.764	0.481	Junction		
S1.020	3	300	S1024	21.545	20.676	0.719	Junction		
S9.000	o	225	S1100	24.028	22.304	1.499	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., (mm)	L*W
S6.000	66.664	222.2	S1010	24.750	22.792	1.658	Open Manhole		1800
S1.009	44.468	224.6	S1011	25.092	22.144	2.198	Open Manhole		1800
S7.000	18.164	150.1	S1071	26.395	25.071	1.099	Open Manhole		1200
S7.001	22.544	150.3	S1072	27.477	24.921	2.331	Open Manhole		1200
S7.002	25.569	150.4	S1073	28.150	24.751	3.174	Open Manhole		1200
S7.003	12.761	170.1	S1074	28.423	24.676	3.522	Open Manhole		1200
S7.004	26.123	169.6	S1075	29.003	24.522	4.256	Open Manhole		1200
S7.005	49.179	170.2	S1076	27.350	24.158	2.892	Open Manhole		1350
S7.006	11.357	169.5	S1077	26.816	24.016	2.350	Open Manhole		1350
S7.007	9.948	168.6	S1078	26.402	23.957	1.995	Open Manhole		1350
S7.008	11.164	169.2	S1079	26.065	23.891	1.724	Open Manhole		1350
S7.009	26.507	64.7	S1080	25.389	23.481	1.458	Open Manhole		1350
S7.010	19.991	19.3	S1011	25.092	22.444	2.198	Open Manhole		1800
S1.010	33.101	225.2	S1012	25.346	21.997	2.599	Open Manhole		1800
S1.011	26.319	224.9	S1014	25.568	21.880	2.938	Open Manhole		1800
S1.012	19.218	226.1	S1016	25.300	21.645	2.755	Open Manhole		1800
S1.013	58.302	225.1	S1018	23.845	21.386	1.559	Open Manhole		1800
S1.014	24.102	173.4	S1019	23.962	21.247	1.815	Open Manhole		1800
S8.000	18.194	28.3	S1019	23.962	21.922	1.815	Open Manhole		1800
S1.015	85.903	436.1	S1020-Basin A2	22.350	21.050	0.400	Open Manhole		1800
S1.016	10.176	221.2	S1021-Con	22.043	20.900	0.843	Open Manhole		2100
S1.017	7.577	236.8	S1022	22.030	20.868	0.862	Junction		
S1.018	40.502	750.0	S1023	21.545	20.764	0.631	Junction		
S1.019	9.086	239.1	S1024	21.545	20.726	0.519	Junction		
S1.020	8.000#	45.5	S1025-Basin A1	20.650	20.500	0.000	Open Manhole		1800
S9.000	32.862	60.9	S1101	23.690	21.764	1.701	Open Manhole		1200

PFA Consulting		Page 10
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023 File M380-Catch A-V4.7 (S278+FW).MDX	Designed by BF/DRB Checked by	
Causeway	Network 2020.1.3	

PIPELINE SCHEDULES for M380-CATCHMENT A-SW.SWS

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C. Level (m)	I. Level (m)	D. Depth (m)	MH Connection	MH DIAM., (mm)	L*W
S10. 000	o	225	S1110	23. 557	21. 907	1. 425	Open Manhole		1200
S9. 001	o	300	S1101	23. 690	21. 689	1. 701	Open Manhole		1200
S9. 002	o	300	S1102	23. 194	21. 470	1. 424	Open Manhole		1200
S9. 003	o	300	S1103	22. 891	21. 166	1. 425	Open Manhole		1200
S9. 004	o	300	S1104	22. 624	20. 899	1. 425	Open Manhole		1200
S11. 000	o	150	S1120	25. 814	24. 164	1. 500	Open Manhole		1200
S12. 000	o	150	S1140	25. 553	23. 903	1. 500	Open Manhole		1200
S11. 001	o	225	S1121	25. 718	23. 675	1. 818	Open Manhole		1200
S11. 002	o	225	S1122	24. 960	23. 235	1. 500	Open Manhole		1200
S11. 003	o	300	S1123	24. 700	22. 975	1. 425	Open Manhole		1200
S11. 004	o	300	S1124	24. 210	22. 410	1. 500	Open Manhole		1200
S13. 000	o	225	S1150	24. 347	22. 697	1. 425	Open Manhole		1200
S11. 005	o	300	S1125	24. 340	22. 312	1. 728	Open Manhole		1200
S11. 006	o	375	S1126	22. 588	20. 788	1. 425	Open Manhole		1350
S11. 007	o	375	S1127	22. 250	20. 375	1. 500	Open Manhole		1350
S11. 008	o	375	S1128	22. 189	20. 313	1. 501	Open Manhole		1350
S11. 009	o	375	S1129	22. 093	20. 218	1. 500	Open Manhole		1350
S11. 010	o	375	S1130	21. 820	20. 046	1. 399	Open Manhole		1350
S14. 000	o	375	S1160	21. 558	20. 059	1. 124	Open Manhole		1350
S11. 011	o	375	S1131	21. 725	20. 020	1. 330	Open Manhole		1350
S9. 005	o	375	S1105	21. 723	19. 863	1. 485	Open Manhole		1350
S15. 000	o	225	S1169	24. 601	22. 990	1. 386	Open Manhole		1200
S15. 001	o	225	S1170	23. 616	21. 955	1. 436	Open Manhole		1200
S15. 002	o	300	S1171	23. 461	21. 744	1. 417	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., (mm)	L*W
S10. 000	14. 433	100. 9	S1101	23. 690	21. 764	1. 701	Open Manhole		1200
S9. 001	18. 287	83. 5	S1102	23. 194	21. 470	1. 424	Open Manhole		1200
S9. 002	11. 426	37. 6	S1103	22. 891	21. 166	1. 425	Open Manhole		1200
S9. 003	11. 455	42. 9	S1104	22. 624	20. 899	1. 425	Open Manhole		1200
S9. 004	36. 976	38. 5	S1105	21. 723	19. 938	1. 485	Open Manhole		1350
S11. 000	9. 559	23. 1	S1121	25. 718	23. 750	1. 818	Open Manhole		1200
S12. 000	15. 521	101. 4	S1121	25. 718	23. 750	1. 818	Open Manhole		1200
S11. 001	21. 433	48. 7	S1122	24. 960	23. 235	1. 500	Open Manhole		1200
S11. 002	8. 283	31. 9	S1123	24. 700	22. 975	1. 500	Open Manhole		1200
S11. 003	30. 938	54. 8	S1124	24. 210	22. 410	1. 500	Open Manhole		1200
S11. 004	13. 620	139. 0	S1125	24. 340	22. 312	1. 728	Open Manhole		1200
S13. 000	11. 835	38. 2	S1125	24. 340	22. 387	1. 728	Open Manhole		1200
S11. 005	57. 782	39. 9	S1126	22. 588	20. 863	1. 425	Open Manhole		1350
S11. 006	19. 501	47. 2	S1127	22. 250	20. 375	1. 500	Open Manhole		1350
S11. 007	3. 946	63. 6	S1128	22. 189	20. 313	1. 501	Open Manhole		1350
S11. 008	4. 967	52. 3	S1129	22. 093	20. 218	1. 500	Open Manhole		1350
S11. 009	14. 725	85. 6	S1130	21. 820	20. 046	1. 399	Open Manhole		1350
S11. 010	7. 909	304. 2	S1131	21. 725	20. 020	1. 330	Open Manhole		1350
S14. 000	12. 385	317. 6	S1131	21. 725	20. 020	1. 330	Open Manhole		1350
S11. 011	50. 303	320. 4	S1105	21. 723	19. 863	1. 485	Open Manhole		1350
S9. 005	13. 484#	37. 1	S1025-Basin A1	20. 650	19. 500	0. 775	Open Manhole		1800
S15. 000	35. 896	34. 7	S1170	23. 616	21. 955	1. 436	Open Manhole		1200
S15. 001	8. 580	40. 7	S1171	23. 461	21. 744	1. 492	Open Manhole		1200
S15. 002	21. 319	45. 7	S1172	22. 404	21. 278	0. 826	Open Manhole		1200

PFA Consulting		Page 11
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023	Designed by BF/DRB	
File M380-Catch A-V4.7 (S278+FW).MDX	Checked by	
Causeway	Network 2020.1.3	

PIPELINE SCHEDULES for M380-CATCHMENT A-SW.SWS

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C. Level (m)	I. Level (m)	D. Depth (m)	MH Connection	MH DIAM. (mm)	L*W
S15.003	o	300	S1172	22.404	21.278	0.826	Open Manhole		1200
S15.004	o	300	S1173	22.405	20.979	1.126	Open Manhole		1200
S15.005	o	300	S1174	21.950	20.579	1.071	Open Manhole		1200
S16.000	o	300	SH119	21.753	20.400	1.053	Open Manhole		1200
S15.006	o	300	S1175	21.840	20.353	1.187	Open Manhole		1200
S15.007	o	300	S1176	22.088	20.183	1.605	Open Manhole		1200
S17.000	o	150	S1200	25.344	23.694	1.500	Open Manhole		1200
S17.001	o	225	S1201	25.284	23.469	1.590	Open Manhole		1200
S17.002	o	225	S1202	24.984	23.148	1.611	Open Manhole		1200
S18.000	o	150	S1220	24.890	23.236	1.504	Open Manhole		1200
S17.003	o	225	S1203	24.846	23.050	1.571	Open Manhole		1200
S17.004	o	225	S1204	24.117	22.392	1.500	Open Manhole		1200
S17.005	o	225	S1205	23.788	22.063	1.500	Open Manhole		1200
S19.000	o	225	S1230	23.400	22.137	1.038	Open Manhole		1200
S19.001	o	225	S1231	23.300	22.063	1.012	Open Manhole		1200
S17.006	o	375	S1206	23.200	21.489	1.336	Open Manhole		1350
S17.007	o	375	S1207	23.000	21.242	1.383	Open Manhole		1350
S17.008	o	375	S1208	22.890	21.137	1.378	Open Manhole		1350
S17.009	o	375	S1209	22.660	21.023	1.262	Open Manhole		1350
S17.010	o	375	S1210	22.325	20.847	1.103	Open Manhole		1350
S15.008	o	450	S1177	21.960	19.997	1.513	Open Manhole		1350
S15.009	o	450	S1178	21.925	19.970	1.505	Open Manhole		1350
S15.010	o	450	S1179	21.794	19.843	1.501	Open Manhole		1350
S15.011	o	450	S1180	21.717	19.766	1.501	Open Manhole		1350
S15.012	o	450	S1181	21.740	19.717	1.573	Open Manhole		1350

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C. Level (m)	I. Level (m)	D. Depth (m)	MH Connection	MH DIAM. (mm)	L*W
S15.003	9.260	31.0	S1173	22.405	20.979	1.126	Open Manhole		1200
S15.004	22.422	56.1	S1174	21.950	20.579	1.071	Open Manhole		1200
S15.005	8.504	37.6	S1175	21.840	20.353	1.187	Open Manhole		1200
S16.000	10.382	220.9	S1175	21.840	20.353	1.187	Open Manhole		1200
S15.006	41.037	241.4	S1176	22.088	20.183	1.605	Open Manhole		1200
S15.007	9.158	254.4	S1177	21.960	20.147	1.513	Open Manhole		1350
S17.000	19.893	88.4	S1201	25.284	23.469	1.665	Open Manhole		1200
S17.001	19.602	61.1	S1202	24.984	23.148	1.611	Open Manhole		1200
S17.002	16.804	171.5	S1203	24.846	23.050	1.571	Open Manhole		1200
S18.000	9.247	83.3	S1203	24.846	23.125	1.571	Open Manhole		1200
S17.003	28.520	43.3	S1204	24.117	22.392	1.500	Open Manhole		1200
S17.004	13.311	40.5	S1205	23.788	22.063	1.500	Open Manhole		1200
S17.005	18.021	36.1	S1206	23.200	21.564	1.411	Open Manhole		1350
S19.000	10.328	139.6	S1231	23.300	22.063	1.012	Open Manhole		1200
S19.001	10.369	24.5	S1206	23.200	21.639	1.336	Open Manhole		1350
S17.006	20.226	81.9	S1207	23.000	21.242	1.383	Open Manhole		1350
S17.007	13.512	128.7	S1208	22.890	21.137	1.378	Open Manhole		1350
S17.008	16.297	143.0	S1209	22.660	21.023	1.262	Open Manhole		1350
S17.009	14.567	82.8	S1210	22.325	20.847	1.103	Open Manhole		1350
S17.010	14.882	19.2	S1177	21.960	20.072	1.513	Open Manhole		1350
S15.008	9.874	365.7	S1178	21.925	19.970	1.505	Open Manhole		1350
S15.009	8.787	69.2	S1179	21.794	19.843	1.501	Open Manhole		1350
S15.010	10.835	140.7	S1180	21.717	19.766	1.501	Open Manhole		1350
S15.011	15.755	321.5	S1181	21.740	19.717	1.573	Open Manhole		1350
S15.012	13.831#	82.3	S1025-Basin A1	20.650	19.549	0.651	Open Manhole		1800

PFA Consulting		Page 12
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023 File M380-Catch A-V4.7 (S278+FW).MDX	Designed by BF/DRB Checked by	
Causeway	Network 2020.1.3	

PIPELINE SCHEDULES for M380-CATCHMENT A-SW.SWS

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C. Level (m)	I. Level (m)	D. Depth (m)	MH Connection	MH DIAM. (mm)	L*W
S20.000	o	150	S1240	22.551	20.901	1.500	Open Manhole		1200
S20.001	o	300	S1241	22.187	20.364	1.523	Open Manhole		1200
S20.002	o	300	S1242	22.030	20.230	1.500	Open Manhole		1200
S21.000	o	150	S1250	22.489	21.063	1.276	Open Manhole		1200
S21.001	o	225	S1251	22.756	20.746	1.785	Open Manhole		1200
S21.002	o	225	S1252	22.692	20.624	1.843	Open Manhole		1200
S21.003	o	300	S1253	22.582	20.414	1.868	Open Manhole		1200
S22.000	o	225	S1270	23.967	22.393	1.349	Open Manhole		1200
S23.000	o	150	S1280	24.231	22.559	1.522	Open Manhole		1200
S22.001	o	300	S1271	24.084	22.021	1.763	Open Manhole		1200
S24.000	o	150	S1290	23.135	21.485	1.500	Open Manhole		1200
S22.002	o	375	S1272	23.338	21.117	1.846	Open Manhole		1350
S22.003	o	450	S1273	23.510	21.009	2.051	Open Manhole		1350
S22.004	o	450	S1274	23.371	20.965	1.956	Open Manhole		1350
S22.005	o	450	S1275	23.170	20.907	1.813	Open Manhole		1350
S25.000	o	225	S1300	23.321	21.671	1.425	Open Manhole		1200
S22.006	o	450	S1277	22.897	20.810	1.637	Open Manhole		1350
S22.007	o	450	S1278	22.785	20.773	1.562	Open Manhole		1350
S22.008	o	450	S1279	22.460	20.357	1.653	Open Manhole		1350
S26.000	o	225	SH310	22.925	21.200	1.500	Open Manhole		1200
S27.000	o	225	S1320	22.334	20.825	1.284	Open Manhole		1200
S27.001	o	225	S1321	22.453	20.754	1.474	Open Manhole		1200
S26.001	o	300	S1311	22.687	20.558	1.829	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. (mm)	L*W
S20.000	37.361	96.5	S1241	22.187	20.514	1.523	Open Manhole		1200
S20.001	14.941	111.5	S1242	22.030	20.230	1.500	Open Manhole		1200
S20.002	47.282	121.9	S1243	21.642	19.842	1.500	Open Manhole		1800
S21.000	26.930	100.9	S1251	22.756	20.796	1.810	Open Manhole		1200
S21.001	20.549	168.4	S1252	22.692	20.624	1.843	Open Manhole		1200
S21.002	10.051	74.5	S1253	22.582	20.489	1.868	Open Manhole		1200
S21.003	38.528	167.5	S1254	22.251	20.184	1.767	Open Manhole		1500
S22.000	28.841	97.1	S1271	24.084	22.096	1.763	Open Manhole		1200
S23.000	9.236	19.9	S1271	24.084	22.096	1.838	Open Manhole		1200
S22.001	44.777	54.0	S1272	23.338	21.192	1.846	Open Manhole		1350
S24.000	12.264	85.8	S1272	23.338	21.342	1.846	Open Manhole		1350
S22.002	25.202	233.4	S1273	23.510	21.009	2.126	Open Manhole		1350
S22.003	14.752	335.3	S1274	23.371	20.965	1.956	Open Manhole		1350
S22.004	18.636	321.3	S1275	23.170	20.907	1.813	Open Manhole		1350
S22.005	30.121	310.5	S1277	22.897	20.810	1.637	Open Manhole		1350
S25.000	27.977	44.0	S1277	22.897	21.035	1.637	Open Manhole		1350
S22.006	10.222	276.3	S1278	22.785	20.773	1.562	Open Manhole		1350
S22.007	33.156	79.7	S1279	22.460	20.357	1.653	Open Manhole		1350
S22.008	22.498	75.8	S1254	22.251	20.060	1.741	Open Manhole		1500
S26.000	23.275	41.0	S1311	22.687	20.633	1.829	Open Manhole		1200
S27.000	12.132	170.9	S1321	22.453	20.754	1.474	Open Manhole		1200
S27.001	20.642	170.6	S1311	22.687	20.633	1.829	Open Manhole		1200
S26.001	39.547	186.5	S1312	22.300	20.346	1.654	Open Manhole		1200

PFA Consulting		Page 13
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023	Designed by BF/DRB	
File M380-Catch A-V4.7 (S278+FW).MDX	Checked by	
Causeway	Network 2020.1.3	

PIPELINE SCHEDULES for M380-CATCHMENT A-SW.SWS

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)
S26.002	o	300	S1312	22.300	20.346	1.654	Open Manhole	1200
S21.004	o	600	S1254	22.251	19.910	1.741	Open Manhole	1500
S21.005	o	600	S1255	21.929	19.841	1.488	Open Manhole	1500
S21.006	o	600	S1256	21.861	19.816	1.445	Open Manhole	1500
S21.007	o	600	S1257	21.952	19.787	1.565	Open Manhole	1500
S21.008	o	600	S1258	22.067	19.748	1.719	Open Manhole	1500
S21.009	o	600	S1259	21.898	19.718	1.580	Open Manhole	1500
S21.010	o	600	S1260	21.875	19.687	1.588	Open Manhole	1500
S21.011	o	600	S1261	21.892	19.673	1.619	Open Manhole	1500
S28.000	o	450	S1330	21.676	19.945	1.281	Open Manhole	1350
S28.001	o	450	S1331	21.339	19.915	0.974	Open Manhole	1350
S28.002	o	750	S1332	21.250	19.875	0.625	Open Manhole	1800
S28.003	o	750	S1333	21.589	19.845	0.994	Open Manhole	1800
S28.004	o	750	S1334	21.694	19.820	1.124	Open Manhole	1800
S21.012	o	750	S1262	21.693	19.600	1.343	Open Manhole	1800
S21.013	o	750	S1263	21.600	19.550	1.300	Open Manhole	1800
S20.003	o	750	S1243	21.642	19.521	1.371	Open Manhole	1800
S1.021	o	375	S1025-Basin A1	20.650	19.105	1.170	Open Manhole	1800
S1.022	o	375	S1026-Con	21.144	19.069	1.700	Open Manhole	2100
S1.023	3	150	S1027	21.298	19.043	2.105	Junction	
S1.024	3	150	S1028	21.261	18.966	2.145	Junction	
S1.025	3	150	S1029	21.175	18.882	2.143	Junction	
S1.026	3	150	S1030	21.018	18.868	2.000	Junction	
S1.027	3	150	S1031	20.969	18.858	1.961	Junction	

