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Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A (FSR 15 & 30)	
Date 15/05/2023	Designed by BF/DRB	
File (FSR 15 + 30) 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)	10	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	98.45	5.35	26.575	0.023	0.0	0.0	0.0	1.37	54.5	6.1
S1.001	95.79	5.72	26.262	0.082	0.0	0.0	0.0	1.19	47.5	21.3
S1.002	93.61	6.05	25.962	0.133	0.0	0.0	0.0	1.19	47.3	33.7
S2.000	99.64	5.19	28.445	0.026	0.0	0.0	0.0	2.18	86.6	7.0
S2.001	98.32	5.36	27.775	0.046	0.0	0.0	0.0	2.19	87.2	12.2
S2.002	96.76	5.58	27.120	0.055	0.0	0.0	0.0	2.08	82.5	14.4
S2.003	95.45	5.77	26.360	0.090	0.0	0.0	0.0	2.08	82.6	23.3
S3.000	100.41	5.08	26.125	0.034	0.0	0.0	0.0	2.30	91.4	9.2
S1.003	92.88	6.16	25.693	0.266	0.0	0.0	0.0	2.47	174.6	66.9
S1.004	91.75	6.34	25.208	0.320	0.0	0.0	0.0	2.51	177.4	79.5
S1.005	89.80	6.66	24.451	0.403	0.0	0.0	0.0	2.57	181.9	98.0
S4.000	98.96	5.28	24.700	0.087	0.0	0.0	0.0	0.96	16.9	23.3
S4.001	94.71	5.89	24.480	0.148	0.0	0.0	0.0	1.48	58.7	38.0

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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	93.80	6.02	23.797	0.210	0.0	0.0	0.0	1.19	47.4	53.3
S4.003	93.01	6.15	23.715	0.210	0.0	0.0	0.0	1.19	47.2	53.3
S4.004	89.32	6.75	23.643	0.231	0.0	0.0	0.0	1.07	42.5	55.9
S4.005	88.36	6.91	23.310	0.406	0.0	0.0	0.0	1.42	100.1	97.2
S4.006	87.88	7.00	23.195	0.422	0.0	0.0	0.0	1.47	103.6	100.4
S1.006	87.56	7.05	22.906	0.902	0.0	0.0	0.0	2.81	609.3	213.9
S5.000	99.39	5.22	23.559	0.041	0.0	0.0	0.0	1.06	42.2	11.0
S5.001	98.03	5.40	23.392	0.082	0.0	0.0	0.0	1.03	72.9	21.8
S5.002	96.88	5.57	23.342	0.096	0.0	0.0	0.0	1.18	83.3	25.2
S5.003	95.36	5.79	23.127	0.121	0.0	0.0	0.0	1.28	204.1	31.2
S5.004	93.94	6.00	23.059	0.161	0.0	0.0	0.0	1.94	309.3	41.0
S1.007	86.71	7.21	22.531	1.127	0.0	0.0	0.0	1.86	820.4	264.7
S1.008	85.48	7.44	22.455	1.151	0.0	0.0	0.0	1.86	822.1	266.5
S6.000	93.57	6.06	23.092	0.304	0.0	0.0	0.0	1.05	74.3	77.0
S1.009	83.43	7.83	22.342	1.500	0.0	0.0	0.0	1.86	823.2	338.9
S7.000	98.91	5.28	25.192	0.065	0.0	0.0	0.0	1.06	42.3	17.4
S7.001	96.39	5.64	25.071	0.095	0.0	0.0	0.0	1.06	42.3	24.8
S7.002	93.70	6.04	24.921	0.126	0.0	0.0	0.0	1.06	42.3	32.0
S7.003	92.33	6.25	24.751	0.154	0.0	0.0	0.0	1.00	39.7	38.5
S7.004	89.68	6.69	24.676	0.161	0.0	0.0	0.0	1.00	39.8	39.1
S7.005	85.84	7.37	24.447	0.261	0.0	0.0	0.0	1.20	85.0	60.7
S7.006	85.20	7.49	24.083	0.341	0.0	0.0	0.0	1.56	247.9	78.7
S7.007	84.64	7.59	24.016	0.364	0.0	0.0	0.0	1.56	248.6	83.4
S7.008	84.03	7.71	23.957	0.419	0.0	0.0	0.0	1.56	248.2	95.4
S7.009	83.15	7.89	23.891	0.425	0.0	0.0	0.0	2.53	402.7	95.7
S7.010	82.80	7.96	23.481	0.523	0.0	0.0	0.0	4.65	739.1	117.3
S1.010	81.36	8.26	22.144	2.108	0.0	0.0	0.0	1.86	822.1	464.5
S1.011	80.27	8.49	21.997	2.221	0.0	0.0	0.0	1.86	822.5	482.8
S1.012	79.57	8.65	21.730	2.273	0.0	0.0	0.0	2.08	1323.1	489.8

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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	0.600	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	0.600	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