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)
S26.002	29.887	219.8	S1254	22.251	20.210	1.741	Open Manhole	1500
S21.004	34.492	499.9	S1255	21.929	19.841	1.488	Open Manhole	1500
S21.005	12.517	500.7	S1256	21.861	19.816	1.445	Open Manhole	1500
S21.006	14.415	497.1	S1257	21.952	19.787	1.565	Open Manhole	1500
S21.007	19.439	498.4	S1258	22.067	19.748	1.719	Open Manhole	1500
S21.008	14.965	498.8	S1259	21.898	19.718	1.580	Open Manhole	1500
S21.009	15.540	501.3	S1260	21.875	19.687	1.588	Open Manhole	1500
S21.010	6.730	480.7	S1261	21.892	19.673	1.619	Open Manhole	1500
S21.011	34.996	479.4	S1262	21.693	19.600	1.493	Open Manhole	1800
S28.000	12.117	403.9	S1331	21.339	19.915	0.974	Open Manhole	1350
S28.001	15.863	396.6	S1332	21.250	19.875	0.925	Open Manhole	1800
S28.002	20.449	681.6	S1333	21.589	19.845	0.994	Open Manhole	1800
S28.003	17.526	701.0	S1334	21.694	19.820	1.124	Open Manhole	1800
S28.004	35.127	159.7	S1262	21.693	19.600	1.343	Open Manhole	1800
S21.012	33.982	679.6	S1263	21.600	19.550	1.300	Open Manhole	1800
S21.013	5.369	185.1	S1243	21.642	19.521	1.371	Open Manhole	1800
S20.003	10.375#	494.0	S1025-Basin A1	20.650	19.500	0.400	Open Manhole	1800
S1.021	8.756	243.2	S1026-Con	21.144	19.069	1.700	Open Manhole	2100
S1.022	6.724	320.2	S1027	21.298	19.048	1.875	Junction	
S1.023	38.389	498.6	S1028	21.261	18.966	2.145	Junction	
S1.024	42.072	500.9	S1029	21.175	18.882	2.143	Junction	
S1.025	7.094	506.7	S1030	21.018	18.868	2.000	Junction	
S1.026	5.150	515.0	S1031	20.969	18.858	1.961	Junction	
S1.027	21.812	16.9	S1032	17.630	17.570	-0.090	Open Manhole	0

PFA Consulting		Page 14
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023 File M380-Catch A-V4.7 (S278+FW).MDX	Designed by BF/DRB Checked by	
Causeway	Network 2020.1.3	

Area Summary for M380-CATCHMENT A-SW.SWS

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
1.000	-	-	100	0.023	0.023	0.023
1.001	-	-	100	0.059	0.059	0.059
1.002	-	-	100	0.051	0.051	0.051
2.000	-	-	100	0.026	0.026	0.026
2.001	-	-	100	0.020	0.020	0.020
2.002	-	-	100	0.009	0.009	0.009
2.003	-	-	100	0.035	0.035	0.035
3.000	-	-	100	0.034	0.034	0.034
1.003	-	-	100	0.009	0.009	0.009
1.004	-	-	100	0.054	0.054	0.054
1.005	-	-	100	0.083	0.083	0.083
4.000	-	-	100	0.087	0.087	0.087
4.001	-	-	100	0.061	0.061	0.061
4.002	-	-	100	0.062	0.062	0.062
4.003	-	-	100	0.000	0.000	0.000
4.004	-	-	100	0.021	0.021	0.021
4.005	-	-	100	0.175	0.175	0.175
4.006	-	-	100	0.016	0.016	0.016
1.006	-	-	100	0.077	0.077	0.077
5.000	-	-	100	0.041	0.041	0.041
5.001	-	-	100	0.041	0.041	0.041
5.002	-	-	100	0.014	0.014	0.014
5.003	-	-	100	0.025	0.025	0.025
5.004	-	-	100	0.040	0.040	0.040
1.007	-	-	100	0.064	0.064	0.064
1.008	-	-	100	0.024	0.024	0.024
6.000	-	-	100	0.304	0.304	0.304
1.009	-	-	100	0.045	0.045	0.045
7.000	-	-	100	0.065	0.065	0.065
7.001	-	-	100	0.030	0.030	0.030
7.002	-	-	100	0.031	0.031	0.031
7.003	-	-	100	0.028	0.028	0.028
7.004	-	-	100	0.007	0.007	0.007
7.005	-	-	100	0.100	0.100	0.100
7.006	-	-	100	0.080	0.080	0.080
7.007	-	-	100	0.023	0.023	0.023
7.008	-	-	100	0.055	0.055	0.055
7.009	-	-	100	0.006	0.006	0.006
7.010	-	-	100	0.098	0.098	0.098
1.010	-	-	100	0.085	0.085	0.085
1.011	-	-	100	0.113	0.113	0.113
1.012	-	-	100	0.052	0.052	0.052
1.013	-	-	100	0.039	0.039	0.039
1.014	-	-	100	0.232	0.232	0.232
8.000	-	-	100	0.023	0.023	0.023
1.015	-	-	100	0.113	0.113	0.113
1.016	-	-	100	0.000	0.000	0.000
1.017	-	-	100	0.000	0.000	0.000
1.018	-	-	100	0.000	0.000	0.000
1.019	-	-	100	0.000	0.000	0.000
1.020	-	-	100	0.000	0.000	0.000
9.000	-	-	100	0.034	0.034	0.034
10.000	-	-	100	0.038	0.038	0.038
9.001	-	-	100	0.099	0.099	0.099
9.002	-	-	100	0.015	0.015	0.015
9.003	-	-	100	0.016	0.016	0.016
9.004	-	-	100	0.041	0.041	0.041
11.000	-	-	100	0.082	0.082	0.082
12.000	-	-	100	0.032	0.032	0.032
11.001	-	-	100	0.012	0.012	0.012
11.002	-	-	100	0.027	0.027	0.027
11.003	-	-	100	0.015	0.015	0.015
11.004	-	-	100	0.034	0.034	0.034
13.000	-	-	100	0.035	0.035	0.035
11.005	-	-	100	0.062	0.062	0.062
11.006	-	-	100	0.124	0.124	0.124
11.007	-	-	100	0.045	0.045	0.045
11.008	-	-	100	0.009	0.009	0.009
11.009	-	-	100	0.018	0.018	0.018
11.010	-	-	100	0.012	0.012	0.012
14.000	-	-	100	0.008	0.008	0.008
11.011	-	-	100	0.038	0.038	0.038
9.005	-	-	100	0.142	0.142	0.142
15.000	-	-	100	0.017	0.017	0.017
15.001	-	-	100	0.067	0.067	0.067
15.002	-	-	100	0.010	0.010	0.010
15.003	-	-	100	0.038	0.038	0.038
15.004	-	-	100	0.011	0.011	0.011

PFA Consulting		Page 15
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023	Designed by BF/DRB	
File M380-Catch A-V4.7 (S278+FW).MDX	Checked by	
Causeway	Network 2020.1.3	

Area Summary for M380-CATCHMENT A-SW.SWS

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
15.005	-	-	100	0.000	0.000	0.000
16.000	-	-	100	0.110	0.110	0.110
15.006	-	-	100	0.005	0.005	0.005
15.007	-	-	100	0.095	0.095	0.095
17.000	-	-	100	0.000	0.000	0.000
17.001	-	-	100	0.038	0.038	0.038
17.002	-	-	100	0.039	0.039	0.039
18.000	-	-	100	0.018	0.018	0.018
17.003	-	-	100	0.034	0.034	0.034
17.004	-	-	100	0.019	0.019	0.019
17.005	-	-	100	0.012	0.012	0.012
19.000	-	-	100	0.037	0.037	0.037
19.001	-	-	100	0.023	0.023	0.023
17.006	-	-	100	0.039	0.039	0.039
17.007	-	-	100	0.062	0.062	0.062
17.008	-	-	100	0.038	0.038	0.038
17.009	-	-	100	0.040	0.040	0.040
17.010	-	-	100	0.024	0.024	0.024
15.008	-	-	100	0.008	0.008	0.008
15.009	-	-	100	0.032	0.032	0.032
15.010	-	-	100	0.013	0.013	0.013
15.011	-	-	100	0.011	0.011	0.011
15.012	-	-	100	0.000	0.000	0.000
20.000	-	-	100	0.008	0.008	0.008
20.001	-	-	100	0.161	0.161	0.161
20.002	-	-	100	0.009	0.009	0.009
21.000	-	-	100	0.011	0.011	0.011
21.001	-	-	100	0.036	0.036	0.036
21.002	-	-	100	0.036	0.036	0.036
21.003	-	-	100	0.008	0.008	0.008
22.000	-	-	100	0.036	0.036	0.036
23.000	-	-	100	0.025	0.025	0.025
22.001	-	-	100	0.033	0.033	0.033
24.000	-	-	100	0.033	0.033	0.033
22.002	-	-	100	0.072	0.072	0.072
22.003	-	-	100	0.019	0.019	0.019
22.004	-	-	100	0.042	0.042	0.042
22.005	-	-	100	0.054	0.054	0.054
25.000	-	-	100	0.123	0.123	0.123
22.006	-	-	100	0.023	0.023	0.023
22.007	-	-	100	0.021	0.021	0.021
22.008	-	-	100	0.199	0.199	0.199
26.000	-	-	100	0.033	0.033	0.033
27.000	-	-	100	0.010	0.010	0.010
27.001	-	-	100	0.014	0.014	0.014
26.001	-	-	100	0.105	0.105	0.105
26.002	-	-	100	0.125	0.125	0.125
21.004	-	-	100	0.187	0.187	0.187
21.005	-	-	100	0.032	0.032	0.032
21.006	-	-	100	0.030	0.030	0.030
21.007	-	-	100	0.039	0.039	0.039
21.008	-	-	100	0.010	0.010	0.010
21.009	-	-	100	0.025	0.025	0.025
21.010	-	-	100	0.000	0.000	0.000
21.011	-	-	100	0.099	0.099	0.099
28.000	-	-	100	0.049	0.049	0.049
28.001	-	-	100	0.067	0.067	0.067
28.002	-	-	100	0.017	0.017	0.017
28.003	-	-	100	0.030	0.030	0.030
28.004	-	-	100	0.000	0.000	0.000
21.012	-	-	100	0.000	0.000	0.000
21.013	-	-	100	0.000	0.000	0.000
20.003	-	-	100	0.088	0.088	0.088
1.021	-	-	100	0.000	0.000	0.000
1.022	-	-	100	0.000	0.000	0.000
1.023	-	-	100	0.000	0.000	0.000
1.024	-	-	100	0.000	0.000	0.000
1.025	-	-	100	0.000	0.000	0.000
1.026	-	-	100	0.000	0.000	0.000
1.027	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				6.367	6.367	6.367

PFA Consulting		Page 16
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023 File M380-Catch A-V4.7 (S278+FW).MDX	Designed by BF/DRB Checked by	
Causeway	Network 2020.1.3	

Online Controls for M380-CATCHMENT A-SW.SWS

Orifice Manhole: S1021-Con, DS/PN: S1.017, Volume (m³): 4.5

Diameter (m) 0.300 Discharge Coefficient 0.600 Invert Level (m) 20.900

Hydro-Brake® Optimum Manhole: S1026-Con, DS/PN: S1.022, Volume (m³): 7.9

Unit Reference	MD-SFF-0306-6200-1531-5580	Sump Available	Yes
Design Head (m)	1.531	Diameter (mm)	306
Design Flow (l/s)	62.0	Invert Level (m)	19.069
Flush-Flo™	User Defined	Minimum Outlet Pipe Diameter (mm)	375
Objective	Minimise upstream storage	Suggested Manhole Diameter (mm)	2100
Application	Surface		

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.531	62.0	Kick-Flo®	0.924	48.6
Flush-Flo™	0.482	55.8	Mean Flow over Head Range	-	48.5

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

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	9.3	0.800	52.7	2.000	70.6	4.000	98.8	7.000	129.8
0.200	31.4	1.000	50.5	2.200	73.9	4.500	104.6	7.500	134.3
0.300	53.6	1.200	55.1	2.400	77.1	5.000	110.2	8.000	138.6
0.400	55.4	1.400	59.4	2.600	80.1	5.500	115.4	8.500	142.8
0.500	55.8	1.600	63.3	3.000	85.9	6.000	120.4	9.000	146.8
0.600	55.3	1.800	67.0	3.500	92.6	6.500	125.2	9.500	150.7

PFA Consulting		Page 17
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023 File M380-Catch A-V4.7 (S278+FW).MDX	Designed by BF/DRB Checked by	
Causeway	Network 2020.1.3	

Storage Structures for M380-CATCHMENT A-SW.SWS

Tank or Pond Manhole: S1020-Basin A2, DS/PN: S1.016

Invert Level (m) 21.000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	717.5	0.500	1015.2	1.000	1339.1	1.500	1539.0	2.000	1539.0	2.500	1539.0
0.100	775.0	0.600	1077.9	1.100	1407.1	1.600	1539.0	2.100	1539.0		
0.200	833.5	0.700	1141.7	1.200	1476.1	1.700	1539.0	2.200	1539.0		
0.300	893.0	0.800	1206.4	1.300	1539.0	1.800	1539.0	2.300	1539.0		
0.400	953.6	0.900	1272.3	1.400	1539.0	1.900	1539.0	2.400	1539.0		

Tank or Pond Manhole: S1025-Basin A1, DS/PN: S1.021

Invert Level (m) 19.400

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	3151.7	0.500	4153.2	1.000	5170.3	1.500	5577.3	2.000	5577.3	2.500	5577.3
0.100	3349.9	0.600	4356.5	1.100	5388.8	1.600	5577.3	2.100	5577.3		
0.200	3549.2	0.700	4560.9	1.200	5577.3	1.700	5577.3	2.200	5577.3		
0.300	3749.5	0.800	4766.4	1.300	5577.3	1.800	5577.3	2.300	5577.3		
0.400	3950.8	0.900	4972.8	1.400	5577.3	1.900	5577.3	2.400	5577.3		

PFA Consulting		Page 1
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023	Designed by BF/DRB	
File M380-Catch A-V4.7 (S278+FW).MDX	Checked by	
Causeway	Network 2020.1.3	

2 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

Simulation Criteria

Areal Reduction Factor 1.000 Manhole Headloss Coeff (Global) 0.500 MADD Factor * 10m³/ha Storage 2.000
 Hot Start (mins) 0 Foul Sewage per hectare (l/s) 0.000 Inlet Coefficient 0.800
 Hot Start Level (mm) 0 Additional Flow - % of Total Flow 0.000 Flow per Person per Day (l/per/day) 0.000

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
 Number of Online Controls 2 Number of Storage Structures 2 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FEH Site Location GB 450306 114752 Cv (Summer) 0.750
 FEH Rainfall Version 2013 Data Type Point Cv (Winter) 0.840

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

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

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S1.000	S988	60 minute 2 year Summer I+0%	60	1	28.000	26.607	-0.193	0.000	0.05	0.030	2.5	OK
S1.001	S989	60 minute 2 year Summer I+0%	60	1	27.700	26.328	-0.159	0.000	0.19	0.107	8.3	OK
S1.002	S990	60 minute 2 year Summer I+0%	60	1	27.550	26.047	-0.140	0.000	0.31	0.207	13.3	OK
S2.000	S1000	60 minute 2 year Summer I+0%	60	1	29.870	28.472	-0.198	0.000	0.03	0.025	2.8	OK
S2.001	S1001	60 minute 2 year Summer I+0%	60	1	29.525	27.810	-0.190	0.000	0.06	0.042	4.8	OK
S2.002	S1002	60 minute 2 year Summer I+0%	60	1	28.930	27.160	-0.185	0.000	0.07	0.049	5.7	OK
S2.003	S1003	60 minute 2 year Summer I+0%	60	1	28.225	26.412	-0.173	0.000	0.12	0.053	9.1	OK
S3.000	S980	60 minute 2 year Summer I+0%	60	1	27.550	26.156	-0.194	0.000	0.05	0.046	3.6	OK
S1.003	S1004	60 minute 2 year Summer I+0%	60	1	27.260	25.779	-0.214	0.000	0.18	0.210	26.9	OK
S1.004	S1005	60 minute 2 year Summer I+0%	60	1	26.950	25.299	-0.209	0.000	0.20	0.154	32.2	OK
S1.005	S1006	60 minute 2 year Summer I+0%	60	1	25.960	24.549	-0.202	0.000	0.24	0.239	40.4	OK
S4.000	S1040	60 minute 2 year Summer I+0%	60	1	26.400	24.783	-0.067	0.000	0.59	0.089	9.3	OK
S4.001	S1041	60 minute 2 year Summer I+0%	60	1	26.170	24.561	-0.144	0.000	0.28	0.088	15.2	OK
S4.002	S1042	60 minute 2 year Summer I+0%	60	1	25.290	23.915	-0.107	0.000	0.54	0.212	21.4	OK
S4.003	S1043	60 minute 2 year Summer I+0%	60	1	25.215	23.836	-0.104	0.000	0.56	0.235	21.3	OK
S4.004	S1044	60 minute 2 year Summer I+0%	60	1	25.220	23.766	-0.102	0.000	0.58	0.235	23.2	OK
S4.005	S1045	60 minute 2 year Summer I+0%	60	1	25.310	23.457	-0.153	0.000	0.48	0.236	39.6	OK
S4.006	S1046	60 minute 2 year Summer I+0%	60	1	25.115	23.372	-0.123	0.000	0.65	0.531	41.3	OK
S1.006	S1007	60 minute 2 year Summer I+0%	60	1	25.050	23.102	-0.329	0.000	0.30	0.337	88.5	OK
S5.000	S1050	60 minute 2 year Summer I+0%	60	1	25.208	23.610	-0.174	0.000	0.12	0.053	4.4	OK
S5.001	S1051	60 minute 2 year Summer I+0%	60	1	25.006	23.468	-0.224	0.000	0.14	0.082	8.5	OK
S5.002	S1052	60 minute 2 year Summer I+0%	60	1	24.945	23.420	-0.222	0.000	0.15	0.179	9.8	OK
S5.003	S1053	60 minute 2 year Summer I+0%	60	1	24.885	23.210	-0.367	0.000	0.08	0.111	12.3	OK

PFA Consulting		Page 2
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023	Designed by BF/DRB	
File M380-Catch A-V4.7 (S278+FW).MDX	Checked by	
Causeway	Network 2020.1.3	

2 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S5.004	S1054	60 minute 2 year Summer I+0%	60	1	24.800	23.132	-0.377	0.000	0.06	0.224	16.3	OK
S1.007	S1008	60 minute 2 year Summer I+0%	60	1	24.900	22.758	-0.523	0.000	0.20	0.571	110.6	OK
S1.008	S1009	60 minute 2 year Summer I+0%	60	1	24.690	22.673	-0.532	0.000	0.19	1.439	113.2	OK
S6.000	S1060	60 minute 2 year Summer I+0%	60	1	26.097	23.234	-0.158	0.000	0.46	0.156	32.6	OK
S1.009	S1010	60 minute 2 year Summer I+0%	60	1	24.750	22.582	-0.510	0.000	0.22	2.292	147.8	OK
S7.000	S1070	60 minute 2 year Summer I+0%	60	1	26.242	25.257	-0.160	0.000	0.18	0.068	7.0	OK
S7.001	S1071	60 minute 2 year Summer I+0%	60	1	26.395	25.153	-0.143	0.000	0.28	0.164	9.9	OK
S7.002	S1072	60 minute 2 year Summer I+0%	60	1	27.477	25.010	-0.136	0.000	0.33	0.181	12.9	OK
S7.003	S1073	60 minute 2 year Summer I+0%	60	1	28.150	24.857	-0.119	0.000	0.45	0.224	15.6	OK
S7.004	S1074	60 minute 2 year Summer I+0%	60	1	28.423	24.781	-0.120	0.000	0.44	0.219	16.2	OK
S7.005	S1075	60 minute 2 year Summer I+0%	60	1	29.003	24.567	-0.180	0.000	0.33	0.163	25.4	OK
S7.006	S1076	60 minute 2 year Summer I+0%	60	1	27.350	24.217	-0.316	0.000	0.19	0.260	32.9	OK
S7.007	S1077	60 minute 2 year Summer I+0%	60	1	26.816	24.154	-0.312	0.000	0.21	0.433	35.0	OK
S7.008	S1078	60 minute 2 year Summer I+0%	60	1	26.402	24.105	-0.302	0.000	0.24	0.443	40.0	OK
S7.009	S1079	60 minute 2 year Summer I+0%	60	1	26.065	23.994	-0.347	0.000	0.12	0.255	40.5	OK
S7.010	S1080	60 minute 2 year Summer I+0%	60	1	25.389	23.570	-0.361	0.000	0.09	0.176	49.6	OK
S1.010	S1011	60 minute 2 year Summer I+0%	60	1	25.092	22.444	-0.450	0.000	0.34	4.766	204.2	OK
S1.011	S1012	60 minute 2 year Summer I+0%	60	1	25.346	22.304	-0.443	0.000	0.35	4.322	212.5	OK
S1.012	S1014	60 minute 2 year Summer I+0%	60	1	25.568	22.034	-0.596	0.000	0.25	1.386	217.2	OK
S1.013	S1016	60 minute 2 year Summer I+0%	60	1	25.300	21.916	-0.629	0.000	0.20	2.279	219.0	OK
S1.014	S1018	60 minute 2 year Summer I+0%	60	1	23.845	21.699	-0.587	0.000	0.26	6.140	235.7	OK
S8.000	S1091	60 minute 2 year Summer I+0%	60	1	24.214	22.589	-0.200	0.000	0.03	0.022	2.5	OK
S1.015	S1019	60 minute 2 year Summer I+0%	60	1	23.962	21.594	-0.553	0.000	0.31	4.177	242.0	OK
S1.016	S1020-Basin A2	120 minute 2 year Winter I+0%	120	1	22.350	21.321	0.075	0.000	1.00	268.784	58.4	SURCHARGED
S1.017	S1021-Con	120 minute 2 year Winter I+0%	120	1	22.043	21.275	0.075	0.000	1.10	1.855	58.4	SURCHARGED
S1.018	S1022	120 minute 2 year Winter I+0%	120	1	22.030	21.087	-0.943	0.000	0.02	0.557	58.3	OK
S1.019	S1023	120 minute 2 year Winter I+0%	120	1	21.545	20.995	-0.069	0.000	0.95	5.145	58.2	OK*
S1.020	S1024	120 minute 2 year Winter I+0%	120	1	21.545	20.803	-0.742	0.000	0.01	0.194	58.2	OK
S9.000	S1100	60 minute 2 year Summer I+0%	60	1	24.028	22.339	-0.190	0.000	0.06	0.034	3.6	OK
S10.000	S1110	60 minute 2 year Summer I+0%	60	1	23.557	21.952	-0.180	0.000	0.09	0.046	4.1	OK
S9.001	S1101	60 minute 2 year Summer I+0%	60	1	23.690	21.779	-0.210	0.000	0.20	0.099	17.6	OK
S9.002	S1102	60 minute 2 year Summer I+0%	60	1	23.194	21.544	-0.226	0.000	0.14	0.124	19.0	OK
S9.003	S1103	60 minute 2 year Summer I+0%	60	1	22.891	21.246	-0.220	0.000	0.16	0.106	20.6	OK
S9.004	S1104	60 minute 2 year Summer I+0%	60	1	22.624	20.976	-0.223	0.000	0.15	0.105	24.6	OK
S11.000	S1120	60 minute 2 year Summer I+0%	60	1	25.814	24.216	-0.098	0.000	0.27	0.054	8.8	OK
S12.000	S1140	60 minute 2 year Summer I+0%	60	1	25.553	23.949	-0.104	0.000	0.21	0.047	3.4	OK
S11.001	S1121	60 minute 2 year Summer I+0%	60	1	25.718	23.745	-0.155	0.000	0.21	0.075	13.4	OK
S11.002	S1122	60 minute 2 year Summer I+0%	60	1	24.960	23.307	-0.153	0.000	0.22	0.098	16.1	OK
S11.003	S1123	60 minute 2 year Summer I+0%	60	1	24.700	23.046	-0.229	0.000	0.13	0.088	17.5	OK
S11.004	S1124	60 minute 2 year Summer I+0%	60	1	24.210	22.523	-0.187	0.000	0.30	0.181	20.9	OK
S13.000	S1150	60 minute 2 year Summer I+0%	60	1	24.347	22.730	-0.192	0.000	0.05	0.032	3.8	OK
S11.005	S1125	60 minute 2 year Summer I+0%	60	1	24.340	22.401	-0.211	0.000	0.19	0.186	30.7	OK
S11.006	S1126	60 minute 2 year Summer I+0%	60	1	22.588	20.894	-0.269	0.000	0.18	0.146	42.9	OK
S11.007	S1127	60 minute 2 year Summer I+0%	60	1	22.250	20.549	-0.201	0.000	0.44	0.411	47.3	OK
S11.008	S1128	60 minute 2 year Summer I+0%	60	1	22.189	20.477	-0.211	0.000	0.40	0.312	48.2	OK
S11.009	S1129	60 minute 2 year Summer I+0%	60	1	22.093	20.360	-0.233	0.000	0.31	0.276	49.8	OK

PFA Consulting		Page 3
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023	Designed by BF/DRB	
File M380-Catch A-V4.7 (S278+FW).MDX	Checked by	
Causeway	Network 2020.1.3	

2 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S11.010	S1130	60 minute 2 year Summer I+0%	60	1	21.820	20.266	-0.155	0.000	0.65	0.776	51.0	OK
S14.000	S1160	60 minute 2 year Summer I+0%	60	1	21.558	20.222	-0.212	0.000	0.01	0.227	0.8	OK
S11.011	S1131	60 minute 2 year Summer I+0%	60	1	21.725	20.222	-0.173	0.000	0.56	1.072	54.4	OK
S9.005	S1105	60 minute 2 year Summer I+0%	60	1	21.723	20.028	-0.210	0.000	0.40	1.310	89.9	OK
S15.000	S1169	60 minute 2 year Summer I+0%	60	1	24.601	23.013	-0.202	0.000	0.02	0.020	1.8	OK
S15.001	S1170	60 minute 2 year Summer I+0%	60	1	23.616	22.009	-0.171	0.000	0.13	0.067	8.5	OK
S15.002	S1171	60 minute 2 year Summer I+0%	60	1	23.461	21.794	-0.250	0.000	0.07	0.062	9.4	OK
S15.003	S1172	60 minute 2 year Summer I+0%	60	1	22.404	21.340	-0.238	0.000	0.10	0.086	13.2	OK
S15.004	S1173	60 minute 2 year Summer I+0%	60	1	22.405	21.045	-0.234	0.000	0.11	0.083	14.3	OK
S15.005	S1174	60 minute 2 year Summer I+0%	60	1	21.950	20.648	-0.231	0.000	0.12	0.101	14.3	OK
S16.000	SH119	60 minute 2 year Summer I+0%	60	1	21.753	20.507	-0.193	0.000	0.20	0.115	11.7	OK
S15.006	S1175	60 minute 2 year Summer I+0%	60	1	21.840	20.488	-0.165	0.000	0.41	0.405	26.0	OK
S15.007	S1176	60 minute 2 year Summer I+0%	60	1	22.088	20.361	-0.122	0.000	0.66	0.995	35.0	OK
S17.000	S1200	60 minute 2 year Summer I+0%	60	1	25.344	23.694	-0.150	0.000	0.00	0.000	0.0	OK
S17.001	S1201	60 minute 2 year Summer I+0%	60	1	25.284	23.505	-0.189	0.000	0.06	0.050	3.8	OK
S17.002	S1202	60 minute 2 year Summer I+0%	60	1	24.984	23.219	-0.154	0.000	0.22	0.102	7.6	OK
S18.000	S1220	60 minute 2 year Summer I+0%	60	1	24.890	23.269	-0.117	0.000	0.11	0.032	1.9	OK
S17.003	S1203	60 minute 2 year Summer I+0%	60	1	24.846	23.115	-0.160	0.000	0.18	0.138	12.9	OK
S17.004	S1204	60 minute 2 year Summer I+0%	60	1	24.117	22.461	-0.156	0.000	0.21	0.092	14.8	OK
S17.005	S1205	60 minute 2 year Summer I+0%	60	1	23.788	22.132	-0.156	0.000	0.21	0.089	16.0	OK
S19.000	S1230	60 minute 2 year Summer I+0%	60	1	23.400	22.186	-0.176	0.000	0.11	0.050	4.0	OK
S19.001	S1231	60 minute 2 year Summer I+0%	60	1	23.300	22.102	-0.186	0.000	0.07	0.068	6.3	OK
S17.006	S1206	60 minute 2 year Summer I+0%	60	1	23.200	21.587	-0.277	0.000	0.16	0.135	26.0	OK
S17.007	S1207	60 minute 2 year Summer I+0%	60	1	23.000	21.370	-0.247	0.000	0.25	0.321	32.1	OK
S17.008	S1208	60 minute 2 year Summer I+0%	60	1	22.890	21.269	-0.243	0.000	0.27	0.397	35.7	OK
S17.009	S1209	60 minute 2 year Summer I+0%	60	1	22.660	21.147	-0.251	0.000	0.24	0.387	39.5	OK
S17.010	S1210	60 minute 2 year Summer I+0%	60	1	22.325	20.934	-0.288	0.000	0.12	0.176	41.7	OK
S15.008	S1177	60 minute 2 year Summer I+0%	60	1	21.960	20.285	-0.162	0.000	0.73	0.685	77.7	OK
S15.009	S1178	60 minute 2 year Summer I+0%	60	1	21.925	20.167	-0.253	0.000	0.40	0.668	80.6	OK
S15.010	S1179	60 minute 2 year Summer I+0%	60	1	21.794	20.064	-0.229	0.000	0.48	0.667	81.5	OK
S15.011	S1180	60 minute 2 year Summer I+0%	60	1	21.717	20.018	-0.198	0.000	0.60	1.014	82.6	OK
S15.012	S1181	60 minute 2 year Summer I+0%	60	1	21.740	19.911	-0.256	0.000	0.39	0.917	82.6	OK
S20.000	S1240	60 minute 2 year Summer I+0%	60	1	22.551	20.922	-0.129	0.000	0.05	0.018	0.9	OK
S20.001	S1241	60 minute 2 year Summer I+0%	60	1	22.187	20.458	-0.206	0.000	0.21	0.100	16.8	OK
S20.002	S1242	60 minute 2 year Summer I+0%	60	1	22.030	20.318	-0.212	0.000	0.19	0.166	17.8	OK
S21.000	S1250	60 minute 2 year Summer I+0%	60	1	22.489	21.089	-0.124	0.000	0.07	0.024	1.2	OK
S21.001	S1251	60 minute 2 year Summer I+0%	60	1	22.756	20.802	-0.169	0.000	0.14	0.063	4.7	OK
S21.002	S1252	60 minute 2 year Summer I+0%	60	1	22.692	20.685	-0.164	0.000	0.16	0.127	8.3	OK
S21.003	S1253	60 minute 2 year Summer I+0%	60	1	22.582	20.481	-0.233	0.000	0.11	0.072	9.0	OK
S22.000	S1270	60 minute 2 year Summer I+0%	60	1	23.967	22.435	-0.183	0.000	0.08	0.042	3.9	OK
S23.000	S1280	60 minute 2 year Summer I+0%	60	1	24.231	22.586	-0.123	0.000	0.08	0.025	2.7	OK
S22.001	S1271	60 minute 2 year Summer I+0%	60	1	24.084	22.074	-0.247	0.000	0.07	0.056	9.8	OK
S24.000	S1290	60 minute 2 year Summer I+0%	60	1	23.135	21.531	-0.104	0.000	0.20	0.046	3.5	OK
S22.002	S1272	60 minute 2 year Summer I+0%	60	1	23.338	21.233	-0.259	0.000	0.21	0.169	20.3	OK
S22.003	S1273	60 minute 2 year Summer I+0%	60	1	23.510	21.144	-0.315	0.000	0.17	0.626	21.8	OK
S22.004	S1274	60 minute 2 year Summer I+0%	60	1	23.371	21.107	-0.308	0.000	0.18	0.537	25.7	OK

PFA Consulting		Page 4
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023	Designed by BF/DRB	
File M380-Catch A-V4.7 (S278+FW).MDX	Checked by	
Causeway	Network 2020.1.3	

2 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S22.005	S1275	60 minute 2 year Summer I+0%	60	1	23.170	21.065	-0.292	0.000	0.19	0.760	30.5	OK
S25.000	S1300	60 minute 2 year Summer I+0%	60	1	23.321	21.735	-0.161	0.000	0.18	0.067	13.2	OK
S22.006	S1277	60 minute 2 year Summer I+0%	60	1	22.897	21.014	-0.246	0.000	0.43	1.640	44.0	OK
S22.007	S1278	60 minute 2 year Summer I+0%	60	1	22.785	20.887	-0.336	0.000	0.15	0.290	45.9	OK
S22.008	S1279	60 minute 2 year Summer I+0%	60	1	22.460	20.497	-0.310	0.000	0.21	0.398	64.2	OK
S26.000	SH310	60 minute 2 year Summer I+0%	60	1	22.925	21.231	-0.194	0.000	0.05	0.030	3.5	OK
S27.000	S1320	60 minute 2 year Summer I+0%	60	1	22.334	20.851	-0.199	0.000	0.03	0.024	1.1	OK
S27.001	S1321	60 minute 2 year Summer I+0%	60	1	22.453	20.792	-0.187	0.000	0.07	0.073	2.5	OK
S26.001	S1311	60 minute 2 year Summer I+0%	60	1	22.687	20.653	-0.205	0.000	0.22	0.106	16.3	OK
S26.002	S1312	60 minute 2 year Summer I+0%	60	1	22.300	20.482	-0.164	0.000	0.42	0.498	28.4	OK
S21.004	S1254	60 minute 2 year Summer I+0%	60	1	22.251	20.298	-0.212	0.000	0.45	1.629	115.4	OK
S21.005	S1255	60 minute 2 year Summer I+0%	60	1	21.929	20.260	-0.181	0.000	0.72	6.446	114.8	OK
S21.006	S1256	60 minute 2 year Summer I+0%	60	1	21.861	20.231	-0.185	0.000	0.69	2.606	115.6	OK
S21.007	S1257	60 minute 2 year Summer I+0%	60	1	21.952	20.199	-0.188	0.000	0.74	2.905	117.1	OK
S21.008	S1258	60 minute 2 year Summer I+0%	60	1	22.067	20.150	-0.198	0.000	0.69	3.628	116.0	OK
S21.009	S1259	60 minute 2 year Summer I+0%	60	1	21.898	20.114	-0.204	0.000	0.68	2.843	115.9	OK
S21.010	S1260	60 minute 2 year Summer I+0%	60	1	21.875	20.076	-0.211	0.000	0.59	2.862	114.9	OK
S21.011	S1261	60 minute 2 year Summer I+0%	60	1	21.892	20.063	-0.210	0.000	0.51	1.497	119.4	OK
S28.000	S1330	60 minute 2 year Summer I+0%	60	1	21.676	20.044	-0.351	0.000	0.05	0.134	5.2	OK
S28.001	S1331	60 minute 2 year Summer I+0%	60	1	21.339	20.035	-0.330	0.000	0.12	0.355	11.5	OK
S28.002	S1332	60 minute 2 year Winter I+0%	60	1	21.250	20.023	-0.602	0.000	0.04	0.759	10.5	OK
S28.003	S1333	60 minute 2 year Summer I+0%	60	1	21.589	20.018	-0.577	0.000	0.06	1.117	14.1	OK
S28.004	S1334	60 minute 2 year Summer I+0%	60	1	21.694	20.014	-0.556	0.000	0.02	1.196	12.5	OK
S21.012	S1262	60 minute 2 year Summer I+0%	60	1	21.693	20.013	-0.337	0.000	0.37	12.167	122.5	OK
S21.013	S1263	60 minute 2 year Summer I+0%	60	1	21.600	19.967	-0.333	0.000	0.30	7.250	122.8	OK
S20.003	S1243	60 minute 2 year Summer I+0%	60	1	21.642	19.960	-0.311	0.000	0.66	2.027	133.7	OK
S1.021	S1025-Basin A1	240 minute 2 year Winter I+0%	240	1	20.650	19.591	0.111	0.000	0.54	638.565	49.4	SURCHARGED
S1.022	S1026-Con	240 minute 2 year Winter I+0%	240	1	21.144	19.573	0.129	0.000	0.69	2.481	49.4	SURCHARGED
S1.023	S1027	240 minute 2 year Winter I+0%	240	1	21.298	19.292	-2.006	0.000	0.00	0.584	49.4	OK
S1.024	S1028	240 minute 2 year Winter I+0%	240	1	21.261	19.212	-2.049	0.000	0.00	1.946	49.4	OK
S1.025	S1029	240 minute 2 year Winter I+0%	240	1	21.175	19.116	-2.059	0.000	0.00	1.854	49.4	OK
S1.026	S1030	240 minute 2 year Winter I+0%	240	1	21.018	19.094	-1.924	0.000	0.00	0.375	49.4	OK
S1.027	S1031	240 minute 2 year Winter I+0%	240	1	20.969	18.971	-1.998	0.000	0.00	0.135	49.4	OK