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S1.013	77.53	9.11	21.645	2.312	0.0	0.0	0.0	2.08	1326.0	489.8
S1.014	76.83	9.28	21.386	2.544	0.0	0.0	0.0	2.38	1511.9	529.3
S8.000	100.12	5.12	22.564	0.023	0.0	0.0	0.0	2.47	98.1	6.2
S1.015	73.09	10.24	21.247	2.680	0.0	0.0	0.0	1.49	950.4	530.5
S1.016	72.50	10.40	20.946	2.680	0.0	0.0	0.0	1.05	74.4	530.5
S1.017	72.06	10.53	20.900	2.680	0.0	0.0	0.0	1.02	71.9	530.5
S1.018	60.20	14.66	20.818	2.680	0.0	0.0	0.0	0.16	18.3	530.5
S1.019	59.86	14.81	20.764	2.680	0.0	0.0	0.0	1.01	71.6	530.5
S1.020	59.41	15.02	20.676	2.680	0.0	0.0	0.0	0.66	74.5	530.5
S9.000	98.60	5.33	22.304	0.034	0.0	0.0	0.0	1.68	66.8	9.1
S10.000	99.65	5.18	21.907	0.038	0.0	0.0	0.0	1.30	51.7	10.3
S9.001	97.33	5.50	21.689	0.171	0.0	0.0	0.0	1.72	121.7	45.1
S9.002	96.81	5.58	21.470	0.186	0.0	0.0	0.0	2.57	181.9	48.8
S9.003	96.26	5.66	21.166	0.202	0.0	0.0	0.0	2.41	170.2	52.7
S9.004	94.61	5.90	20.899	0.243	0.0	0.0	0.0	2.54	179.7	62.3
S11.000	100.48	5.08	24.164	0.082	0.0	0.0	0.0	2.10	37.2	22.3
S12.000	99.09	5.26	23.903	0.032	0.0	0.0	0.0	1.00	17.6	8.6
S11.001	97.71	5.45	23.675	0.126	0.0	0.0	0.0	1.88	74.7	33.3
S11.002	97.29	5.51	23.235	0.153	0.0	0.0	0.0	2.33	92.5	40.3
S11.003	95.61	5.75	22.975	0.168	0.0	0.0	0.0	2.13	150.5	43.5
S11.004	94.46	5.92	22.410	0.202	0.0	0.0	0.0	1.33	94.1	51.7
S13.000	100.34	5.09	22.697	0.035	0.0	0.0	0.0	2.12	84.4	9.5
S11.005	91.98	6.31	22.312	0.299	0.0	0.0	0.0	2.50	176.5	74.5
S11.006	91.22	6.43	20.788	0.423	0.0	0.0	0.0	2.64	291.9	104.5
S11.007	91.04	6.46	20.375	0.468	0.0	0.0	0.0	2.27	251.2	115.4
S11.008	90.84	6.49	20.313	0.477	0.0	0.0	0.0	2.51	277.3	117.4

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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	90.09	6.62	20.218	0.495	0.0	0.0	0.0	1.96	216.4	120.8
S11.010	89.33	6.74	20.046	0.507	0.0	0.0	0.0	1.03	114.2	122.7
S14.000	99.50	5.20	20.059	0.008	0.0	0.0	0.0	1.01	111.7	2.2
S11.011	84.73	7.58	20.020	0.553	0.0	0.0	0.0	1.01	111.2	126.9
S9.005	84.34	7.65	19.863	0.938	0.0	0.0	0.0	2.98	329.3	214.3
S15.000	99.03	5.27	22.990	0.017	0.0	0.0	0.0	2.23	88.6	4.6
S15.001	98.52	5.34	21.955	0.084	0.0	0.0	0.0	2.06	81.8	22.4
S15.002	97.42	5.49	21.744	0.094	0.0	0.0	0.0	2.33	164.7	24.8
S15.003	97.04	5.54	21.278	0.132	0.0	0.0	0.0	2.84	200.4	34.7
S15.004	95.80	5.72	20.979	0.143	0.0	0.0	0.0	2.10	148.7	37.1
S15.005	95.43	5.78	20.579	0.143	0.0	0.0	0.0	2.57	181.7	37.1
S16.000	99.80	5.16	20.400	0.110	0.0	0.0	0.0	1.05	74.5	29.7
S15.006	91.06	6.46	20.353	0.258	0.0	0.0	0.0	1.01	71.2	63.6
S15.007	90.12	6.61	20.183	0.353	0.0	0.0	0.0	0.98	69.4	86.2
S17.000	98.72	5.31	23.694	0.000	0.0	0.0	0.0	1.07	18.9	0.0
S17.001	97.32	5.50	23.469	0.038	0.0	0.0	0.0	1.68	66.7	10.0
S17.002	95.37	5.79	23.148	0.077	0.0	0.0	0.0	1.00	39.6	19.9
S18.000	99.99	5.14	23.236	0.018	0.0	0.0	0.0	1.10	19.5	4.9
S17.003	93.78	6.02	23.050	0.129	0.0	0.0	0.0	1.99	79.2	32.8
S17.004	93.09	6.13	22.392	0.148	0.0	0.0	0.0	2.06	82.0	37.3
S17.005	92.21	6.27	22.063	0.160	0.0	0.0	0.0	2.18	86.8	40.0
S19.000	99.87	5.16	22.137	0.037	0.0	0.0	0.0	1.10	43.9	10.0
S19.001	99.38	5.22	22.063	0.060	0.0	0.0	0.0	2.66	105.6	16.1
S17.006	91.17	6.44	21.489	0.259	0.0	0.0	0.0	2.00	221.3	63.9
S17.007	90.31	6.58	21.242	0.321	0.0	0.0	0.0	1.60	176.2	78.5

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Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A (FSR 15 & 30)	
Date 15/05/2023	Designed by BF/DRB	
File (FSR 15 + 30) 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	89.25	6.76	21.137	0.359	0.0	0.0	0.0	1.51	167.1	86.8
S17.009	88.54	6.88	21.023	0.399	0.0	0.0	0.0	1.99	220.1	95.7
S17.010	88.20	6.94	20.847	0.423	0.0	0.0	0.0	4.15	458.5	101.0
S15.008	87.33	7.10	19.997	0.784	0.0	0.0	0.0	1.06	168.1	185.4
S15.009	86.99	7.16	19.970	0.816	0.0	0.0	0.0	2.45	389.2	192.2
S15.010	86.42	7.26	19.843	0.829	0.0	0.0	0.0	1.71	272.3	194.0
S15.011	85.17	7.49	19.766	0.840	0.0	0.0	0.0	1.13	179.5	194.0
S15.012	84.63	7.60	19.717	0.840	0.0	0.0	0.0	2.24	356.6	194.0
S20.000	96.59	5.61	20.901	0.008	0.0	0.0	0.0	1.02	18.1	2.1
S20.001	95.44	5.78	20.364	0.169	0.0	0.0	0.0	1.49	105.2	43.7
S20.002	91.84	6.33	20.230	0.178	0.0	0.0	0.0	1.42	100.6	44.3
S21.000	97.72	5.45	21.063	0.011	0.0	0.0	0.0	1.00	17.7	2.9
S21.001	95.35	5.79	20.746	0.047	0.0	0.0	0.0	1.00	39.9	12.1
S21.002	94.61	5.90	20.624	0.083	0.0	0.0	0.0	1.52	60.3	21.3
S21.003	91.22	6.43	20.414	0.091	0.0	0.0	0.0	1.21	85.7	22.5
S22.000	98.34	5.36	22.393	0.036	0.0	0.0	0.0	1.33	52.8	9.6
S23.000	100.54	5.07	22.559	0.025	0.0	0.0	0.0	2.27	40.0	6.8
S22.001	95.89	5.71	22.021	0.094	0.0	0.0	0.0	2.14	151.5	24.4
S24.000	99.62	5.19	21.485	0.033	0.0	0.0	0.0	1.09	19.2	8.9
S22.002	93.52	6.07	21.117	0.199	0.0	0.0	0.0	1.18	130.5	50.4
S22.003	92.10	6.29	21.009	0.218	0.0	0.0	0.0	1.10	175.7	54.4
S22.004	90.41	6.56	20.965	0.260	0.0	0.0	0.0	1.13	179.5	63.7
S22.005	87.86	7.00	20.907	0.314	0.0	0.0	0.0	1.15	182.6	74.7
S25.000	99.27	5.24	21.671	0.123	0.0	0.0	0.0	1.98	78.6	33.1
S22.006	87.08	7.14	20.810	0.460	0.0	0.0	0.0	1.22	193.7	108.5
S22.007	85.76	7.38	20.773	0.481	0.0	0.0	0.0	2.28	362.4	111.7