PFA Consulting		Page 5
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023	Designed by BF/DRB	
File M380-Catch A-V4.7 (S278+FW).MDX	Checked by	
Causeway	Network 2020.1.3	

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

Simulation Criteria

Areal Reduction Factor 1.000 Manhole Headloss Coeff (Global) 0.500 MADD Factor * 10m³/ha Storage 2.000
 Hot Start (mins) 0 Foul Sewage per hectare (l/s) 0.000 Inlet Coefficient 0.800
 Hot Start Level (mm) 0 Additional Flow - % of Total Flow 0.000 Flow per Person per Day (l/per/day) 0.000

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
 Number of Online Controls 2 Number of Storage Structures 2 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FEH Site Location GB 450306 114752 Cv (Summer) 0.750
 FEH Rainfall Version 2013 Data Type Point Cv (Winter) 0.840

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

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

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S1.000	S988	60 minute 30 year Summer I+0%	60	1	28.000	26.623	-0.177	0.000	0.10	0.049	5.3	OK
S1.001	S989	60 minute 30 year Summer I+0%	60	1	27.700	26.366	-0.121	0.000	0.43	0.174	19.1	OK
S1.002	S990	60 minute 30 year Summer I+0%	60	1	27.550	26.104	-0.083	0.000	0.71	0.400	31.0	OK
S2.000	S1000	60 minute 30 year Summer I+0%	60	1	29.870	28.486	-0.184	0.000	0.08	0.040	6.0	OK
S2.001	S1001	60 minute 30 year Summer I+0%	60	1	29.525	27.830	-0.170	0.000	0.13	0.068	10.7	OK
S2.002	S1002	60 minute 30 year Summer I+0%	60	1	28.930	27.182	-0.163	0.000	0.17	0.078	12.8	OK
S2.003	S1003	60 minute 30 year Summer I+0%	60	1	28.225	26.441	-0.144	0.000	0.28	0.087	21.0	OK
S3.000	S980	60 minute 30 year Summer I+0%	60	1	27.550	26.172	-0.178	0.000	0.10	0.075	7.8	OK
S1.003	S1004	60 minute 30 year Summer I+0%	60	1	27.260	25.828	-0.165	0.000	0.42	0.397	61.9	OK
S1.004	S1005	60 minute 30 year Summer I+0%	60	1	26.950	25.352	-0.156	0.000	0.47	0.267	74.4	OK
S1.005	S1006	60 minute 30 year Summer I+0%	60	1	25.960	24.609	-0.142	0.000	0.54	0.420	93.3	OK
S4.000	S1040	60 minute 30 year Summer I+0%	60	1	26.400	24.929	0.079	0.000	1.25	0.253	19.6	SURCHARGED
S4.001	S1041	60 minute 30 year Summer I+0%	60	1	26.170	24.608	-0.097	0.000	0.60	0.162	33.1	OK
S4.002	S1042	60 minute 30 year Summer I+0%	60	1	25.290	24.186	0.164	0.000	1.10	1.267	43.4	SURCHARGED
S4.003	S1043	60 minute 30 year Summer I+0%	60	1	25.215	24.086	0.146	0.000	1.15	0.758	43.4	SURCHARGED
S4.004	S1044	60 minute 30 year Summer I+0%	60	1	25.220	23.992	0.124	0.000	1.17	0.688	47.3	SURCHARGED
S4.005	S1045	60 minute 30 year Summer I+0%	60	1	25.310	23.646	0.036	0.000	0.98	1.190	81.8	SURCHARGED
S4.006	S1046	60 minute 30 year Summer I+0%	60	1	25.115	23.533	0.038	0.000	1.35	1.201	85.3	SURCHARGED
S1.006	S1007	60 minute 30 year Summer I+0%	60	1	25.050	23.219	-0.212	0.000	0.66	0.619	194.7	OK
S5.000	S1050	60 minute 30 year Summer I+0%	60	1	25.208	23.636	-0.148	0.000	0.26	0.082	9.4	OK
S5.001	S1051	60 minute 30 year Summer I+0%	60	1	25.006	23.510	-0.182	0.000	0.33	0.152	19.1	OK
S5.002	S1052	60 minute 30 year Summer I+0%	60	1	24.945	23.465	-0.177	0.000	0.35	0.317	22.4	OK
S5.003	S1053	60 minute 30 year Summer I+0%	60	1	24.885	23.254	-0.323	0.000	0.18	0.180	28.2	OK

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S5.004	S1054	60 minute 30 year Summer I+0%	60	1	24.800	23.173	-0.336	0.000	0.14	0.391	37.5	OK
S1.007	S1008	60 minute 30 year Summer I+0%	60	1	24.900	22.881	-0.400	0.000	0.44	1.054	245.9	OK
S1.008	S1009	60 minute 30 year Summer I+0%	60	1	24.690	22.809	-0.396	0.000	0.41	3.155	250.7	OK
S6.000	S1060	60 minute 30 year Summer I+0%	60	1	26.097	23.329	-0.063	0.000	0.99	0.263	69.9	OK
S1.009	S1010	60 minute 30 year Summer I+0%	60	1	24.750	22.741	-0.351	0.000	0.48	5.242	325.3	OK
S7.000	S1070	60 minute 30 year Summer I+0%	60	1	26.242	25.290	-0.127	0.000	0.39	0.105	14.9	OK
S7.001	S1071	60 minute 30 year Summer I+0%	60	1	26.395	25.200	-0.096	0.000	0.62	0.322	21.8	OK
S7.002	S1072	60 minute 30 year Summer I+0%	60	1	27.477	25.066	-0.080	0.000	0.73	0.411	28.6	OK
S7.003	S1073	60 minute 30 year Summer I+0%	60	1	28.150	24.940	-0.036	0.000	1.00	0.644	34.3	OK
S7.004	S1074	60 minute 30 year Summer I+0%	60	1	28.423	24.852	-0.049	0.000	0.97	0.476	35.6	OK
S7.005	S1075	60 minute 30 year Summer I+0%	60	1	29.003	24.643	-0.104	0.000	0.74	0.397	56.6	OK
S7.006	S1076	60 minute 30 year Summer I+0%	60	1	27.350	24.291	-0.242	0.000	0.44	0.557	73.6	OK
S7.007	S1077	60 minute 30 year Summer I+0%	60	1	26.816	24.232	-0.234	0.000	0.46	0.837	78.6	OK
S7.008	S1078	60 minute 30 year Summer I+0%	60	1	26.402	24.192	-0.215	0.000	0.53	0.861	90.2	OK
S7.009	S1079	60 minute 30 year Summer I+0%	60	1	26.065	24.049	-0.292	0.000	0.27	0.527	91.4	OK
S7.010	S1080	60 minute 30 year Summer I+0%	60	1	25.389	23.616	-0.315	0.000	0.20	0.339	112.1	OK
S1.010	S1011	60 minute 30 year Summer I+0%	60	1	25.092	22.630	-0.264	0.000	0.74	10.947	451.5	OK
S1.011	S1012	60 minute 30 year Summer I+0%	60	1	25.346	22.496	-0.251	0.000	0.77	9.204	468.7	OK
S1.012	S1014	60 minute 30 year Summer I+0%	60	1	25.568	22.207	-0.423	0.000	0.55	4.352	478.5	OK
S1.013	S1016	60 minute 30 year Summer I+0%	60	1	25.300	22.063	-0.482	0.000	0.43	4.654	479.3	OK
S1.014	S1018	60 minute 30 year Summer I+0%	60	1	23.845	21.876	-0.410	0.000	0.57	14.541	511.4	OK
S8.000	S1091	60 minute 30 year Summer I+0%	60	1	24.214	22.600	-0.189	0.000	0.06	0.035	5.3	OK
S1.015	S1019	60 minute 30 year Summer I+0%	60	1	23.962	21.796	-0.351	0.000	0.68	8.564	520.5	OK
S1.016	S1020-Basin A2	60 minute 30 year Winter I+0%	60	1	22.350	21.584	0.338	0.000	1.52	547.001	88.9	SURCHARGED
S1.017	S1021-Con	60 minute 30 year Winter I+0%	60	1	22.043	21.459	0.259	0.000	1.68	2.500	88.8	SURCHARGED
S1.018	S1022	60 minute 30 year Winter I+0%	60	1	22.030	21.187	-0.843	0.000	0.03	0.790	88.8	OK
S1.019	S1023	60 minute 30 year Winter I+0%	60	1	21.545	21.136	0.072	0.000	1.44	14.527	88.5	SURCHARGED*
S1.020	S1024	60 minute 30 year Winter I+0%	60	1	21.545	20.835	-0.710	0.000	0.02	0.296	88.5	OK
S9.000	S1100	60 minute 30 year Summer I+0%	60	1	24.028	22.357	-0.172	0.000	0.12	0.054	7.8	OK
S10.000	S1110	60 minute 30 year Summer I+0%	60	1	23.557	21.974	-0.158	0.000	0.19	0.070	8.7	OK
S9.001	S1101	60 minute 30 year Summer I+0%	60	1	23.690	21.829	-0.160	0.000	0.44	0.221	39.7	OK
S9.002	S1102	60 minute 30 year Summer I+0%	60	1	23.194	21.586	-0.184	0.000	0.31	0.221	43.4	OK
S9.003	S1103	60 minute 30 year Summer I+0%	60	1	22.891	21.291	-0.175	0.000	0.36	0.189	47.2	OK
S9.004	S1104	60 minute 30 year Summer I+0%	60	1	22.624	21.020	-0.179	0.000	0.34	0.186	56.8	OK
S11.000	S1120	60 minute 30 year Summer I+0%	60	1	25.814	24.245	-0.069	0.000	0.57	0.086	18.9	OK
S12.000	S1140	60 minute 30 year Summer I+0%	60	1	25.553	23.973	-0.080	0.000	0.45	0.074	7.4	OK
S11.001	S1121	60 minute 30 year Summer I+0%	60	1	25.718	23.782	-0.118	0.000	0.46	0.119	29.0	OK
S11.002	S1122	60 minute 30 year Summer I+0%	60	1	24.960	23.347	-0.113	0.000	0.49	0.163	35.4	OK
S11.003	S1123	60 minute 30 year Summer I+0%	60	1	24.700	23.084	-0.191	0.000	0.28	0.140	38.8	OK
S11.004	S1124	60 minute 30 year Summer I+0%	60	1	24.210	22.590	-0.120	0.000	0.67	0.384	46.6	OK
S13.000	S1150	60 minute 30 year Summer I+0%	60	1	24.347	22.747	-0.175	0.000	0.11	0.051	8.0	OK
S11.005	S1125	60 minute 30 year Summer I+0%	60	1	24.340	22.449	-0.163	0.000	0.43	0.378	68.5	OK
S11.006	S1126	60 minute 30 year Summer I+0%	60	1	22.588	20.953	-0.210	0.000	0.40	0.263	97.2	OK
S11.007	S1127	60 minute 30 year Summer I+0%	60	1	22.250	20.685	-0.065	0.000	1.00	1.030	106.8	OK
S11.008	S1128	60 minute 30 year Summer I+0%	60	1	22.189	20.653	-0.035	0.000	0.89	0.717	106.9	OK
S11.009	S1129	60 minute 30 year Summer I+0%	60	1	22.093	20.617	0.024	0.000	0.67	0.941	109.2	SURCHARGED

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S11.010	S1130	60 minute 30 year Summer I+0%	60	1	21.820	20.540	0.119	0.000	1.41	2.146	110.8	SURCHARGED
S14.000	S1160	60 minute 30 year Summer I+0%	60	1	21.558	20.460	0.026	0.000	0.03	0.567	2.6	SURCHARGED
S11.011	S1131	60 minute 30 year Summer I+0%	60	1	21.725	20.460	0.065	0.000	1.21	2.538	117.9	SURCHARGED
S9.005	S1105	60 minute 30 year Summer I+0%	60	1	21.723	20.136	-0.102	0.000	0.87	3.287	196.3	OK
S15.000	S1169	60 minute 30 year Summer I+0%	60	1	24.601	23.021	-0.194	0.000	0.05	0.030	3.9	OK
S15.001	S1170	60 minute 30 year Summer I+0%	60	1	23.616	22.040	-0.140	0.000	0.30	0.110	19.7	OK
S15.002	S1171	60 minute 30 year Summer I+0%	60	1	23.461	21.822	-0.222	0.000	0.15	0.101	22.0	OK
S15.003	S1172	60 minute 30 year Summer I+0%	60	1	22.404	21.375	-0.203	0.000	0.23	0.138	31.0	OK
S15.004	S1173	60 minute 30 year Summer I+0%	60	1	22.405	21.082	-0.197	0.000	0.26	0.134	33.7	OK
S15.005	S1174	60 minute 30 year Summer I+0%	60	1	21.950	20.730	-0.149	0.000	0.27	0.296	32.7	OK
S16.000	SH119	60 minute 30 year Summer I+0%	60	1	21.753	20.728	0.028	0.000	0.41	0.366	23.8	SURCHARGED
S15.006	S1175	60 minute 30 year Summer I+0%	60	1	21.840	20.713	0.060	0.000	0.88	1.438	55.3	SURCHARGED
S15.007	S1176	60 minute 30 year Summer I+0%	60	1	22.088	20.588	0.105	0.000	1.38	3.185	73.4	SURCHARGED
S17.000	S1200	60 minute 30 year Summer I+0%	60	1	25.344	23.694	-0.150	0.000	0.00	0.000	0.0	OK
S17.001	S1201	60 minute 30 year Summer I+0%	60	1	25.284	23.527	-0.167	0.000	0.15	0.084	9.0	OK
S17.002	S1202	60 minute 30 year Summer I+0%	60	1	24.984	23.264	-0.109	0.000	0.52	0.183	18.2	OK
S18.000	S1220	60 minute 30 year Summer I+0%	60	1	24.890	23.286	-0.100	0.000	0.24	0.051	4.1	OK
S17.003	S1203	60 minute 30 year Summer I+0%	60	1	24.846	23.154	-0.121	0.000	0.43	0.226	30.4	OK
S17.004	S1204	60 minute 30 year Summer I+0%	60	1	24.117	22.503	-0.114	0.000	0.49	0.158	34.8	OK
S17.005	S1205	60 minute 30 year Summer I+0%	60	1	23.788	22.173	-0.115	0.000	0.48	0.151	37.6	OK
S19.000	S1230	60 minute 30 year Summer I+0%	60	1	23.400	22.210	-0.152	0.000	0.23	0.077	8.5	OK
S19.001	S1231	60 minute 30 year Summer I+0%	60	1	23.300	22.123	-0.165	0.000	0.16	0.108	13.9	OK
S17.006	S1206	60 minute 30 year Summer I+0%	60	1	23.200	21.645	-0.219	0.000	0.36	0.239	60.5	OK
S17.007	S1207	60 minute 30 year Summer I+0%	60	1	23.000	21.449	-0.168	0.000	0.59	0.695	74.8	OK
S17.008	S1208	60 minute 30 year Summer I+0%	60	1	22.890	21.354	-0.158	0.000	0.63	0.850	83.2	OK
S17.009	S1209	60 minute 30 year Summer I+0%	60	1	22.660	21.225	-0.173	0.000	0.56	0.853	91.9	OK
S17.010	S1210	60 minute 30 year Summer I+0%	60	1	22.325	20.983	-0.239	0.000	0.28	0.357	97.5	OK
S15.008	S1177	60 minute 30 year Summer I+0%	60	1	21.960	20.502	0.055	0.000	1.60	1.732	169.0	SURCHARGED
S15.009	S1178	60 minute 30 year Summer I+0%	60	1	21.925	20.443	0.023	0.000	0.87	1.949	174.8	SURCHARGED
S15.010	S1179	60 minute 30 year Summer I+0%	60	1	21.794	20.346	0.053	0.000	1.05	1.857	177.4	SURCHARGED
S15.011	S1180	60 minute 30 year Summer I+0%	60	1	21.717	20.246	0.030	0.000	1.30	2.120	179.2	SURCHARGED
S15.012	S1181	60 minute 30 year Summer I+0%	60	1	21.740	20.036	-0.131	0.000	0.84	1.869	178.5	OK
S20.000	S1240	60 minute 30 year Summer I+0%	60	1	22.551	20.933	-0.118	0.000	0.11	0.031	1.8	OK
S20.001	S1241	60 minute 30 year Summer I+0%	60	1	22.187	20.516	-0.148	0.000	0.50	0.171	39.9	OK
S20.002	S1242	60 minute 30 year Summer I+0%	60	1	22.030	20.371	-0.159	0.000	0.44	0.359	41.9	OK
S21.000	S1250	60 minute 30 year Summer I+0%	60	1	22.489	21.101	-0.112	0.000	0.15	0.038	2.5	OK
S21.001	S1251	60 minute 30 year Summer I+0%	60	1	22.756	20.834	-0.137	0.000	0.32	0.103	11.0	OK
S21.002	S1252	60 minute 30 year Summer I+0%	60	1	22.692	20.721	-0.128	0.000	0.39	0.210	19.4	OK
S21.003	S1253	60 minute 30 year Summer I+0%	60	1	22.582	20.664	-0.050	0.000	0.25	0.436	20.0	OK
S22.000	S1270	60 minute 30 year Summer I+0%	60	1	23.967	22.455	-0.163	0.000	0.17	0.064	8.3	OK
S23.000	S1280	60 minute 30 year Summer I+0%	60	1	24.231	22.599	-0.110	0.000	0.16	0.040	5.7	OK
S22.001	S1271	60 minute 30 year Summer I+0%	60	1	24.084	22.101	-0.220	0.000	0.16	0.087	21.7	OK
S24.000	S1290	60 minute 30 year Summer I+0%	60	1	23.135	21.554	-0.081	0.000	0.44	0.073	7.6	OK
S22.002	S1272	60 minute 30 year Summer I+0%	60	1	23.338	21.307	-0.185	0.000	0.47	0.331	45.7	OK
S22.003	S1273	60 minute 30 year Summer I+0%	60	1	23.510	21.242	-0.217	0.000	0.38	1.525	48.6	OK
S22.004	S1274	60 minute 30 year Summer I+0%	60	1	23.371	21.217	-0.198	0.000	0.40	1.288	56.9	OK

PFA Consulting		Page 8
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023	Designed by BF/DRB	
File M380-Catch A-V4.7 (S278+FW).MDX	Checked by	
Causeway	Network 2020.1.3	