PFA Consulting		Page 6
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A (FSR 15 & 30)	
Date 15/05/2023	Designed by BF/DRB	
File (FSR 15 + 30) 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	84.91	7.54	20.357	0.680	0.0	0.0	0.0	2.34	371.8	156.4
S26.000	99.61	5.19	21.200	0.033	0.0	0.0	0.0	2.05	81.4	8.9
S27.000	99.51	5.20	20.825	0.010	0.0	0.0	0.0	1.00	39.7	2.7
S27.001	97.02	5.55	20.754	0.024	0.0	0.0	0.0	1.00	39.7	6.3
S26.001	93.16	6.12	20.558	0.162	0.0	0.0	0.0	1.15	81.1	40.9
S26.002	90.23	6.59	20.346	0.287	0.0	0.0	0.0	1.06	74.7	70.1
S21.004	82.24	8.07	19.910	1.245	0.0	0.0	0.0	1.08	306.0	277.3
S21.005	81.31	8.27	19.841	1.277	0.0	0.0	0.0	1.08	305.8	281.2
S21.006	80.28	8.49	19.816	1.307	0.0	0.0	0.0	1.09	306.9	284.2
S21.007	78.94	8.79	19.787	1.346	0.0	0.0	0.0	1.08	306.5	287.8
S21.008	77.94	9.02	19.748	1.356	0.0	0.0	0.0	1.08	306.3	287.8
S21.009	76.93	9.26	19.718	1.381	0.0	0.0	0.0	1.08	305.6	287.8
S21.010	76.51	9.36	19.687	1.381	0.0	0.0	0.0	1.10	312.1	287.8
S21.011	74.42	9.89	19.673	1.480	0.0	0.0	0.0	1.11	312.6	298.3
S28.000	99.53	5.20	19.945	0.049	0.0	0.0	0.0	1.01	159.9	13.2
S28.001	97.63	5.46	19.915	0.116	0.0	0.0	0.0	1.01	161.4	30.7
S28.002	95.40	5.78	19.875	0.133	0.0	0.0	0.0	1.06	470.2	34.4
S28.003	93.56	6.06	19.845	0.163	0.0	0.0	0.0	1.05	463.5	41.3
S28.004	91.87	6.32	19.820	0.163	0.0	0.0	0.0	2.21	977.3	41.3
S21.012	72.44	10.42	19.600	1.643	0.0	0.0	0.0	1.07	470.9	322.3
S21.013	72.28	10.46	19.550	1.643	0.0	0.0	0.0	2.05	907.2	322.3
S20.003	71.79	10.60	19.521	1.909	0.0	0.0	0.0	1.25	553.2	371.2
S1.021	59.13	15.14	19.105	6.367	0.0	0.0	0.0	1.16	127.8	1019.5
S1.022	58.88	15.25	19.069	6.367	0.0	0.0	0.0	1.01	111.2	1019.5
S1.023	52.40	18.66	19.043	6.367	0.0	0.0	0.0	0.19	16.9	1019.5
S1.024	46.97	22.41	18.966	6.367	0.0	0.0	0.0	0.19	16.9	1019.5
S1.025	46.18	23.04	18.882	6.367	0.0	0.0	0.0	0.19	16.8	1019.5
S1.026	45.62	23.51	18.868	6.367	0.0	0.0	0.0	0.18	16.6	1019.5

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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	45.20	23.86	18.858	6.367	0.0	0.0	0.0	1.02	91.7	1019.5

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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

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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

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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

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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

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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

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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	¥=	S1027	21. 298	19. 043	2. 105	Junction	
S1. 024	3	¥=	S1028	21. 261	18. 966	2. 145	Junction	
S1. 025	3	¥=	S1029	21. 175	18. 882	2. 143	Junction	
S1. 026	3	¥=	S1030	21. 018	18. 868	2. 000	Junction	
S1. 027	3	¥=	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

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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

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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

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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

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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		

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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

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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

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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

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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

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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

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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	¥=	S1027	21. 298	19. 043	2. 105	Junction	
S1. 024	3	¥=	S1028	21. 261	18. 966	2. 145	Junction	
S1. 025	3	¥=	S1029	21. 175	18. 882	2. 143	Junction	
S1. 026	3	¥=	S1030	21. 018	18. 868	2. 000	Junction	
S1. 027	3	¥=	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

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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

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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

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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

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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		