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S22.005	S1275	60 minute 30 year Summer I+0%	60	1	23.170	21.191	-0.166	0.000	0.43	1.843	67.2	OK
S25.000	S1300	60 minute 30 year Summer I+0%	60	1	23.321	21.768	-0.128	0.000	0.39	0.104	28.3	OK
S22.006	S1277	60 minute 30 year Summer I+0%	60	1	22.897	21.157	-0.103	0.000	0.95	3.669	97.8	OK
S22.007	S1278	60 minute 30 year Summer I+0%	60	1	22.785	20.949	-0.274	0.000	0.32	0.582	101.9	OK
S22.008	S1279	60 minute 30 year Summer I+0%	60	1	22.460	20.693	-0.114	0.000	0.44	1.918	136.3	OK
S26.000	SH310	60 minute 30 year Summer I+0%	60	1	22.925	21.248	-0.177	0.000	0.10	0.048	7.6	OK
S27.000	S1320	60 minute 30 year Summer I+0%	60	1	22.334	20.863	-0.187	0.000	0.07	0.037	2.3	OK
S27.001	S1321	60 minute 30 year Summer I+0%	60	1	22.453	20.813	-0.166	0.000	0.15	0.118	5.6	OK
S26.001	S1311	60 minute 30 year Summer I+0%	60	1	22.687	20.747	-0.111	0.000	0.49	0.413	37.2	OK
S26.002	S1312	60 minute 30 year Summer I+0%	60	1	22.300	20.707	0.061	0.000	0.85	2.602	57.7	SURCHARGED
S21.004	S1254	60 minute 30 year Summer I+0%	60	1	22.251	20.647	0.137	0.000	0.94	8.888	240.1	SURCHARGED
S21.005	S1255	60 minute 30 year Summer I+0%	60	1	21.929	20.602	0.161	0.000	1.54	10.662	244.4	SURCHARGED
S21.006	S1256	60 minute 30 year Summer I+0%	60	1	21.861	20.569	0.153	0.000	1.49	4.436	248.1	SURCHARGED
S21.007	S1257	60 minute 30 year Summer I+0%	60	1	21.952	20.532	0.145	0.000	1.58	4.957	252.3	SURCHARGED
S21.008	S1258	60 minute 30 year Summer I+0%	60	1	22.067	20.475	0.127	0.000	1.51	6.346	252.2	SURCHARGED
S21.009	S1259	60 minute 30 year Summer I+0%	60	1	21.898	20.437	0.119	0.000	1.49	5.066	254.4	SURCHARGED
S21.010	S1260	60 minute 30 year Summer I+0%	60	1	21.875	20.396	0.109	0.000	1.29	5.211	252.3	SURCHARGED
S21.011	S1261	60 minute 30 year Summer I+0%	60	1	21.892	20.373	0.100	0.000	1.12	2.701	261.9	SURCHARGED
S28.000	S1330	60 minute 30 year Summer I+0%	60	1	21.676	20.316	-0.079	0.000	0.11	0.523	10.6	OK
S28.001	S1331	60 minute 30 year Summer I+0%	60	1	21.339	20.314	-0.051	0.000	0.25	1.983	24.2	OK
S28.002	S1332	60 minute 30 year Summer I+0%	60	1	21.250	20.310	-0.315	0.000	0.09	3.113	24.4	OK
S28.003	S1333	60 minute 30 year Summer I+0%	60	1	21.589	20.309	-0.286	0.000	0.11	5.412	24.5	OK
S28.004	S1334	60 minute 30 year Summer I+0%	60	1	21.694	20.307	-0.263	0.000	0.04	5.080	31.5	OK
S21.012	S1262	60 minute 30 year Summer I+0%	60	1	21.693	20.306	-0.044	0.000	0.73	23.542	241.0	OK
S21.013	S1263	60 minute 30 year Summer I+0%	60	1	21.600	20.249	-0.051	0.000	0.57	14.241	238.4	OK
S20.003	S1243	60 minute 30 year Summer I+0%	60	1	21.642	20.236	-0.035	0.000	1.28	5.199	260.2	OK
S1.021	S1025-Basin A1	360 minute 30 year Winter I+0%	360	1	20.650	19.802	0.322	0.000	0.61	1432.525	55.6	SURCHARGED
S1.022	S1026-Con	360 minute 30 year Winter I+0%	360	1	21.144	19.782	0.338	0.000	0.78	3.206	55.6	SURCHARGED
S1.023	S1027	360 minute 30 year Winter I+0%	360	1	21.298	19.301	-1.997	0.000	0.00	0.613	55.6	OK
S1.024	S1028	360 minute 30 year Winter I+0%	360	1	21.261	19.221	-2.040	0.000	0.00	2.118	55.6	OK
S1.025	S1029	360 minute 30 year Winter I+0%	360	1	21.175	19.124	-2.051	0.000	0.00	2.016	55.6	OK
S1.026	S1030	360 minute 30 year Winter I+0%	360	1	21.018	19.101	-1.917	0.000	0.00	0.417	55.6	OK
S1.027	S1031	360 minute 30 year Winter I+0%	360	1	20.969	18.977	-1.992	0.000	0.00	0.142	55.6	OK

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

Simulation Criteria

Areal Reduction Factor 1.000	Manhole Headloss Coeff (Global) 0.500	MADD Factor * 10m³/ha Storage 2.000
Hot Start (mins) 0	Foul Sewage per hectare (l/s) 0.000	Inlet Coefficient 0.800
Hot Start Level (mm) 0	Additional Flow - % of Total Flow 0.000	Flow per Person per Day (l/per/day) 0.000

Number of Input Hydrographs 0	Number of Offline Controls 0	Number of Time/Area Diagrams 0
Number of Online Controls 2	Number of Storage Structures 2	Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FEH	Site Location GB 450306	114752 Cv (Summer) 0.750
FEH Rainfall Version 2013	Data Type	Point Cv (Winter) 0.840

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

Profile(s)

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

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S1.000	S988	60 minute 100 year Summer I+40%	60	1	28.000	26.640	-0.160	0.000	0.19	0.068	9.4	OK
S1.001	S989	60 minute 100 year Summer I+40%	60	1	27.700	26.413	-0.074	0.000	0.77	0.338	34.1	OK
S1.002	S990	60 minute 100 year Summer I+40%	60	1	27.550	26.280	0.093	0.000	1.23	1.349	53.4	SURCHARGED
S2.000	S1000	60 minute 100 year Summer I+40%	60	1	29.870	28.499	-0.171	0.000	0.13	0.056	10.7	OK
S2.001	S1001	60 minute 100 year Summer I+40%	60	1	29.525	27.849	-0.151	0.000	0.24	0.096	19.0	OK
S2.002	S1002	60 minute 100 year Summer I+40%	60	1	28.930	27.204	-0.141	0.000	0.30	0.109	22.8	OK
S2.003	S1003	60 minute 100 year Summer I+40%	60	1	28.225	26.473	-0.112	0.000	0.49	0.126	37.4	OK
S3.000	S980	60 minute 100 year Summer I+40%	60	1	27.550	26.189	-0.161	0.000	0.18	0.104	13.9	OK
S1.003	S1004	60 minute 100 year Summer I+40%	60	1	27.260	25.883	-0.110	0.000	0.72	0.656	107.0	OK
S1.004	S1005	60 minute 100 year Summer I+40%	60	1	26.950	25.415	-0.093	0.000	0.81	0.413	128.9	OK
S1.005	S1006	60 minute 100 year Summer I+40%	60	1	25.960	24.683	-0.068	0.000	0.94	0.676	161.8	OK
S4.000	S1040	60 minute 100 year Summer I+40%	60	1	26.400	26.146	1.296	0.000	1.79	1.630	28.0	FLOOD RISK
S4.001	S1041	60 minute 100 year Summer I+40%	60	1	26.170	25.680	0.975	0.000	0.84	1.613	45.9	SURCHARGED
S4.002	S1042	60 minute 100 year Summer I+40%	60	1	25.290	25.193	1.171	0.000	1.63	3.663	64.3	FLOOD RISK
S4.003	S1043	60 minute 100 year Summer I+40%	60	1	25.215	24.970	1.030	0.000	1.72	1.758	65.1	FLOOD RISK
S4.004	S1044	60 minute 100 year Summer I+40%	60	1	25.220	24.761	0.893	0.000	1.78	1.557	71.6	SURCHARGED
S4.005	S1045	60 minute 100 year Summer I+40%	60	1	25.310	24.023	0.413	0.000	1.56	2.285	129.8	SURCHARGED
S4.006	S1046	60 minute 100 year Summer I+40%	60	1	25.115	23.737	0.242	0.000	2.15	1.522	135.9	SURCHARGED
S1.006	S1007	60 minute 100 year Summer I+40%	60	1	25.050	23.440	0.009	0.000	1.10	1.716	327.2	SURCHARGED
S5.000	S1050	60 minute 100 year Summer I+40%	60	1	25.208	23.666	-0.118	0.000	0.46	0.115	16.8	OK
S5.001	S1051	60 minute 100 year Summer I+40%	60	1	25.006	23.557	-0.135	0.000	0.58	0.280	33.9	OK
S5.002	S1052	60 minute 100 year Summer I+40%	60	1	24.945	23.515	-0.127	0.000	0.63	0.521	39.9	OK
S5.003	S1053	60 minute 100 year Summer I+40%	60	1	24.885	23.300	-0.277	0.000	0.31	0.257	50.3	OK

PFA Consulting	M380: Boorley Gardens	Page 10
Stratton Park House	SW Drainage - Planning	
Wanborough Road	Catchment A	
Swindon SN3 4HG	Designed by BF/DRB	
Date 15/05/2023	Checked by	
File M380-Catch A-V4.7 (S278+FW).MDX	Network 2020.1.3	
Causeway		

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S5.004	S1054	60 minute 100 year Summer I+40%	60	1	24.800	23.255	-0.254	0.000	0.26	0.982	66.8	OK
S1.007	S1008	60 minute 100 year Summer I+40%	60	1	24.900	23.232	-0.049	0.000	0.71	5.558	395.0	OK
S1.008	S1009	60 minute 100 year Summer I+40%	60	1	24.690	23.190	-0.015	0.000	0.65	8.073	392.4	OK
S6.000	S1060	60 minute 100 year Summer I+40%	60	1	26.097	23.985	0.593	0.000	1.69	1.004	119.8	SURCHARGED
S1.009	S1010	60 minute 100 year Summer I+40%	60	1	24.750	23.143	0.051	0.000	0.75	15.190	515.3	SURCHARGED
S7.000	S1070	60 minute 100 year Summer I+40%	60	1	26.242	25.709	0.292	0.000	0.60	0.579	22.9	SURCHARGED
S7.001	S1071	60 minute 100 year Summer I+40%	60	1	26.395	25.663	0.367	0.000	0.94	1.339	32.7	SURCHARGED
S7.002	S1072	60 minute 100 year Summer I+40%	60	1	27.477	25.533	0.387	0.000	1.09	1.535	42.7	SURCHARGED
S7.003	S1073	60 minute 100 year Summer I+40%	60	1	28.150	25.331	0.355	0.000	1.51	1.620	51.7	SURCHARGED
S7.004	S1074	60 minute 100 year Summer I+40%	60	1	28.423	25.161	0.260	0.000	1.47	1.002	54.3	SURCHARGED
S7.005	S1075	60 minute 100 year Summer I+40%	60	1	29.003	24.838	0.091	0.000	1.15	1.359	88.1	SURCHARGED
S7.006	S1076	60 minute 100 year Summer I+40%	60	1	27.350	24.361	-0.172	0.000	0.69	1.152	117.4	OK
S7.007	S1077	60 minute 100 year Summer I+40%	60	1	26.816	24.315	-0.151	0.000	0.75	1.324	126.1	OK
S7.008	S1078	60 minute 100 year Summer I+40%	60	1	26.402	24.283	-0.124	0.000	0.87	1.331	146.8	OK
S7.009	S1079	60 minute 100 year Summer I+40%	60	1	26.065	24.099	-0.242	0.000	0.44	0.781	149.0	OK
S7.010	S1080	60 minute 100 year Summer I+40%	60	1	25.389	23.658	-0.273	0.000	0.32	0.519	185.9	OK
S1.010	S1011	60 minute 100 year Summer I+40%	60	1	25.092	23.030	0.136	0.000	1.18	21.911	712.8	SURCHARGED
S1.011	S1012	60 minute 100 year Summer I+40%	60	1	25.346	22.821	0.074	0.000	1.23	15.671	744.4	SURCHARGED
S1.012	S1014	60 minute 100 year Summer I+40%	60	1	25.568	22.415	-0.215	0.000	0.87	8.591	757.4	OK
S1.013	S1016	60 minute 100 year Summer I+40%	60	1	25.300	22.359	-0.186	0.000	0.68	9.910	748.3	OK
S1.014	S1018	60 minute 100 year Summer I+40%	60	1	23.845	22.250	-0.036	0.000	0.85	33.020	762.1	OK
S8.000	S1091	60 minute 100 year Summer I+40%	60	1	24.214	22.613	-0.176	0.000	0.11	0.050	9.4	OK
S1.015	S1019	60 minute 100 year Summer I+40%	60	1	23.962	22.147	0.000	0.000	1.01	15.684	780.4	OK
S1.016	S1020-Basin A2	60 minute 100 year Winter I+40%	60	1	22.350	21.953	0.707	0.000	2.01	1009.376	117.5	SURCHARGED
S1.017	S1021-Con	60 minute 100 year Winter I+40%	60	1	22.043	21.733	0.533	0.000	2.21	3.450	117.4	SURCHARGED
S1.018	S1022	60 minute 100 year Winter I+40%	60	1	22.030	21.263	-0.767	0.000	0.04	0.901	117.4	OK
S1.019	S1023	60 minute 100 year Winter I+40%	60	1	21.545	21.227	0.163	0.000	1.90	23.203	116.6	SURCHARGED*
S1.020	S1024	60 minute 100 year Winter I+40%	60	1	21.545	20.858	-0.687	0.000	0.02	0.368	116.6	OK
S9.000	S1100	60 minute 100 year Summer I+40%	60	1	24.028	22.376	-0.153	0.000	0.22	0.075	13.9	OK
S10.000	S1110	60 minute 100 year Summer I+40%	60	1	23.557	21.998	-0.134	0.000	0.34	0.097	15.6	OK
S9.001	S1101	60 minute 100 year Summer I+40%	60	1	23.690	21.893	-0.096	0.000	0.79	0.406	70.9	OK
S9.002	S1102	60 minute 100 year Summer I+40%	60	1	23.194	21.632	-0.138	0.000	0.56	0.400	77.4	OK
S9.003	S1103	60 minute 100 year Summer I+40%	60	1	22.891	21.343	-0.123	0.000	0.65	0.309	84.1	OK
S9.004	S1104	60 minute 100 year Summer I+40%	60	1	22.624	21.068	-0.131	0.000	0.61	0.306	101.1	OK
S11.000	S1120	60 minute 100 year Summer I+40%	60	1	25.814	24.316	0.002	0.000	1.00	0.167	33.0	SURCHARGED
S12.000	S1140	60 minute 100 year Summer I+40%	60	1	25.553	24.005	-0.048	0.000	0.80	0.110	13.1	OK
S11.001	S1121	60 minute 100 year Summer I+40%	60	1	25.718	23.828	-0.072	0.000	0.80	0.218	51.0	OK
S11.002	S1122	60 minute 100 year Summer I+40%	60	1	24.960	23.398	-0.062	0.000	0.87	0.285	62.3	OK
S11.003	S1123	60 minute 100 year Summer I+40%	60	1	24.700	23.125	-0.150	0.000	0.50	0.218	68.5	OK
S11.004	S1124	60 minute 100 year Summer I+40%	60	1	24.210	22.744	0.034	0.000	1.19	1.037	82.5	SURCHARGED
S13.000	S1150	60 minute 100 year Summer I+40%	60	1	24.347	22.765	-0.157	0.000	0.20	0.071	14.3	OK
S11.005	S1125	60 minute 100 year Summer I+40%	60	1	24.340	22.633	0.021	0.000	0.74	1.325	118.6	SURCHARGED
S11.006	S1126	60 minute 100 year Summer I+40%	60	1	22.588	21.994	0.831	0.000	0.61	4.407	147.8	SURCHARGED
S11.007	S1127	60 minute 100 year Summer I+40%	60	1	22.250	21.845	1.095	0.000	1.50	4.102	160.8	SURCHARGED
S11.008	S1128	60 minute 100 year Summer I+40%	60	1	22.189	21.676	0.988	0.000	1.35	2.231	163.2	SURCHARGED
S11.009	S1129	60 minute 100 year Summer I+40%	60	1	22.093	21.502	0.909	0.000	1.04	2.231	169.1	SURCHARGED