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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 FSR M5-60 (mm) 20.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.350 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) 15, 30
 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	15 minute 2 year Winter I+0%	15	1	28.000	26.617	-0.183	0.000	0.08	0.042	3.9	OK
S1.001	S989	15 minute 2 year Winter I+0%	15	1	27.700	26.344	-0.143	0.000	0.28	0.136	12.5	OK
S1.002	S990	15 minute 2 year Winter I+0%	15	1	27.550	26.069	-0.118	0.000	0.46	0.265	19.8	OK
S2.000	S1000	15 minute 2 year Winter I+0%	15	1	29.870	28.479	-0.191	0.000	0.06	0.033	4.5	OK
S2.001	S1001	15 minute 2 year Winter I+0%	15	1	29.525	27.821	-0.179	0.000	0.09	0.057	7.3	OK
S2.002	S1002	15 minute 2 year Winter I+0%	15	1	28.930	27.171	-0.174	0.000	0.11	0.063	8.7	OK
S2.003	S1003	15 minute 2 year Winter I+0%	15	1	28.225	26.425	-0.160	0.000	0.18	0.068	13.8	OK
S3.000	S980	15 minute 2 year Winter I+0%	15	1	27.550	26.166	-0.184	0.000	0.07	0.064	5.8	OK
S1.003	S1004	15 minute 2 year Winter I+0%	15	1	27.260	25.800	-0.193	0.000	0.27	0.266	40.6	OK
S1.004	S1005	15 minute 2 year Winter I+0%	15	1	26.950	25.321	-0.187	0.000	0.30	0.196	48.4	OK
S1.005	S1006	15 minute 2 year Winter I+0%	15	1	25.960	24.574	-0.177	0.000	0.35	0.310	59.9	OK
S4.000	S1040	15 minute 2 year Winter I+0%	15	1	26.400	24.817	-0.033	0.000	0.94	0.127	14.7	OK
S4.001	S1041	15 minute 2 year Winter I+0%	15	1	26.170	24.584	-0.121	0.000	0.43	0.114	23.4	OK
S4.002	S1042	15 minute 2 year Winter I+0%	15	1	25.290	23.953	-0.069	0.000	0.81	0.335	32.1	OK
S4.003	S1043	15 minute 2 year Winter I+0%	15	1	25.215	23.876	-0.064	0.000	0.85	0.352	32.0	OK
S4.004	S1044	15 minute 2 year Winter I+0%	15	1	25.220	23.806	-0.062	0.000	0.86	0.343	34.4	OK
S4.005	S1045	15 minute 2 year Winter I+0%	15	1	25.310	23.496	-0.114	0.000	0.69	0.348	57.4	OK
S4.006	S1046	15 minute 2 year Winter I+0%	15	1	25.115	23.424	-0.071	0.000	0.94	0.767	59.5	OK
S1.006	S1007	15 minute 2 year Winter I+0%	15	1	25.050	23.149	-0.282	0.000	0.43	0.441	129.0	OK
S5.000	S1050	15 minute 2 year Winter I+0%	15	1	25.208	23.626	-0.158	0.000	0.19	0.070	7.0	OK
S5.001	S1051	15 minute 2 year Winter I+0%	15	1	25.006	23.488	-0.204	0.000	0.22	0.106	12.9	OK
S5.002	S1052	15 minute 2 year Winter I+0%	15	1	24.945	23.441	-0.201	0.000	0.24	0.230	15.1	OK
S5.003	S1053	15 minute 2 year Winter I+0%	15	1	24.885	23.229	-0.348	0.000	0.12	0.139	18.7	OK

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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	15 minute 2 year Winter I+0%	15	1	24.800	23.152	-0.357	0.000	0.09	0.289	24.5	OK
S1.007	S1008	15 minute 2 year Winter I+0%	15	1	24.900	22.807	-0.474	0.000	0.29	0.712	161.5	OK
S1.008	S1009	15 minute 2 year Winter I+0%	15	1	24.690	22.723	-0.482	0.000	0.27	2.038	163.7	OK
S6.000	S1060	15 minute 2 year Winter I+0%	15	1	26.097	23.286	-0.106	0.000	0.74	0.214	52.2	OK
S1.009	S1010	15 minute 2 year Winter I+0%	15	1	24.750	22.643	-0.449	0.000	0.32	3.351	215.3	OK
S7.000	S1070	15 minute 2 year Winter I+0%	15	1	26.242	25.276	-0.141	0.000	0.29	0.089	11.0	OK
S7.001	S1071	15 minute 2 year Winter I+0%	15	1	26.395	25.176	-0.120	0.000	0.44	0.215	15.4	OK
S7.002	S1072	15 minute 2 year Winter I+0%	15	1	27.477	25.034	-0.112	0.000	0.50	0.257	19.5	OK
S7.003	S1073	15 minute 2 year Winter I+0%	15	1	28.150	24.889	-0.087	0.000	0.68	0.382	23.4	OK
S7.004	S1074	15 minute 2 year Winter I+0%	15	1	28.423	24.809	-0.092	0.000	0.65	0.322	24.0	OK
S7.005	S1075	15 minute 2 year Winter I+0%	15	1	29.003	24.595	-0.152	0.000	0.47	0.248	36.3	OK
S7.006	S1076	15 minute 2 year Winter I+0%	15	1	27.350	24.244	-0.289	0.000	0.27	0.359	46.2	OK
S7.007	S1077	15 minute 2 year Winter I+0%	15	1	26.816	24.181	-0.285	0.000	0.29	0.572	48.9	OK
S7.008	S1078	15 minute 2 year Winter I+0%	15	1	26.402	24.136	-0.271	0.000	0.33	0.584	55.7	OK
S7.009	S1079	15 minute 2 year Winter I+0%	15	1	26.065	24.014	-0.327	0.000	0.17	0.350	56.6	OK
S7.010	S1080	15 minute 2 year Winter I+0%	15	1	25.389	23.585	-0.346	0.000	0.12	0.206	68.4	OK
S1.010	S1011	15 minute 2 year Winter I+0%	15	1	25.092	22.512	-0.382	0.000	0.48	6.938	292.3	OK
S1.011	S1012	15 minute 2 year Winter I+0%	15	1	25.346	22.374	-0.373	0.000	0.50	6.071	303.6	OK
S1.012	S1014	15 minute 2 year Winter I+0%	15	1	25.568	22.100	-0.530	0.000	0.35	2.409	308.8	OK
S1.013	S1016	15 minute 2 year Winter I+0%	15	1	25.300	21.969	-0.576	0.000	0.28	3.082	309.7	OK
S1.014	S1018	15 minute 2 year Winter I+0%	15	1	23.845	21.762	-0.524	0.000	0.36	8.942	325.5	OK
S8.000	S1091	15 minute 2 year Winter I+0%	15	1	24.214	22.595	-0.194	0.000	0.04	0.029	4.0	OK
S1.015	S1019	15 minute 2 year Winter I+0%	15	1	23.962	21.662	-0.485	0.000	0.43	5.597	331.0	OK
S1.016	S1020-Basin A2	30 minute 2 year Winter I+0%	30	1	22.350	21.286	0.040	0.000	0.90	234.928	52.4	SURCHARGED
S1.017	S1021-Con	30 minute 2 year Winter I+0%	30	1	22.043	21.249	0.049	0.000	0.99	1.754	52.4	SURCHARGED
S1.018	S1022	30 minute 2 year Winter I+0%	30	1	22.030	21.073	-0.957	0.000	0.02	0.517	52.4	OK
S1.019	S1023	30 minute 2 year Winter I+0%	30	1	21.545	20.976	-0.088	0.000	0.85	4.140	52.0	OK*
S1.020	S1024	30 minute 2 year Winter I+0%	30	1	21.545	20.796	-0.749	0.000	0.01	0.172	52.0	OK
S9.000	S1100	15 minute 2 year Winter I+0%	15	1	24.028	22.350	-0.179	0.000	0.09	0.047	5.8	OK
S10.000	S1110	15 minute 2 year Winter I+0%	15	1	23.557	21.964	-0.168	0.000	0.14	0.059	6.5	OK
S9.001	S1101	15 minute 2 year Winter I+0%	15	1	23.690	21.802	-0.187	0.000	0.30	0.139	26.6	OK
S9.002	S1102	15 minute 2 year Winter I+0%	15	1	23.194	21.564	-0.206	0.000	0.21	0.159	29.0	OK
S9.003	S1103	15 minute 2 year Winter I+0%	15	1	22.891	21.266	-0.200	0.000	0.24	0.135	31.4	OK
S9.004	S1104	15 minute 2 year Winter I+0%	15	1	22.624	20.995	-0.204	0.000	0.22	0.133	37.3	OK
S11.000	S1120	15 minute 2 year Winter I+0%	15	1	25.814	24.233	-0.081	0.000	0.43	0.072	14.1	OK
S12.000	S1140	15 minute 2 year Winter I+0%	15	1	25.553	23.963	-0.090	0.000	0.33	0.063	5.4	OK
S11.001	S1121	15 minute 2 year Winter I+0%	15	1	25.718	23.765	-0.135	0.000	0.33	0.098	21.1	OK
S11.002	S1122	15 minute 2 year Winter I+0%	15	1	24.960	23.328	-0.132	0.000	0.35	0.129	25.2	OK
S11.003	S1123	15 minute 2 year Winter I+0%	15	1	24.700	23.066	-0.209	0.000	0.20	0.115	27.5	OK
S11.004	S1124	15 minute 2 year Winter I+0%	15	1	24.210	22.554	-0.156	0.000	0.47	0.274	32.4	OK
S13.000	S1150	15 minute 2 year Winter I+0%	15	1	24.347	22.741	-0.181	0.000	0.08	0.044	6.0	OK
S11.005	S1125	15 minute 2 year Winter I+0%	15	1	24.340	22.422	-0.190	0.000	0.29	0.248	46.7	OK
S11.006	S1126	15 minute 2 year Winter I+0%	15	1	22.588	20.919	-0.244	0.000	0.26	0.196	64.2	OK
S11.007	S1127	15 minute 2 year Winter I+0%	15	1	22.250	20.599	-0.151	0.000	0.65	0.601	69.9	OK
S11.008	S1128	15 minute 2 year Winter I+0%	15	1	22.189	20.522	-0.166	0.000	0.59	0.416	71.6	OK
S11.009	S1129	15 minute 2 year Winter I+0%	15	1	22.093	20.396	-0.197	0.000	0.46	0.370	74.2	OK

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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	15 minute 2 year Winter I+0%	15	1	21.820	20.337	-0.084	0.000	0.96	1.209	75.5	OK
S14.000	S1160	15 minute 2 year Winter I+0%	15	1	21.558	20.283	-0.151	0.000	0.01	0.314	1.1	OK
S11.011	S1131	15 minute 2 year Winter I+0%	15	1	21.725	20.283	-0.112	0.000	0.80	1.548	78.4	OK
S9.005	S1105	15 minute 2 year Winter I+0%	15	1	21.723	20.066	-0.172	0.000	0.56	1.866	127.2	OK
S15.000	S1169	15 minute 2 year Winter I+0%	15	1	24.601	23.017	-0.198	0.000	0.03	0.025	2.9	OK
S15.001	S1170	15 minute 2 year Winter I+0%	15	1	23.616	22.023	-0.157	0.000	0.20	0.086	12.6	OK
S15.002	S1171	15 minute 2 year Winter I+0%	15	1	23.461	21.807	-0.237	0.000	0.10	0.080	14.1	OK
S15.003	S1172	15 minute 2 year Winter I+0%	15	1	22.404	21.354	-0.224	0.000	0.14	0.107	19.7	OK
S15.004	S1173	15 minute 2 year Winter I+0%	15	1	22.405	21.060	-0.219	0.000	0.16	0.103	21.3	OK
S15.005	S1174	15 minute 2 year Winter I+0%	15	1	21.950	20.664	-0.215	0.000	0.18	0.127	21.4	OK
S16.000	SH119	15 minute 2 year Winter I+0%	15	1	21.753	20.544	-0.156	0.000	0.31	0.157	18.5	OK
S15.006	S1175	15 minute 2 year Winter I+0%	15	1	21.840	20.527	-0.126	0.000	0.62	0.597	39.2	OK
S15.007	S1176	15 minute 2 year Winter I+0%	15	1	22.088	20.452	-0.031	0.000	0.92	2.017	48.9	OK
S17.000	S1200	15 minute 2 year Summer I+0%	15	1	25.344	23.694	-0.150	0.000	0.00	0.000	0.0	OK
S17.001	S1201	15 minute 2 year Winter I+0%	15	1	25.284	23.515	-0.179	0.000	0.09	0.065	5.5	OK
S17.002	S1202	15 minute 2 year Winter I+0%	15	1	24.984	23.236	-0.137	0.000	0.32	0.128	11.2	OK
S18.000	S1220	15 minute 2 year Winter I+0%	15	1	24.890	23.279	-0.107	0.000	0.18	0.043	3.1	OK
S17.003	S1203	15 minute 2 year Winter I+0%	15	1	24.846	23.130	-0.145	0.000	0.27	0.173	19.2	OK
S17.004	S1204	15 minute 2 year Winter I+0%	15	1	24.117	22.478	-0.139	0.000	0.31	0.115	22.0	OK
S17.005	S1205	15 minute 2 year Winter I+0%	15	1	23.788	22.148	-0.140	0.000	0.30	0.111	23.7	OK
S19.000	S1230	15 minute 2 year Winter I+0%	15	1	23.400	22.200	-0.162	0.000	0.17	0.066	6.3	OK
S19.001	S1231	15 minute 2 year Winter I+0%	15	1	23.300	22.113	-0.175	0.000	0.11	0.089	9.6	OK
S17.006	S1206	15 minute 2 year Winter I+0%	15	1	23.200	21.611	-0.253	0.000	0.23	0.176	38.9	OK
S17.007	S1207	15 minute 2 year Winter I+0%	15	1	23.000	21.401	-0.216	0.000	0.38	0.465	47.6	OK
S17.008	S1208	15 minute 2 year Winter I+0%	15	1	22.890	21.302	-0.210	0.000	0.40	0.571	52.6	OK
S17.009	S1209	15 minute 2 year Winter I+0%	15	1	22.660	21.178	-0.220	0.000	0.35	0.570	58.3	OK
S17.010	S1210	15 minute 2 year Winter I+0%	15	1	22.325	20.954	-0.268	0.000	0.18	0.225	61.7	OK
S15.008	S1177	15 minute 2 year Winter I+0%	15	1	21.960	20.423	-0.024	0.000	1.00	1.371	105.7	OK
S15.009	S1178	15 minute 2 year Winter I+0%	15	1	21.925	20.208	-0.212	0.000	0.55	0.874	109.9	OK
S15.010	S1179	15 minute 2 year Winter I+0%	15	1	21.794	20.113	-0.180	0.000	0.66	0.895	111.4	OK
S15.011	S1180	15 minute 2 year Winter I+0%	15	1	21.717	20.078	-0.138	0.000	0.82	1.346	112.6	OK
S15.012	S1181	15 minute 2 year Winter I+0%	15	1	21.740	19.951	-0.216	0.000	0.53	1.214	112.7	OK
S20.000	S1240	15 minute 2 year Winter I+0%	15	1	22.551	20.929	-0.122	0.000	0.08	0.026	1.4	OK
S20.001	S1241	15 minute 2 year Winter I+0%	15	1	22.187	20.480	-0.184	0.000	0.31	0.127	24.7	OK
S20.002	S1242	15 minute 2 year Winter I+0%	15	1	22.030	20.338	-0.192	0.000	0.28	0.213	26.3	OK
S21.000	S1250	15 minute 2 year Winter I+0%	15	1	22.489	21.096	-0.117	0.000	0.11	0.032	1.9	OK
S21.001	S1251	15 minute 2 year Winter I+0%	15	1	22.756	20.816	-0.155	0.000	0.21	0.080	7.1	OK
S21.002	S1252	15 minute 2 year Winter I+0%	15	1	22.692	20.700	-0.149	0.000	0.24	0.160	12.3	OK
S21.003	S1253	15 minute 2 year Winter I+0%	15	1	22.582	20.497	-0.217	0.000	0.17	0.089	13.3	OK
S22.000	S1270	15 minute 2 year Winter I+0%	15	1	23.967	22.446	-0.172	0.000	0.12	0.055	6.1	OK
S23.000	S1280	15 minute 2 year Winter I+0%	15	1	24.231	22.594	-0.115	0.000	0.12	0.034	4.3	OK
S22.001	S1271	15 minute 2 year Winter I+0%	15	1	24.084	22.088	-0.233	0.000	0.11	0.072	15.2	OK
S24.000	S1290	15 minute 2 year Winter I+0%	15	1	23.135	21.544	-0.091	0.000	0.32	0.061	5.7	OK
S22.002	S1272	15 minute 2 year Winter I+0%	15	1	23.338	21.264	-0.228	0.000	0.32	0.236	31.1	OK
S22.003	S1273	15 minute 2 year Winter I+0%	15	1	23.510	21.179	-0.280	0.000	0.26	0.934	32.7	OK
S22.004	S1274	15 minute 2 year Winter I+0%	15	1	23.371	21.146	-0.269	0.000	0.26	0.786	37.8	OK