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S11.010	S1130	60 minute 100 year Summer I+40%	60	1	21.820	21.316	0.895	0.000	2.20	3.289	173.4	SURCHARGED
S14.000	S1160	60 minute 100 year Summer I+40%	60	1	21.558	21.124	0.690	0.000	0.06	1.517	5.2	SURCHARGED
S11.011	S1131	60 minute 100 year Summer I+40%	60	1	21.725	21.122	0.727	0.000	1.92	3.514	187.0	SURCHARGED
S9.005	S1105	60 minute 100 year Summer I+40%	60	1	21.723	20.571	0.333	0.000	1.39	7.668	314.1	SURCHARGED
S15.000	S1169	60 minute 100 year Summer I+40%	60	1	24.601	23.033	-0.182	0.000	0.08	0.043	7.0	OK
S15.001	S1170	60 minute 100 year Summer I+40%	60	1	23.616	22.074	-0.106	0.000	0.54	0.166	35.1	OK
S15.002	S1171	60 minute 100 year Summer I+40%	60	1	23.461	21.851	-0.193	0.000	0.27	0.142	39.2	OK
S15.003	S1172	60 minute 100 year Summer I+40%	60	1	22.404	21.809	0.231	0.000	0.37	1.720	51.0	SURCHARGED
S15.004	S1173	60 minute 100 year Summer I+40%	60	1	22.405	21.783	0.504	0.000	0.36	1.474	47.6	SURCHARGED
S15.005	S1174	60 minute 100 year Summer I+40%	60	1	21.950	21.735	0.856	0.000	0.39	2.802	46.6	FLOOD RISK
S16.000	SH119	60 minute 100 year Summer I+40%	60	1	21.753	21.735	1.035	0.000	0.64	1.504	37.8	FLOOD RISK
S15.006	S1175	60 minute 100 year Summer I+40%	60	1	21.840	21.709	1.056	0.000	1.32	2.694	82.9	FLOOD RISK
S15.007	S1176	60 minute 100 year Summer I+40%	60	1	22.088	21.412	0.929	0.000	2.08	4.200	110.9	SURCHARGED
S17.000	S1200	60 minute 100 year Summer I+40%	60	1	25.344	23.694	-0.150	0.000	0.00	0.000	0.0	OK
S17.001	S1201	60 minute 100 year Summer I+40%	60	1	25.284	23.548	-0.146	0.000	0.27	0.117	16.1	OK
S17.002	S1202	60 minute 100 year Summer I+40%	60	1	24.984	23.319	-0.054	0.000	0.92	0.334	32.4	OK
S18.000	S1220	60 minute 100 year Summer I+40%	60	1	24.890	23.304	-0.082	0.000	0.43	0.072	7.4	OK
S17.003	S1203	60 minute 100 year Summer I+40%	60	1	24.846	23.200	-0.075	0.000	0.77	0.453	54.1	OK
S17.004	S1204	60 minute 100 year Summer I+40%	60	1	24.117	22.555	-0.062	0.000	0.87	0.276	62.0	OK
S17.005	S1205	60 minute 100 year Summer I+40%	60	1	23.788	22.224	-0.064	0.000	0.86	0.260	66.9	OK
S19.000	S1230	60 minute 100 year Summer I+40%	60	1	23.400	22.237	-0.125	0.000	0.41	0.108	15.2	OK
S19.001	S1231	60 minute 100 year Summer I+40%	60	1	23.300	22.144	-0.144	0.000	0.28	0.151	24.7	OK
S17.006	S1206	60 minute 100 year Summer I+40%	60	1	23.200	21.765	-0.099	0.000	0.64	0.536	106.3	OK
S17.007	S1207	60 minute 100 year Summer I+40%	60	1	23.000	21.679	0.062	0.000	1.00	2.327	126.7	SURCHARGED
S17.008	S1208	60 minute 100 year Summer I+40%	60	1	22.890	21.590	0.078	0.000	1.05	1.951	138.8	SURCHARGED
S17.009	S1209	60 minute 100 year Summer I+40%	60	1	22.660	21.485	0.087	0.000	0.90	2.264	148.1	SURCHARGED
S17.010	S1210	60 minute 100 year Summer I+40%	60	1	22.325	21.356	0.134	0.000	0.44	2.167	149.9	SURCHARGED
S15.008	S1177	60 minute 100 year Summer I+40%	60	1	21.960	21.211	0.764	0.000	2.49	3.781	262.9	SURCHARGED
S15.009	S1178	60 minute 100 year Summer I+40%	60	1	21.925	20.993	0.573	0.000	1.36	2.813	272.5	SURCHARGED
S15.010	S1179	60 minute 100 year Summer I+40%	60	1	21.794	20.758	0.465	0.000	1.63	2.486	275.9	SURCHARGED
S15.011	S1180	60 minute 100 year Summer I+40%	60	1	21.717	20.517	0.301	0.000	2.03	2.577	279.5	SURCHARGED
S15.012	S1181	60 minute 100 year Summer I+40%	60	1	21.740	20.270	0.103	0.000	1.32	3.066	279.6	SURCHARGED
S20.000	S1240	60 minute 100 year Summer I+40%	60	1	22.551	20.945	-0.106	0.000	0.19	0.044	3.2	OK
S20.001	S1241	60 minute 100 year Summer I+40%	60	1	22.187	20.604	-0.060	0.000	0.89	0.317	70.7	OK
S20.002	S1242	60 minute 100 year Summer I+40%	60	1	22.030	20.501	-0.029	0.000	0.76	0.970	71.5	OK
S21.000	S1250	60 minute 100 year Summer I+40%	60	1	22.489	21.756	0.543	0.000	0.27	0.778	4.6	SURCHARGED
S21.001	S1251	60 minute 100 year Summer I+40%	60	1	22.756	21.738	0.767	0.000	0.46	1.572	15.6	SURCHARGED
S21.002	S1252	60 minute 100 year Summer I+40%	60	1	22.692	21.710	0.861	0.000	0.49	1.992	24.9	SURCHARGED
S21.003	S1253	60 minute 100 year Summer I+40%	60	1	22.582	21.681	0.967	0.000	0.33	1.779	26.4	SURCHARGED
S22.000	S1270	60 minute 100 year Summer I+40%	60	1	23.967	22.477	-0.141	0.000	0.30	0.089	14.7	OK
S23.000	S1280	60 minute 100 year Summer I+40%	60	1	24.231	22.614	-0.095	0.000	0.29	0.056	10.2	OK
S22.001	S1271	60 minute 100 year Summer I+40%	60	1	24.084	22.130	-0.191	0.000	0.29	0.126	38.6	OK
S24.000	S1290	60 minute 100 year Summer I+40%	60	1	23.135	22.088	0.453	0.000	0.75	0.676	13.1	SURCHARGED
S22.002	S1272	60 minute 100 year Summer I+40%	60	1	23.338	22.043	0.551	0.000	0.73	4.086	71.2	SURCHARGED
S22.003	S1273	60 minute 100 year Summer I+40%	60	1	23.510	22.000	0.541	0.000	0.56	4.045	71.3	SURCHARGED
S22.004	S1274	60 minute 100 year Summer I+40%	60	1	23.371	21.977	0.562	0.000	0.56	3.574	80.0	SURCHARGED

PFA Consulting		Page 12
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A	
Date 15/05/2023	Designed by BF/DRB	
File M380-Catch A-V4.7 (S278+FW).MDX	Checked by	
Causeway	Network 2020.1.3	

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S22.005	S1275	60 minute 100 year Summer I+40%	60	1	23.170	21.949	0.592	0.000	0.59	4.233	93.0	SURCHARGED
S25.000	S1300	60 minute 100 year Summer I+40%	60	1	23.321	22.091	0.195	0.000	0.68	0.469	49.8	SURCHARGED
S22.006	S1277	60 minute 100 year Summer I+40%	60	1	22.897	21.908	0.648	0.000	1.33	7.192	137.9	SURCHARGED
S22.007	S1278	60 minute 100 year Summer I+40%	60	1	22.785	21.847	0.624	0.000	0.44	2.941	139.6	SURCHARGED
S22.008	S1279	60 minute 100 year Summer I+40%	60	1	22.460	21.766	0.959	0.000	0.65	7.069	198.6	SURCHARGED
S26.000	SH310	60 minute 100 year Summer I+40%	60	1	22.925	21.937	0.512	0.000	0.17	0.828	12.5	SURCHARGED
S27.000	S1320	60 minute 100 year Summer I+40%	60	1	22.334	21.929	0.879	0.000	0.14	1.243	4.8	SURCHARGED
S27.001	S1321	60 minute 100 year Summer I+40%	60	1	22.453	21.926	0.947	0.000	0.28	1.755	10.1	SURCHARGED
S26.001	S1311	60 minute 100 year Summer I+40%	60	1	22.687	21.916	1.058	0.000	0.60	3.181	45.0	SURCHARGED
S26.002	S1312	60 minute 100 year Summer I+40%	60	1	22.300	21.839	1.193	0.000	1.18	4.394	80.3	SURCHARGED
S21.004	S1254	60 minute 100 year Summer I+40%	60	1	22.251	21.648	1.138	0.000	1.38	11.060	351.2	SURCHARGED
S21.005	S1255	60 minute 100 year Summer I+40%	60	1	21.929	21.520	1.079	0.000	2.26	12.287	359.4	SURCHARGED
S21.006	S1256	60 minute 100 year Summer I+40%	60	1	21.861	21.394	0.978	0.000	2.21	5.894	367.2	SURCHARGED
S21.007	S1257	60 minute 100 year Summer I+40%	60	1	21.952	21.261	0.874	0.000	2.37	6.247	377.4	SURCHARGED
S21.008	S1258	60 minute 100 year Summer I+40%	60	1	22.067	21.091	0.743	0.000	2.27	7.436	379.1	SURCHARGED
S21.009	S1259	60 minute 100 year Summer I+40%	60	1	21.898	20.947	0.629	0.000	2.25	5.971	385.4	SURCHARGED
S21.010	S1260	60 minute 100 year Summer I+40%	60	1	21.875	20.799	0.512	0.000	1.98	5.926	385.6	SURCHARGED
S21.011	S1261	60 minute 100 year Summer I+40%	60	1	21.892	20.651	0.378	0.000	1.75	3.198	408.8	SURCHARGED
S28.000	S1330	60 minute 100 year Summer I+40%	60	1	21.676	20.460	0.065	0.000	0.19	0.730	19.3	SURCHARGED
S28.001	S1331	60 minute 100 year Summer I+40%	60	1	21.339	20.456	0.091	0.000	0.45	2.470	43.5	SURCHARGED
S28.002	S1332	60 minute 100 year Summer I+40%	60	1	21.250	20.442	-0.183	0.000	0.19	3.696	48.0	OK
S28.003	S1333	60 minute 100 year Summer I+40%	60	1	21.589	20.438	-0.157	0.000	0.23	7.479	51.5	OK
S28.004	S1334	60 minute 100 year Summer I+40%	60	1	21.694	20.433	-0.137	0.000	0.06	6.810	45.9	OK
S21.012	S1262	60 minute 100 year Summer I+40%	60	1	21.693	20.425	0.075	0.000	1.38	25.591	451.3	SURCHARGED
S21.013	S1263	60 minute 100 year Summer I+40%	60	1	21.600	20.330	0.030	0.000	1.09	15.559	452.1	SURCHARGED
S20.003	S1243	60 minute 100 year Summer I+40%	60	1	21.642	20.297	0.026	0.000	2.56	5.904	518.8	SURCHARGED
S1.021	S1025-Basin A1	600 minute 100 year Winter I+40%	600	1	20.650	20.153	0.673	0.000	0.62	2952.072	56.6	SURCHARGED
S1.022	S1026-Con	600 minute 100 year Winter I+40%	600	1	21.144	20.150	0.706	0.000	0.78	4.480	55.8	SURCHARGED
S1.023	S1027	960 minute 100 year Summer I+40%	960	1	21.298	19.301	-1.997	0.000	0.00	0.613	55.8	OK
S1.024	S1028	960 minute 100 year Summer I+40%	960	1	21.261	19.221	-2.040	0.000	0.00	2.122	55.8	OK
S1.025	S1029	960 minute 100 year Summer I+40%	960	1	21.175	19.124	-2.051	0.000	0.00	2.018	55.8	OK
S1.026	S1030	960 minute 100 year Summer I+40%	960	1	21.018	19.101	-1.917	0.000	0.00	0.418	55.8	OK
S1.027	S1031	960 minute 100 year Summer I+40%	960	1	20.969	18.977	-1.992	0.000	0.00	0.142	55.8	OK

PFA Consulting		Page 1
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Sensitivity Test Catchment A	
Date 15/05/2023 File M380-Catch A-V4.7 (S278+FW).MDX	Designed by BF/DRB Checked by	
Causeway	Network 2020.1.3	

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

Simulation Criteria

Areal Reduction Factor 1.000 Manhole Headloss Coeff (Global) 0.500 MADD Factor * 10m³/ha Storage 2.000
 Hot Start (mins) 0 Foul Sewage per hectare (l/s) 0.000 Inlet Coefficient 0.800
 Hot Start Level (mm) 0 Additional Flow - % of Total Flow 0.000 Flow per Person per Day (l/per/day) 0.000

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
 Number of Online Controls 2 Number of Storage Structures 2 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FEH Site Location GB 450306 114752 Cv (Summer) 0.750
 FEH Rainfall Version 2013 Data Type Point Cv (Winter) 0.840

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

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

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S1.000	S988	60 minute 30 year Summer I+30%	60	1	28.000	26.630	-0.170	0.000	0.14	0.056	6.9	OK
S1.001	S989	60 minute 30 year Summer I+30%	60	1	27.700	26.384	-0.103	0.000	0.56	0.236	24.9	OK
S1.002	S990	60 minute 30 year Summer I+30%	60	1	27.550	26.133	-0.054	0.000	0.93	0.515	40.3	OK
S2.000	S1000	60 minute 30 year Summer I+30%	60	1	29.870	28.492	-0.178	0.000	0.10	0.047	7.8	OK
S2.001	S1001	60 minute 30 year Summer I+30%	60	1	29.525	27.838	-0.162	0.000	0.17	0.080	13.8	OK
S2.002	S1002	60 minute 30 year Summer I+30%	60	1	28.930	27.191	-0.154	0.000	0.22	0.091	16.6	OK
S2.003	S1003	60 minute 30 year Summer I+30%	60	1	28.225	26.454	-0.131	0.000	0.36	0.101	27.3	OK
S3.000	S980	60 minute 30 year Summer I+30%	60	1	27.550	26.179	-0.171	0.000	0.13	0.086	10.2	OK
S1.003	S1004	60 minute 30 year Summer I+30%	60	1	27.260	25.851	-0.142	0.000	0.54	0.504	80.5	OK
S1.004	S1005	60 minute 30 year Summer I+30%	60	1	26.950	25.377	-0.131	0.000	0.61	0.325	96.7	OK
S1.005	S1006	60 minute 30 year Summer I+30%	60	1	25.960	24.639	-0.112	0.000	0.71	0.510	121.2	OK
S4.000	S1040	60 minute 30 year Summer I+30%	60	1	26.400	25.146	0.296	0.000	1.55	0.499	24.3	SURCHARGED
S4.001	S1041	60 minute 30 year Summer I+30%	60	1	26.170	24.835	0.130	0.000	0.71	0.645	39.0	SURCHARGED
S4.002	S1042	60 minute 30 year Summer I+30%	60	1	25.290	24.518	0.496	0.000	1.31	2.649	51.5	SURCHARGED
S4.003	S1043	60 minute 30 year Summer I+30%	60	1	25.215	24.377	0.437	0.000	1.37	1.087	51.9	SURCHARGED
S4.004	S1044	60 minute 30 year Summer I+30%	60	1	25.220	24.242	0.374	0.000	1.40	0.971	56.5	SURCHARGED
S4.005	S1045	60 minute 30 year Summer I+30%	60	1	25.310	23.766	0.156	0.000	1.21	1.831	100.6	SURCHARGED
S4.006	S1046	60 minute 30 year Summer I+30%	60	1	25.115	23.594	0.099	0.000	1.66	1.351	105.1	SURCHARGED
S1.006	S1007	60 minute 30 year Summer I+30%	60	1	25.050	23.276	-0.155	0.000	0.83	0.869	246.8	OK
S5.000	S1050	60 minute 30 year Summer I+30%	60	1	25.208	23.648	-0.136	0.000	0.33	0.095	12.3	OK
S5.001	S1051	60 minute 30 year Summer I+30%	60	1	25.006	23.529	-0.163	0.000	0.42	0.203	24.8	OK
S5.002	S1052	60 minute 30 year Summer I+30%	60	1	24.945	23.484	-0.158	0.000	0.46	0.397	29.1	OK
S5.003	S1053	60 minute 30 year Summer I+30%	60	1	24.885	23.273	-0.304	0.000	0.23	0.212	36.7	OK

PFA Consulting	M380: Boorley Gardens	Page 2 
Stratton Park House	SW Drainage - Sensitivity Test	
Wanborough Road	Catchment A	
Swindon SN3 4HG	Designed by BF/DRB	
Date 15/05/2023	Checked by	
File M380-Catch A-V4.7 (S278+FW).MDX	Network 2020.1.3	
Causeway		

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S5.004	S1054	60 minute 30 year Summer I+30%	60	1	24.800	23.191	-0.318	0.000	0.19	0.521	48.8	OK
S1.007	S1008	60 minute 30 year Summer I+30%	60	1	24.900	22.936	-0.345	0.000	0.56	1.369	312.7	OK
S1.008	S1009	60 minute 30 year Summer I+30%	60	1	24.690	22.882	-0.323	0.000	0.52	4.158	318.1	OK
S6.000	S1060	60 minute 30 year Summer I+30%	60	1	26.097	23.566	0.174	0.000	1.27	0.530	89.8	SURCHARGED
S1.009	S1010	60 minute 30 year Summer I+30%	60	1	24.750	22.823	-0.269	0.000	0.61	6.913	414.6	OK
S7.000	S1070	60 minute 30 year Summer I+30%	60	1	26.242	25.306	-0.111	0.000	0.51	0.123	19.4	OK
S7.001	S1071	60 minute 30 year Summer I+30%	60	1	26.395	25.262	-0.034	0.000	0.77	0.596	27.0	OK
S7.002	S1072	60 minute 30 year Summer I+30%	60	1	27.477	25.178	0.032	0.000	0.87	0.931	33.9	SURCHARGED
S7.003	S1073	60 minute 30 year Summer I+30%	60	1	28.150	25.049	0.073	0.000	1.19	1.183	40.8	SURCHARGED
S7.004	S1074	60 minute 30 year Summer I+30%	60	1	28.423	24.942	0.041	0.000	1.15	0.713	42.5	SURCHARGED
S7.005	S1075	60 minute 30 year Summer I+30%	60	1	29.003	24.673	-0.074	0.000	0.90	0.546	68.9	OK
S7.006	S1076	60 minute 30 year Summer I+30%	60	1	27.350	24.320	-0.213	0.000	0.54	0.802	91.2	OK
S7.007	S1077	60 minute 30 year Summer I+30%	60	1	26.816	24.263	-0.203	0.000	0.58	1.018	97.9	OK
S7.008	S1078	60 minute 30 year Summer I+30%	60	1	26.402	24.229	-0.178	0.000	0.67	1.055	113.4	OK
S7.009	S1079	60 minute 30 year Summer I+30%	60	1	26.065	24.072	-0.269	0.000	0.34	0.642	115.3	OK
S7.010	S1080	60 minute 30 year Summer I+30%	60	1	25.389	23.634	-0.297	0.000	0.25	0.415	142.5	OK
S1.010	S1011	60 minute 30 year Summer I+30%	60	1	25.092	22.722	-0.172	0.000	0.95	14.161	573.4	OK
S1.011	S1012	60 minute 30 year Summer I+30%	60	1	25.346	22.592	-0.155	0.000	0.98	11.598	596.3	OK
S1.012	S1014	60 minute 30 year Summer I+30%	60	1	25.568	22.287	-0.343	0.000	0.70	5.957	608.8	OK
S1.013	S1016	60 minute 30 year Summer I+30%	60	1	25.300	22.143	-0.402	0.000	0.55	6.058	609.8	OK
S1.014	S1018	60 minute 30 year Summer I+30%	60	1	23.845	21.972	-0.314	0.000	0.73	19.551	648.8	OK
S8.000	S1091	60 minute 30 year Summer I+30%	60	1	24.214	22.606	-0.183	0.000	0.08	0.041	6.9	OK
S1.015	S1019	60 minute 30 year Summer I+30%	60	1	23.962	21.899	-0.248	0.000	0.86	10.828	661.0	OK
S1.016	S1020-Basin A2	60 minute 30 year Winter I+30%	60	1	22.350	21.732	0.486	0.000	1.73	722.542	101.2	SURCHARGED
S1.017	S1021-Con	60 minute 30 year Winter I+30%	60	1	22.043	21.569	0.369	0.000	1.91	2.880	101.2	SURCHARGED
S1.018	S1022	60 minute 30 year Winter I+30%	60	1	22.030	21.217	-0.813	0.000	0.04	0.849	101.2	OK
S1.019	S1023	60 minute 30 year Winter I+30%	60	1	21.545	21.173	0.109	0.000	1.64	17.563	100.8	SURCHARGED*
S1.020	S1024	60 minute 30 year Winter I+30%	60	1	21.545	20.848	-0.697	0.000	0.02	0.336	100.8	OK
S9.000	S1100	60 minute 30 year Summer I+30%	60	1	24.028	22.364	-0.165	0.000	0.16	0.063	10.2	OK
S10.000	S1110	60 minute 30 year Summer I+30%	60	1	23.557	21.983	-0.149	0.000	0.25	0.080	11.4	OK
S9.001	S1101	60 minute 30 year Summer I+30%	60	1	23.690	21.854	-0.135	0.000	0.57	0.292	51.6	OK
S9.002	S1102	60 minute 30 year Summer I+30%	60	1	23.194	21.604	-0.166	0.000	0.41	0.292	56.4	OK
S9.003	S1103	60 minute 30 year Summer I+30%	60	1	22.891	21.312	-0.154	0.000	0.47	0.237	61.4	OK
S9.004	S1104	60 minute 30 year Summer I+30%	60	1	22.624	21.039	-0.160	0.000	0.44	0.233	73.8	OK
S11.000	S1120	60 minute 30 year Summer I+30%	60	1	25.814	24.261	-0.053	0.000	0.74	0.104	24.5	OK
S12.000	S1140	60 minute 30 year Summer I+30%	60	1	25.553	23.986	-0.067	0.000	0.59	0.088	9.6	OK
S11.001	S1121	60 minute 30 year Summer I+30%	60	1	25.718	23.800	-0.100	0.000	0.59	0.158	37.7	OK
S11.002	S1122	60 minute 30 year Summer I+30%	60	1	24.960	23.367	-0.093	0.000	0.64	0.211	46.0	OK
S11.003	S1123	60 minute 30 year Summer I+30%	60	1	24.700	23.101	-0.174	0.000	0.37	0.172	50.5	OK
S11.004	S1124	60 minute 30 year Summer I+30%	60	1	24.210	22.627	-0.083	0.000	0.87	0.512	60.6	OK
S13.000	S1150	60 minute 30 year Summer I+30%	60	1	24.347	22.754	-0.168	0.000	0.15	0.059	10.5	OK
S11.005	S1125	60 minute 30 year Summer I+30%	60	1	24.340	22.472	-0.140	0.000	0.55	0.492	89.0	OK
S11.006	S1126	60 minute 30 year Summer I+30%	60	1	22.588	21.160	-0.003	0.000	0.49	0.923	118.9	OK
S11.007	S1127	60 minute 30 year Summer I+30%	60	1	22.250	21.066	0.316	0.000	1.19	2.932	127.7	SURCHARGED
S11.008	S1128	60 minute 30 year Summer I+30%	60	1	22.189	20.961	0.273	0.000	1.07	1.207	128.8	SURCHARGED
S11.009	S1129	60 minute 30 year Summer I+30%	60	1	22.093	20.856	0.263	0.000	0.82	1.305	132.4	SURCHARGED

PFA Consulting	M380: Boorley Gardens	Page 3
Stratton Park House	SW Drainage - Sensitivity Test	
Wanborough Road	Catchment A	
Swindon SN3 4HG	Designed by BF/DRB	
Date 15/05/2023	Checked by	
File M380-Catch A-V4.7 (S278+FW).MDX	Network 2020.1.3	
Causeway		

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S11.010	S1130	60 minute 30 year Summer I+30%	60	1	21.820	20.743	0.322	0.000	1.71	2.467	135.0	SURCHARGED
S14.000	S1160	60 minute 30 year Summer I+30%	60	1	21.558	20.625	0.191	0.000	0.04	0.803	3.3	SURCHARGED
S11.011	S1131	60 minute 30 year Summer I+30%	60	1	21.725	20.624	0.229	0.000	1.49	2.801	144.8	SURCHARGED
S9.005	S1105	60 minute 30 year Summer I+30%	60	1	21.723	20.275	0.037	0.000	1.07	5.917	241.9	SURCHARGED
S15.000	S1169	60 minute 30 year Summer I+30%	60	1	24.601	23.026	-0.189	0.000	0.06	0.035	5.1	OK
S15.001	S1170	60 minute 30 year Summer I+30%	60	1	23.616	22.054	-0.126	0.000	0.40	0.129	25.6	OK
S15.002	S1171	60 minute 30 year Summer I+30%	60	1	23.461	21.835	-0.209	0.000	0.20	0.119	28.6	OK
S15.003	S1172	60 minute 30 year Summer I+30%	60	1	22.404	21.390	-0.188	0.000	0.29	0.168	40.3	OK
S15.004	S1173	60 minute 30 year Summer I+30%	60	1	22.405	21.147	-0.132	0.000	0.33	0.267	43.7	OK
S15.005	S1174	60 minute 30 year Summer I+30%	60	1	21.950	21.107	0.228	0.000	0.32	1.901	37.9	SURCHARGED
S16.000	SH119	60 minute 30 year Summer I+30%	60	1	21.753	21.106	0.406	0.000	0.48	0.793	28.2	SURCHARGED
S15.006	S1175	60 minute 30 year Summer I+30%	60	1	21.840	21.086	0.433	0.000	1.06	1.989	67.0	SURCHARGED
S15.007	S1176	60 minute 30 year Summer I+30%	60	1	22.088	20.902	0.419	0.000	1.65	3.623	88.2	SURCHARGED
S17.000	S1200	60 minute 30 year Summer I+30%	60	1	25.344	23.694	-0.150	0.000	0.00	0.000	0.0	OK
S17.001	S1201	60 minute 30 year Summer I+30%	60	1	25.284	23.536	-0.158	0.000	0.19	0.099	11.7	OK
S17.002	S1202	60 minute 30 year Summer I+30%	60	1	24.984	23.284	-0.089	0.000	0.67	0.240	23.6	OK
S18.000	S1220	60 minute 30 year Summer I+30%	60	1	24.890	23.293	-0.093	0.000	0.31	0.059	5.4	OK
S17.003	S1203	60 minute 30 year Summer I+30%	60	1	24.846	23.171	-0.104	0.000	0.56	0.311	39.5	OK
S17.004	S1204	60 minute 30 year Summer I+30%	60	1	24.117	22.523	-0.094	0.000	0.64	0.202	45.2	OK
S17.005	S1205	60 minute 30 year Summer I+30%	60	1	23.788	22.192	-0.096	0.000	0.63	0.192	48.8	OK
S19.000	S1230	60 minute 30 year Summer I+30%	60	1	23.400	22.221	-0.141	0.000	0.30	0.089	11.1	OK
S19.001	S1231	60 minute 30 year Summer I+30%	60	1	23.300	22.132	-0.156	0.000	0.20	0.127	18.1	OK
S17.006	S1206	60 minute 30 year Summer I+30%	60	1	23.200	21.670	-0.194	0.000	0.47	0.285	78.6	OK
S17.007	S1207	60 minute 30 year Summer I+30%	60	1	23.000	21.489	-0.128	0.000	0.76	0.983	97.0	OK
S17.008	S1208	60 minute 30 year Summer I+30%	60	1	22.890	21.397	-0.115	0.000	0.82	1.103	107.7	OK
S17.009	S1209	60 minute 30 year Summer I+30%	60	1	22.660	21.263	-0.135	0.000	0.73	1.110	119.4	OK
S17.010	S1210	60 minute 30 year Summer I+30%	60	1	22.325	21.005	-0.217	0.000	0.37	0.454	126.5	OK
S15.008	S1177	60 minute 30 year Summer I+30%	60	1	21.960	20.779	0.332	0.000	2.01	2.664	212.3	SURCHARGED
S15.009	S1178	60 minute 30 year Summer I+30%	60	1	21.925	20.638	0.218	0.000	1.09	2.305	219.6	SURCHARGED
S15.010	S1179	60 minute 30 year Summer I+30%	60	1	21.794	20.487	0.194	0.000	1.32	2.097	222.9	SURCHARGED
S15.011	S1180	60 minute 30 year Summer I+30%	60	1	21.717	20.331	0.115	0.000	1.64	2.305	225.2	SURCHARGED
S15.012	S1181	60 minute 30 year Summer I+30%	60	1	21.740	20.171	0.004	0.000	1.06	2.743	224.7	SURCHARGED
S20.000	S1240	60 minute 30 year Summer I+30%	60	1	22.551	20.938	-0.113	0.000	0.14	0.036	2.4	OK
S20.001	S1241	60 minute 30 year Summer I+30%	60	1	22.187	20.543	-0.121	0.000	0.66	0.204	51.9	OK
S20.002	S1242	60 minute 30 year Summer I+30%	60	1	22.030	20.395	-0.135	0.000	0.58	0.467	54.4	OK
S21.000	S1250	60 minute 30 year Summer I+30%	60	1	22.489	21.108	-0.105	0.000	0.19	0.045	3.3	OK
S21.001	S1251	60 minute 30 year Summer I+30%	60	1	22.756	21.006	0.035	0.000	0.42	0.511	14.2	SURCHARGED
S21.002	S1252	60 minute 30 year Summer I+30%	60	1	22.692	20.985	0.136	0.000	0.49	1.164	24.4	SURCHARGED
S21.003	S1253	60 minute 30 year Summer I+30%	60	1	22.582	20.962	0.248	0.000	0.29	0.966	22.7	SURCHARGED
S22.000	S1270	60 minute 30 year Summer I+30%	60	1	23.967	22.464	-0.154	0.000	0.22	0.075	10.8	OK
S23.000	S1280	60 minute 30 year Summer I+30%	60	1	24.231	22.606	-0.103	0.000	0.21	0.047	7.5	OK
S22.001	S1271	60 minute 30 year Summer I+30%	60	1	24.084	22.114	-0.207	0.000	0.21	0.102	28.2	OK
S24.000	S1290	60 minute 30 year Summer I+30%	60	1	23.135	21.566	-0.069	0.000	0.57	0.086	9.9	OK
S22.002	S1272	60 minute 30 year Summer I+30%	60	1	23.338	21.389	-0.103	0.000	0.59	0.623	57.2	OK
S22.003	S1273	60 minute 30 year Summer I+30%	60	1	23.510	21.347	-0.112	0.000	0.48	2.522	60.9	OK
S22.004	S1274	60 minute 30 year Summer I+30%	60	1	23.371	21.326	-0.089	0.000	0.50	2.062	71.2	OK

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S22.005	S1275	60 minute 30 year Summer I+30%	60	1	23.170	21.298	-0.059	0.000	0.54	2.774	84.4	OK
S25.000	S1300	60 minute 30 year Summer I+30%	60	1	23.321	21.784	-0.112	0.000	0.50	0.122	36.8	OK
S22.006	S1277	60 minute 30 year Summer I+30%	60	1	22.897	21.260	0.000	0.000	1.18	4.956	122.4	OK
S22.007	S1278	60 minute 30 year Summer I+30%	60	1	22.785	21.089	-0.134	0.000	0.39	1.310	121.7	OK
S22.008	S1279	60 minute 30 year Summer I+30%	60	1	22.460	21.025	0.218	0.000	0.53	5.515	163.8	SURCHARGED
S26.000	SH310	60 minute 30 year Summer I+30%	60	1	22.925	21.254	-0.171	0.000	0.13	0.056	9.9	OK
S27.000	S1320	60 minute 30 year Summer I+30%	60	1	22.334	21.108	0.058	0.000	0.08	0.315	2.8	SURCHARGED
S27.001	S1321	60 minute 30 year Summer I+30%	60	1	22.453	21.105	0.126	0.000	0.20	0.826	7.4	SURCHARGED
S26.001	S1311	60 minute 30 year Summer I+30%	60	1	22.687	21.096	0.238	0.000	0.55	1.912	41.2	SURCHARGED
S26.002	S1312	60 minute 30 year Summer I+30%	60	1	22.300	21.049	0.403	0.000	1.00	3.500	68.0	SURCHARGED
S21.004	S1254	60 minute 30 year Summer I+30%	60	1	22.251	20.939	0.429	0.000	1.10	9.806	280.0	SURCHARGED
S21.005	S1255	60 minute 30 year Summer I+30%	60	1	21.929	20.857	0.416	0.000	1.79	11.114	285.2	SURCHARGED
S21.006	S1256	60 minute 30 year Summer I+30%	60	1	21.861	20.809	0.393	0.000	1.75	4.861	290.3	SURCHARGED
S21.007	S1257	60 minute 30 year Summer I+30%	60	1	21.952	20.756	0.369	0.000	1.86	5.354	296.8	SURCHARGED
S21.008	S1258	60 minute 30 year Summer I+30%	60	1	22.067	20.649	0.301	0.000	1.78	6.656	298.4	SURCHARGED
S21.009	S1259	60 minute 30 year Summer I+30%	60	1	21.898	20.592	0.274	0.000	1.77	5.343	302.8	SURCHARGED
S21.010	S1260	60 minute 30 year Summer I+30%	60	1	21.875	20.532	0.245	0.000	1.55	5.454	302.8	SURCHARGED
S21.011	S1261	60 minute 30 year Summer I+30%	60	1	21.892	20.489	0.216	0.000	1.37	2.912	320.3	SURCHARGED
S28.000	S1330	60 minute 30 year Winter I+30%	60	1	21.676	20.375	-0.020	0.000	0.11	0.609	11.1	OK
S28.001	S1331	60 minute 30 year Winter I+30%	60	1	21.339	20.372	0.007	0.000	0.26	2.223	25.1	SURCHARGED
S28.002	S1332	60 minute 30 year Summer I+30%	60	1	21.250	20.363	-0.262	0.000	0.11	3.424	29.5	OK
S28.003	S1333	60 minute 30 year Summer I+30%	60	1	21.589	20.360	-0.235	0.000	0.14	6.242	31.1	OK
S28.004	S1334	60 minute 30 year Summer I+30%	60	1	21.694	20.357	-0.213	0.000	0.05	5.766	36.3	OK
S21.012	S1262	60 minute 30 year Summer I+30%	60	1	21.693	20.353	0.003	0.000	1.06	24.417	346.3	SURCHARGED
S21.013	S1263	60 minute 30 year Summer I+30%	60	1	21.600	20.291	-0.009	0.000	0.83	14.952	345.6	OK
S20.003	S1243	60 minute 30 year Summer I+30%	60	1	21.642	20.271	0.000	0.000	1.92	5.608	389.0	OK
S1.021	S1025-Basin A1	480 minute 30 year Winter I+30%	480	1	20.650	19.950	0.470	0.000	0.61	2043.507	55.8	SURCHARGED
S1.022	S1026-Con	480 minute 30 year Winter I+30%	480	1	21.144	19.931	0.487	0.000	0.78	3.719	55.7	SURCHARGED
S1.023	S1027	1440 minute 30 year Winter I+30%	1440	1	21.298	19.301	-1.997	0.000	0.00	0.613	55.7	OK
S1.024	S1028	960 minute 30 year Summer I+30%	960	1	21.261	19.221	-2.040	0.000	0.00	2.120	55.7	OK
S1.025	S1029	1440 minute 30 year Winter I+30%	1440	1	21.175	19.124	-2.051	0.000	0.00	2.017	55.7	OK
S1.026	S1030	1440 minute 30 year Winter I+30%	1440	1	21.018	19.101	-1.917	0.000	0.00	0.418	55.7	OK
S1.027	S1031	960 minute 30 year Summer I+30%	960	1	20.969	18.977	-1.992	0.000	0.00	0.142	55.7	OK

PFA Consulting	M380: Boorley Gardens	Page 5
Stratton Park House	SW Drainage - Sensitivity Test	
Wanborough Road	Catchment A	
Swindon SN3 4HG	Designed by BF/DRB	
Date 15/05/2023	Checked by	
File M380-Catch A-V4.7 (S278+FW).MDX	Network 2020.1.3	
Causeway		

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

Simulation Criteria

Areal Reduction Factor 1.000 Manhole Headloss Coeff (Global) 0.500 MADD Factor * 10m³/ha Storage 2.000
Hot Start (mins) 0 Foul Sewage per hectare (l/s) 0.000 Inlet Coefficient 0.800
Hot Start Level (mm) 0 Additional Flow - % of Total Flow 0.000 Flow per Person per Day (l/per/day) 0.000

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
Number of Online Controls 2 Number of Storage Structures 2 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FEH Site Location GB 450306 114752 Cv (Summer) 0.750
FEH Rainfall Version 2013 Data Type Point Cv (Winter) 0.840

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

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

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S1.000	S988	60 minute 100 year Summer I+30%	60	1	28.000	26.637	-0.163	0.000	0.17	0.065	8.7	OK
S1.001	S989	60 minute 100 year Summer I+30%	60	1	27.700	26.405	-0.082	0.000	0.72	0.311	31.6	OK
S1.002	S990	60 minute 100 year Summer I+30%	60	1	27.550	26.240	0.053	0.000	1.15	1.104	49.7	SURCHARGED
S2.000	S1000	60 minute 100 year Summer I+30%	60	1	29.870	28.497	-0.173	0.000	0.12	0.054	9.9	OK
S2.001	S1001	60 minute 100 year Summer I+30%	60	1	29.525	27.847	-0.153	0.000	0.22	0.092	17.6	OK
S2.002	S1002	60 minute 100 year Summer I+30%	60	1	28.930	27.201	-0.144	0.000	0.28	0.104	21.1	OK
S2.003	S1003	60 minute 100 year Summer I+30%	60	1	28.225	26.468	-0.117	0.000	0.46	0.119	34.7	OK
S3.000	S980	60 minute 100 year Summer I+30%	60	1	27.550	26.186	-0.164	0.000	0.17	0.099	12.9	OK
S1.003	S1004	60 minute 100 year Summer I+30%	60	1	27.260	25.874	-0.119	0.000	0.67	0.613	99.5	OK
S1.004	S1005	60 minute 100 year Summer I+30%	60	1	26.950	25.404	-0.104	0.000	0.75	0.387	119.8	OK
S1.005	S1006	60 minute 100 year Summer I+30%	60	1	25.960	24.671	-0.080	0.000	0.88	0.626	150.5	OK
S4.000	S1040	60 minute 100 year Summer I+30%	60	1	26.400	25.855	1.005	0.000	1.69	1.300	26.5	SURCHARGED
S4.001	S1041	60 minute 100 year Summer I+30%	60	1	26.170	25.438	0.733	0.000	0.79	1.338	43.5	SURCHARGED
S4.002	S1042	60 minute 100 year Summer I+30%	60	1	25.290	25.001	0.979	0.000	1.55	3.446	60.9	FLOOD RISK
S4.003	S1043	60 minute 100 year Summer I+30%	60	1	25.215	24.801	0.861	0.000	1.63	1.566	61.5	SURCHARGED
S4.004	S1044	60 minute 100 year Summer I+30%	60	1	25.220	24.612	0.744	0.000	1.68	1.389	67.6	SURCHARGED
S4.005	S1045	60 minute 100 year Summer I+30%	60	1	25.310	23.937	0.327	0.000	1.46	2.188	121.3	SURCHARGED
S4.006	S1046	60 minute 100 year Summer I+30%	60	1	25.115	23.688	0.193	0.000	2.00	1.467	126.9	SURCHARGED
S1.006	S1007	60 minute 100 year Summer I+30%	60	1	25.050	23.431	0.000	0.000	1.02	1.670	302.2	OK
S5.000	S1050	60 minute 100 year Summer I+30%	60	1	25.208	23.661	-0.123	0.000	0.42	0.110	15.6	OK
S5.001	S1051	60 minute 100 year Summer I+30%	60	1	25.006	23.550	-0.142	0.000	0.54	0.260	31.5	OK
S5.002	S1052	60 minute 100 year Summer I+30%	60	1	24.945	23.507	-0.135	0.000	0.58	0.489	37.1	OK
S5.003	S1053	60 minute 100 year Summer I+30%	60	1	24.885	23.293	-0.284	0.000	0.29	0.245	46.7	OK