PFA Consulting		Page 4
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A (FSR 15 & 30)	
Date 15/05/2023	Designed by BF/DRB	
File (FSR 15 + 30) 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	15 minute 2 year Winter I+0%	15	1	23.170	21.109	-0.248	0.000	0.28	1.105	44.2	OK
S25.000	S1300	15 minute 2 year Winter I+0%	15	1	23.321	21.754	-0.142	0.000	0.29	0.088	21.1	OK
S22.006	S1277	15 minute 2 year Winter I+0%	15	1	22.897	21.065	-0.195	0.000	0.61	2.354	62.6	OK
S22.007	S1278	15 minute 2 year Winter I+0%	15	1	22.785	20.912	-0.311	0.000	0.21	0.408	65.4	OK
S22.008	S1279	15 minute 2 year Winter I+0%	15	1	22.460	20.524	-0.283	0.000	0.29	0.538	89.7	OK
S26.000	SH310	15 minute 2 year Winter I+0%	15	1	22.925	21.241	-0.184	0.000	0.08	0.041	5.7	OK
S27.000	S1320	15 minute 2 year Winter I+0%	15	1	22.334	20.858	-0.192	0.000	0.05	0.031	1.7	OK
S27.001	S1321	15 minute 2 year Winter I+0%	15	1	22.453	20.803	-0.176	0.000	0.10	0.095	3.7	OK
S26.001	S1311	15 minute 2 year Winter I+0%	15	1	22.687	20.677	-0.181	0.000	0.32	0.166	24.4	OK
S26.002	S1312	15 minute 2 year Winter I+0%	15	1	22.300	20.518	-0.128	0.000	0.61	0.769	41.5	OK
S21.004	S1254	15 minute 2 year Winter I+0%	15	1	22.251	20.384	-0.126	0.000	0.61	3.424	156.6	OK
S21.005	S1255	15 minute 2 year Winter I+0%	15	1	21.929	20.347	-0.094	0.000	0.97	8.216	153.6	OK
S21.006	S1256	15 minute 2 year Winter I+0%	15	1	21.861	20.311	-0.105	0.000	0.93	3.247	155.0	OK
S21.007	S1257	15 minute 2 year Winter I+0%	15	1	21.952	20.273	-0.114	0.000	0.98	3.574	155.6	OK
S21.008	S1258	15 minute 2 year Winter I+0%	15	1	22.067	20.214	-0.134	0.000	0.93	4.395	154.8	OK
S21.009	S1259	15 minute 2 year Winter I+0%	15	1	21.898	20.170	-0.148	0.000	0.91	3.369	155.5	OK
S21.010	S1260	30 minute 2 year Winter I+0%	30	1	21.875	20.129	-0.158	0.000	0.73	3.381	142.6	OK
S21.011	S1261	30 minute 2 year Winter I+0%	30	1	21.892	20.115	-0.158	0.000	0.63	1.744	148.0	OK
S28.000	S1330	15 minute 2 year Winter I+0%	15	1	21.676	20.072	-0.323	0.000	0.08	0.174	8.1	OK
S28.001	S1331	30 minute 2 year Winter I+0%	30	1	21.339	20.067	-0.298	0.000	0.15	0.525	14.5	OK
S28.002	S1332	30 minute 2 year Winter I+0%	30	1	21.250	20.065	-0.560	0.000	0.06	1.088	15.7	OK
S28.003	S1333	30 minute 2 year Winter I+0%	30	1	21.589	20.063	-0.532	0.000	0.08	1.633	17.5	OK
S28.004	S1334	30 minute 2 year Winter I+0%	30	1	21.694	20.062	-0.508	0.000	0.02	1.749	14.5	OK
S21.012	S1262	30 minute 2 year Winter I+0%	30	1	21.693	20.061	-0.289	0.000	0.45	14.361	148.9	OK
S21.013	S1263	30 minute 2 year Winter I+0%	30	1	21.600	20.013	-0.287	0.000	0.36	8.457	149.3	OK
S20.003	S1243	30 minute 2 year Winter I+0%	30	1	21.642	20.004	-0.267	0.000	0.80	2.409	161.3	OK
S1.021	S1025-Basin A1	30 minute 2 year Winter I+0%	30	1	20.650	19.516	0.036	0.000	0.42	380.525	37.9	SURCHARGED
S1.022	S1026-Con	30 minute 2 year Winter I+0%	30	1	21.144	19.503	0.059	0.000	0.53	2.225	37.9	SURCHARGED
S1.023	S1027	30 minute 2 year Winter I+0%	30	1	21.298	19.273	-2.025	0.000	0.00	0.527	37.9	OK
S1.024	S1028	30 minute 2 year Winter I+0%	30	1	21.261	19.194	-2.067	0.000	0.00	1.578	37.9	OK
S1.025	S1029	30 minute 2 year Winter I+0%	30	1	21.175	19.098	-2.077	0.000	0.00	1.448	37.9	OK
S1.026	S1030	30 minute 2 year Winter I+0%	30	1	21.018	19.077	-1.941	0.000	0.00	0.276	37.9	OK
S1.027	S1031	30 minute 2 year Winter I+0%	30	1	20.969	18.959	-2.010	0.000	0.00	0.120	37.9	OK