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S5.004	S1054	60 minute 100 year Summer I+30%	60	1	24.800	23.208	-0.301	0.000	0.24	0.646	62.2	OK
S1.007	S1008	60 minute 100 year Summer I+30%	60	1	24.900	23.152	-0.129	0.000	0.67	4.259	370.8	OK
S1.008	S1009	60 minute 100 year Summer I+30%	60	1	24.690	23.112	-0.093	0.000	0.61	7.223	367.4	OK
S6.000	S1060	60 minute 100 year Summer I+30%	60	1	26.097	23.863	0.471	0.000	1.58	0.866	111.9	SURCHARGED
S1.009	S1010	60 minute 100 year Summer I+30%	60	1	24.750	23.067	-0.025	0.000	0.71	13.148	482.5	OK
S7.000	S1070	60 minute 100 year Summer I+30%	60	1	26.242	25.570	0.153	0.000	0.57	0.422	21.8	SURCHARGED
S7.001	S1071	60 minute 100 year Summer I+30%	60	1	26.395	25.528	0.232	0.000	0.88	1.185	30.7	SURCHARGED
S7.002	S1072	60 minute 100 year Summer I+30%	60	1	27.477	25.412	0.266	0.000	1.03	1.398	40.1	SURCHARGED
S7.003	S1073	60 minute 100 year Summer I+30%	60	1	28.150	25.232	0.256	0.000	1.42	1.508	48.7	SURCHARGED
S7.004	S1074	60 minute 100 year Summer I+30%	60	1	28.423	25.080	0.179	0.000	1.39	0.911	51.0	SURCHARGED
S7.005	S1075	60 minute 100 year Summer I+30%	60	1	29.003	24.790	0.043	0.000	1.08	1.167	82.7	SURCHARGED
S7.006	S1076	60 minute 100 year Summer I+30%	60	1	27.350	24.349	-0.184	0.000	0.65	1.044	109.7	OK
S7.007	S1077	60 minute 100 year Summer I+30%	60	1	26.816	24.299	-0.167	0.000	0.70	1.228	117.8	OK
S7.008	S1078	60 minute 100 year Summer I+30%	60	1	26.402	24.267	-0.140	0.000	0.81	1.254	137.2	OK
S7.009	S1079	60 minute 100 year Summer I+30%	60	1	26.065	24.091	-0.250	0.000	0.41	0.741	139.4	OK
S7.010	S1080	60 minute 100 year Summer I+30%	60	1	25.389	23.652	-0.279	0.000	0.31	0.491	175.2	OK
S1.010	S1011	60 minute 100 year Summer I+30%	60	1	25.092	22.969	0.075	0.000	1.09	21.114	663.1	SURCHARGED
S1.011	S1012	60 minute 100 year Summer I+30%	60	1	25.346	22.788	0.041	0.000	1.14	15.350	690.0	SURCHARGED
S1.012	S1014	60 minute 100 year Summer I+30%	60	1	25.568	22.347	-0.283	0.000	0.81	7.192	702.1	OK
S1.013	S1016	60 minute 100 year Summer I+30%	60	1	25.300	22.223	-0.322	0.000	0.64	7.516	707.5	OK
S1.014	S1018	60 minute 100 year Summer I+30%	60	1	23.845	22.081	-0.205	0.000	0.83	25.188	744.4	OK
S8.000	S1091	60 minute 100 year Summer I+30%	60	1	24.214	22.611	-0.178	0.000	0.10	0.048	8.7	OK
S1.015	S1019	60 minute 100 year Summer I+30%	60	1	23.962	21.985	-0.162	0.000	1.00	12.669	766.8	OK
S1.016	S1020-Basin A2	60 minute 100 year Winter I+30%	60	1	22.350	21.896	0.650	0.000	1.94	932.778	113.5	SURCHARGED
S1.017	S1021-Con	60 minute 100 year Winter I+30%	60	1	22.043	21.691	0.491	0.000	2.14	3.303	113.5	SURCHARGED
S1.018	S1022	60 minute 100 year Winter I+30%	60	1	22.030	21.251	-0.779	0.000	0.04	0.889	113.4	OK
S1.019	S1023	60 minute 100 year Winter I+30%	60	1	21.545	21.213	0.149	0.000	1.84	21.750	112.7	SURCHARGED*
S1.020	S1024	60 minute 100 year Winter I+30%	60	1	21.545	20.856	-0.689	0.000	0.02	0.361	112.7	OK
S9.000	S1100	60 minute 100 year Summer I+30%	60	1	24.028	22.373	-0.156	0.000	0.21	0.072	12.9	OK
S10.000	S1110	60 minute 100 year Summer I+30%	60	1	23.557	21.994	-0.138	0.000	0.32	0.093	14.5	OK
S9.001	S1101	60 minute 100 year Summer I+30%	60	1	23.690	21.882	-0.107	0.000	0.73	0.375	65.7	OK
S9.002	S1102	60 minute 100 year Summer I+30%	60	1	23.194	21.625	-0.145	0.000	0.52	0.373	71.8	OK
S9.003	S1103	60 minute 100 year Summer I+30%	60	1	22.891	21.335	-0.131	0.000	0.60	0.290	78.1	OK
S9.004	S1104	60 minute 100 year Summer I+30%	60	1	22.624	21.061	-0.138	0.000	0.57	0.288	94.0	OK
S11.000	S1120	60 minute 100 year Summer I+30%	60	1	25.814	24.279	-0.035	0.000	0.95	0.125	31.2	OK
S12.000	S1140	60 minute 100 year Summer I+30%	60	1	25.553	24.000	-0.053	0.000	0.75	0.104	12.2	OK
S11.001	S1121	60 minute 100 year Summer I+30%	60	1	25.718	23.822	-0.078	0.000	0.75	0.205	48.0	OK
S11.002	S1122	60 minute 100 year Summer I+30%	60	1	24.960	23.391	-0.069	0.000	0.81	0.269	58.5	OK
S11.003	S1123	60 minute 100 year Summer I+30%	60	1	24.700	23.120	-0.155	0.000	0.47	0.208	64.2	OK
S11.004	S1124	60 minute 100 year Summer I+30%	60	1	24.210	22.719	0.009	0.000	1.11	0.916	77.0	SURCHARGED
S13.000	S1150	60 minute 100 year Summer I+30%	60	1	24.347	22.762	-0.160	0.000	0.18	0.068	13.3	OK
S11.005	S1125	60 minute 100 year Summer I+30%	60	1	24.340	22.499	-0.113	0.000	0.70	0.624	112.3	OK
S11.006	S1126	60 minute 100 year Summer I+30%	60	1	22.588	21.788	0.625	0.000	0.59	3.553	143.0	SURCHARGED
S11.007	S1127	60 minute 100 year Summer I+30%	60	1	22.250	21.655	0.905	0.000	1.45	3.830	155.0	SURCHARGED
S11.008	S1128	60 minute 100 year Summer I+30%	60	1	22.189	21.502	0.814	0.000	1.30	1.982	157.0	SURCHARGED
S11.009	S1129	60 minute 100 year Summer I+30%	60	1	22.093	21.343	0.750	0.000	0.99	2.003	161.4	SURCHARGED

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S11.010	S1130	60 minute 100 year Summer I+30%	60	1	21.820	21.172	0.751	0.000	2.10	3.082	165.6	SURCHARGED
S14.000	S1160	60 minute 100 year Summer I+30%	60	1	21.558	20.995	0.561	0.000	0.06	1.332	4.7	SURCHARGED
S11.011	S1131	60 minute 100 year Summer I+30%	60	1	21.725	20.994	0.599	0.000	1.82	3.330	177.8	SURCHARGED
S9.005	S1105	60 minute 100 year Summer I+30%	60	1	21.723	20.488	0.250	0.000	1.31	7.332	295.5	SURCHARGED
S15.000	S1169	60 minute 100 year Summer I+30%	60	1	24.601	23.031	-0.184	0.000	0.08	0.041	6.5	OK
S15.001	S1170	60 minute 100 year Summer I+30%	60	1	23.616	22.069	-0.111	0.000	0.50	0.155	32.6	OK
S15.002	S1171	60 minute 100 year Summer I+30%	60	1	23.461	21.847	-0.197	0.000	0.25	0.135	36.4	OK
S15.003	S1172	60 minute 100 year Summer I+30%	60	1	22.404	21.647	0.069	0.000	0.37	1.063	50.9	SURCHARGED
S15.004	S1173	60 minute 100 year Summer I+30%	60	1	22.405	21.623	0.344	0.000	0.37	1.292	49.0	SURCHARGED
S15.005	S1174	60 minute 100 year Summer I+30%	60	1	21.950	21.578	0.699	0.000	0.38	2.624	44.7	SURCHARGED
S16.000	SH119	60 minute 100 year Summer I+30%	60	1	21.753	21.577	0.877	0.000	0.60	1.326	35.4	FLOOD RISK
S15.006	S1175	60 minute 100 year Summer I+30%	60	1	21.840	21.553	0.900	0.000	1.24	2.517	78.3	FLOOD RISK
S15.007	S1176	60 minute 100 year Summer I+30%	60	1	22.088	21.288	0.805	0.000	1.97	4.060	104.8	SURCHARGED
S17.000	S1200	60 minute 100 year Summer I+30%	60	1	25.344	23.694	-0.150	0.000	0.00	0.000	0.0	OK
S17.001	S1201	60 minute 100 year Summer I+30%	60	1	25.284	23.545	-0.149	0.000	0.25	0.113	14.9	OK
S17.002	S1202	60 minute 100 year Summer I+30%	60	1	24.984	23.310	-0.063	0.000	0.85	0.309	30.1	OK
S18.000	S1220	60 minute 100 year Summer I+30%	60	1	24.890	23.302	-0.084	0.000	0.40	0.069	6.8	OK
S17.003	S1203	60 minute 100 year Summer I+30%	60	1	24.846	23.192	-0.083	0.000	0.72	0.414	50.2	OK
S17.004	S1204	60 minute 100 year Summer I+30%	60	1	24.117	22.547	-0.070	0.000	0.81	0.256	57.5	OK
S17.005	S1205	60 minute 100 year Summer I+30%	60	1	23.788	22.216	-0.072	0.000	0.80	0.242	62.1	OK
S19.000	S1230	60 minute 100 year Summer I+30%	60	1	23.400	22.233	-0.129	0.000	0.38	0.103	14.1	OK
S19.001	S1231	60 minute 100 year Summer I+30%	60	1	23.300	22.141	-0.147	0.000	0.26	0.145	23.0	OK
S17.006	S1206	60 minute 100 year Summer I+30%	60	1	23.200	21.699	-0.165	0.000	0.60	0.343	100.0	OK
S17.007	S1207	60 minute 100 year Summer I+30%	60	1	23.000	21.569	-0.048	0.000	0.95	1.570	120.0	OK
S17.008	S1208	60 minute 100 year Summer I+30%	60	1	22.890	21.478	-0.034	0.000	1.00	1.542	132.2	OK
S17.009	S1209	60 minute 100 year Summer I+30%	60	1	22.660	21.366	-0.032	0.000	0.89	1.774	146.9	OK
S17.010	S1210	60 minute 100 year Summer I+30%	60	1	22.325	21.246	0.024	0.000	0.42	1.800	145.6	SURCHARGED
S15.008	S1177	60 minute 100 year Summer I+30%	60	1	21.960	21.110	0.663	0.000	2.38	3.583	251.9	SURCHARGED
S15.009	S1178	60 minute 100 year Summer I+30%	60	1	21.925	20.909	0.489	0.000	1.30	2.693	260.7	SURCHARGED
S15.010	S1179	60 minute 100 year Summer I+30%	60	1	21.794	20.693	0.400	0.000	1.56	2.393	264.4	SURCHARGED
S15.011	S1180	60 minute 100 year Summer I+30%	60	1	21.717	20.471	0.255	0.000	1.95	2.511	267.6	SURCHARGED
S15.012	S1181	60 minute 100 year Summer I+30%	60	1	21.740	20.245	0.078	0.000	1.26	3.026	267.6	SURCHARGED
S20.000	S1240	60 minute 100 year Summer I+30%	60	1	22.551	20.943	-0.108	0.000	0.17	0.042	3.0	OK
S20.001	S1241	60 minute 100 year Summer I+30%	60	1	22.187	20.576	-0.088	0.000	0.83	0.252	66.0	OK
S20.002	S1242	60 minute 100 year Summer I+30%	60	1	22.030	20.470	-0.060	0.000	0.71	0.818	66.8	OK
S21.000	S1250	60 minute 100 year Summer I+30%	60	1	22.489	21.542	0.329	0.000	0.26	0.536	4.4	SURCHARGED
S21.001	S1251	60 minute 100 year Summer I+30%	60	1	22.756	21.529	0.558	0.000	0.48	1.334	16.2	SURCHARGED
S21.002	S1252	60 minute 100 year Summer I+30%	60	1	22.692	21.504	0.655	0.000	0.51	1.759	25.5	SURCHARGED
S21.003	S1253	60 minute 100 year Summer I+30%	60	1	22.582	21.477	0.763	0.000	0.31	1.549	24.6	SURCHARGED
S22.000	S1270	60 minute 100 year Summer I+30%	60	1	23.967	22.474	-0.144	0.000	0.28	0.085	13.7	OK
S23.000	S1280	60 minute 100 year Summer I+30%	60	1	24.231	22.612	-0.097	0.000	0.27	0.054	9.5	OK
S22.001	S1271	60 minute 100 year Summer I+30%	60	1	24.084	22.126	-0.195	0.000	0.27	0.116	35.9	OK
S24.000	S1290	60 minute 100 year Summer I+30%	60	1	23.135	21.849	0.214	0.000	0.71	0.406	12.4	SURCHARGED
S22.002	S1272	60 minute 100 year Summer I+30%	60	1	23.338	21.808	0.316	0.000	0.72	2.888	70.2	SURCHARGED
S22.003	S1273	60 minute 100 year Summer I+30%	60	1	23.510	21.766	0.307	0.000	0.56	3.711	71.0	SURCHARGED
S22.004	S1274	60 minute 100 year Summer I+30%	60	1	23.371	21.745	0.330	0.000	0.56	3.241	80.1	SURCHARGED

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for M380-CATCHMENT A-SW.SWS

PN	US/MH Name	Event	Duration (mins)	Storm Rank	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Maximum Vol (m³)	Pipe Flow (l/s)	Status
S22.005	S1275	60 minute 100 year Summer I+30%	60	1	23.170	21.719	0.362	0.000	0.57	3.904	89.9	SURCHARGED
S25.000	S1300	60 minute 100 year Summer I+30%	60	1	23.321	21.846	-0.050	0.000	0.64	0.192	46.8	OK
S22.006	S1277	60 minute 100 year Summer I+30%	60	1	22.897	21.681	0.421	0.000	1.34	6.697	138.2	SURCHARGED
S22.007	S1278	60 minute 100 year Summer I+30%	60	1	22.785	21.628	0.405	0.000	0.43	2.628	134.4	SURCHARGED
S22.008	S1279	60 minute 100 year Summer I+30%	60	1	22.460	21.558	0.751	0.000	0.63	6.771	192.7	SURCHARGED
S26.000	SH310	60 minute 100 year Summer I+30%	60	1	22.925	21.701	0.276	0.000	0.16	0.561	12.2	SURCHARGED
S27.000	S1320	60 minute 100 year Summer I+30%	60	1	22.334	21.693	0.643	0.000	0.13	0.976	4.5	SURCHARGED
S27.001	S1321	60 minute 100 year Summer I+30%	60	1	22.453	21.690	0.711	0.000	0.26	1.488	9.5	SURCHARGED
S26.001	S1311	60 minute 100 year Summer I+30%	60	1	22.687	21.681	0.823	0.000	0.57	2.915	42.9	SURCHARGED
S26.002	S1312	60 minute 100 year Summer I+30%	60	1	22.300	21.616	0.970	0.000	1.15	4.142	78.1	SURCHARGED
S21.004	S1254	60 minute 100 year Summer I+30%	60	1	22.251	21.450	0.940	0.000	1.34	10.709	342.2	SURCHARGED
S21.005	S1255	60 minute 100 year Summer I+30%	60	1	21.929	21.333	0.892	0.000	2.18	11.956	346.7	SURCHARGED
S21.006	S1256	60 minute 100 year Summer I+30%	60	1	21.861	21.264	0.848	0.000	2.11	5.666	350.2	SURCHARGED
S21.007	S1257	60 minute 100 year Summer I+30%	60	1	21.952	21.154	0.767	0.000	2.25	6.058	358.4	SURCHARGED
S21.008	S1258	60 minute 100 year Summer I+30%	60	1	22.067	21.001	0.653	0.000	2.15	7.278	360.6	SURCHARGED
S21.009	S1259	60 minute 100 year Summer I+30%	60	1	21.898	20.872	0.554	0.000	2.14	5.838	365.6	SURCHARGED
S21.010	S1260	60 minute 100 year Summer I+30%	60	1	21.875	20.739	0.452	0.000	1.88	5.819	365.9	SURCHARGED
S21.011	S1261	60 minute 100 year Summer I+30%	60	1	21.892	20.605	0.332	0.000	1.66	3.117	388.0	SURCHARGED
S28.000	S1330	60 minute 100 year Summer I+30%	60	1	21.676	20.433	0.038	0.000	0.17	0.691	17.2	SURCHARGED
S28.001	S1331	60 minute 100 year Summer I+30%	60	1	21.339	20.429	0.064	0.000	0.41	2.429	39.4	SURCHARGED
S28.002	S1332	60 minute 100 year Summer I+30%	60	1	21.250	20.416	-0.209	0.000	0.16	3.626	42.3	OK
S28.003	S1333	60 minute 100 year Summer I+30%	60	1	21.589	20.412	-0.183	0.000	0.21	7.075	46.7	OK
S28.004	S1334	60 minute 100 year Summer I+30%	60	1	21.694	20.408	-0.162	0.000	0.06	6.476	42.2	OK
S21.012	S1262	60 minute 100 year Summer I+30%	60	1	21.693	20.402	0.052	0.000	1.30	25.345	426.9	SURCHARGED
S21.013	S1263	60 minute 100 year Summer I+30%	60	1	21.600	20.317	0.017	0.000	1.03	15.353	427.5	SURCHARGED
S20.003	S1243	60 minute 100 year Summer I+30%	60	1	21.642	20.287	0.016	0.000	2.41	5.791	487.9	SURCHARGED
S1.021	S1025-Basin A1	480 minute 100 year Winter I+30%	480	1	20.650	20.093	0.613	0.000	0.62	2675.184	56.6	SURCHARGED
S1.022	S1026-Con	480 minute 100 year Winter I+30%	480	1	21.144	20.084	0.640	0.000	0.78	4.249	55.8	SURCHARGED
S1.023	S1027	180 minute 100 year Winter I+30%	180	1	21.298	19.301	-1.997	0.000	0.00	0.613	55.8	OK
S1.024	S1028	180 minute 100 year Winter I+30%	180	1	21.261	19.221	-2.040	0.000	0.00	2.122	55.8	OK
S1.025	S1029	180 minute 100 year Winter I+30%	180	1	21.175	19.124	-2.051	0.000	0.00	2.018	55.8	OK
S1.026	S1030	180 minute 100 year Winter I+30%	180	1	21.018	19.101	-1.917	0.000	0.00	0.418	55.8	OK
S1.027	S1031	180 minute 100 year Winter I+30%	180	1	20.969	18.977	-1.992	0.000	0.00	0.142	55.8	OK