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	FSR M5-60 (mm) 20.000	Cv (Summer) 0.750
Region England and Wales	Ratio R 0.350	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)	15, 30
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	15 minute 30 year Winter I+0%	15	1	28.000	26.633	-0.167	0.000	0.15	0.060	7.4	OK
S1.001	S989	15 minute 30 year Winter I+0%	15	1	27.700	26.393	-0.094	0.000	0.62	0.268	27.4	OK
S1.002	S990	15 minute 30 year Winter I+0%	15	1	27.550	26.165	-0.022	0.000	1.00	0.639	43.4	OK
S2.000	S1000	15 minute 30 year Winter I+0%	15	1	29.870	28.494	-0.176	0.000	0.11	0.050	8.5	OK
S2.001	S1001	15 minute 30 year Winter I+0%	15	1	29.525	27.842	-0.158	0.000	0.19	0.086	15.4	OK
S2.002	S1002	15 minute 30 year Winter I+0%	15	1	28.930	27.195	-0.150	0.000	0.24	0.097	18.4	OK
S2.003	S1003	15 minute 30 year Winter I+0%	15	1	28.225	26.460	-0.125	0.000	0.40	0.108	30.6	OK
S3.000	S980	15 minute 30 year Winter I+0%	15	1	27.550	26.182	-0.168	0.000	0.14	0.091	11.1	OK
S1.003	S1004	15 minute 30 year Winter I+0%	15	1	27.260	25.860	-0.133	0.000	0.58	0.547	86.8	OK
S1.004	S1005	15 minute 30 year Winter I+0%	15	1	26.950	25.389	-0.119	0.000	0.65	0.351	104.5	OK
S1.005	S1006	15 minute 30 year Winter I+0%	15	1	25.960	24.654	-0.097	0.000	0.77	0.556	131.7	OK
S4.000	S1040	15 minute 30 year Winter I+0%	15	1	26.400	25.189	0.339	0.000	1.60	0.547	25.1	SURCHARGED
S4.001	S1041	15 minute 30 year Winter I+0%	15	1	26.170	24.847	0.142	0.000	0.74	0.661	40.6	SURCHARGED
S4.002	S1042	15 minute 30 year Winter I+0%	15	1	25.290	24.507	0.485	0.000	1.31	2.611	51.6	SURCHARGED
S4.003	S1043	15 minute 30 year Winter I+0%	15	1	25.215	24.364	0.424	0.000	1.39	1.073	52.5	SURCHARGED
S4.004	S1044	15 minute 30 year Winter I+0%	15	1	25.220	24.234	0.366	0.000	1.40	0.961	56.4	SURCHARGED
S4.005	S1045	15 minute 30 year Winter I+0%	15	1	25.310	23.777	0.167	0.000	1.23	1.876	101.9	SURCHARGED
S4.006	S1046	15 minute 30 year Winter I+0%	15	1	25.115	23.600	0.105	0.000	1.68	1.365	106.7	SURCHARGED
S1.006	S1007	15 minute 30 year Winter I+0%	15	1	25.050	23.294	-0.137	0.000	0.88	0.948	262.8	OK
S5.000	S1050	15 minute 30 year Winter I+0%	15	1	25.208	23.653	-0.131	0.000	0.36	0.101	13.4	OK
S5.001	S1051	15 minute 30 year Winter I+0%	15	1	25.006	23.538	-0.154	0.000	0.47	0.227	27.5	OK
S5.002	S1052	15 minute 30 year Winter I+0%	15	1	24.945	23.494	-0.148	0.000	0.50	0.437	32.0	OK
S5.003	S1053	15 minute 30 year Winter I+0%	15	1	24.885	23.281	-0.296	0.000	0.25	0.226	40.3	OK

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Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A (FSR 15 & 30)	
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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
S5.004	S1054	15 minute 30 year Winter I+0%	15	1	24.800	23.199	-0.310	0.000	0.21	0.582	53.3	OK
S1.007	S1008	15 minute 30 year Winter I+0%	15	1	24.900	22.954	-0.327	0.000	0.60	1.561	336.2	OK
S1.008	S1009	15 minute 30 year Winter I+0%	15	1	24.690	22.895	-0.310	0.000	0.55	4.339	333.4	OK
S6.000	S1060	15 minute 30 year Winter I+0%	15	1	26.097	23.653	0.261	0.000	1.33	0.629	94.7	SURCHARGED
S1.009	S1010	15 minute 30 year Winter I+0%	15	1	24.750	22.834	-0.258	0.000	0.64	7.132	434.4	OK
S7.000	S1070	15 minute 30 year Winter I+0%	15	1	26.242	25.325	-0.092	0.000	0.55	0.145	20.9	OK
S7.001	S1071	15 minute 30 year Winter I+0%	15	1	26.395	25.287	-0.009	0.000	0.82	0.697	28.6	OK
S7.002	S1072	15 minute 30 year Winter I+0%	15	1	27.477	25.196	0.050	0.000	0.89	1.008	34.9	SURCHARGED
S7.003	S1073	15 minute 30 year Winter I+0%	15	1	28.150	25.061	0.085	0.000	1.21	1.227	41.5	SURCHARGED
S7.004	S1074	15 minute 30 year Winter I+0%	15	1	28.423	24.947	0.046	0.000	1.16	0.725	42.8	SURCHARGED
S7.005	S1075	15 minute 30 year Winter I+0%	15	1	29.003	24.678	-0.069	0.000	0.91	0.577	69.7	OK
S7.006	S1076	15 minute 30 year Winter I+0%	15	1	27.350	24.325	-0.208	0.000	0.56	0.845	94.0	OK
S7.007	S1077	15 minute 30 year Winter I+0%	15	1	26.816	24.268	-0.198	0.000	0.60	1.048	100.9	OK
S7.008	S1078	15 minute 30 year Winter I+0%	15	1	26.402	24.235	-0.172	0.000	0.69	1.087	117.4	OK
S7.009	S1079	15 minute 30 year Winter I+0%	15	1	26.065	24.075	-0.266	0.000	0.35	0.657	118.6	OK
S7.010	S1080	15 minute 30 year Winter I+0%	15	1	25.389	23.637	-0.294	0.000	0.26	0.427	147.8	OK
S1.010	S1011	15 minute 30 year Winter I+0%	15	1	25.092	22.732	-0.162	0.000	0.96	14.535	581.7	OK
S1.011	S1012	15 minute 30 year Winter I+0%	15	1	25.346	22.600	-0.147	0.000	1.00	11.780	603.9	OK
S1.012	S1014	15 minute 30 year Winter I+0%	15	1	25.568	22.288	-0.342	0.000	0.70	5.977	608.6	OK
S1.013	S1016	15 minute 30 year Winter I+0%	15	1	25.300	22.129	-0.416	0.000	0.55	5.812	608.7	OK
S1.014	S1018	15 minute 30 year Winter I+0%	15	1	23.845	21.951	-0.335	0.000	0.69	18.402	619.5	OK
S8.000	S1091	15 minute 30 year Winter I+0%	15	1	24.214	22.608	-0.181	0.000	0.09	0.045	7.5	OK
S1.015	S1019	15 minute 30 year Winter I+0%	15	1	23.962	21.874	-0.273	0.000	0.80	10.284	618.8	OK
S1.016	S1020-Basin A2	30 minute 30 year Winter I+0%	30	1	22.350	21.500	0.254	0.000	1.34	452.178	78.5	SURCHARGED
S1.017	S1021-Con	30 minute 30 year Winter I+0%	30	1	22.043	21.403	0.203	0.000	1.48	2.306	78.2	SURCHARGED
S1.018	S1022	30 minute 30 year Winter I+0%	30	1	22.030	21.159	-0.871	0.000	0.03	0.734	78.1	OK
S1.019	S1023	30 minute 30 year Winter I+0%	30	1	21.545	21.105	0.041	0.000	1.25	12.088	76.9	SURCHARGED*
S1.020	S1024	30 minute 30 year Winter I+0%	30	1	21.545	20.823	-0.722	0.000	0.02	0.257	76.8	OK
S9.000	S1100	15 minute 30 year Winter I+0%	15	1	24.028	22.368	-0.161	0.000	0.17	0.067	11.0	OK
S10.000	S1110	15 minute 30 year Winter I+0%	15	1	23.557	21.987	-0.145	0.000	0.27	0.085	12.4	OK
S9.001	S1101	15 minute 30 year Winter I+0%	15	1	23.690	21.866	-0.123	0.000	0.64	0.327	57.6	OK
S9.002	S1102	15 minute 30 year Winter I+0%	15	1	23.194	21.613	-0.157	0.000	0.45	0.327	62.5	OK
S9.003	S1103	15 minute 30 year Winter I+0%	15	1	22.891	21.322	-0.144	0.000	0.52	0.259	67.6	OK
S9.004	S1104	15 minute 30 year Winter I+0%	15	1	22.624	21.049	-0.150	0.000	0.49	0.257	81.1	OK
S11.000	S1120	15 minute 30 year Winter I+0%	15	1	25.814	24.268	-0.046	0.000	0.81	0.112	26.7	OK
S12.000	S1140	15 minute 30 year Winter I+0%	15	1	25.553	23.991	-0.062	0.000	0.63	0.094	10.3	OK
S11.001	S1121	15 minute 30 year Winter I+0%	15	1	25.718	23.808	-0.092	0.000	0.64	0.176	40.8	OK
S11.002	S1122	15 minute 30 year Winter I+0%	15	1	24.960	23.377	-0.083	0.000	0.69	0.234	49.7	OK
S11.003	S1123	15 minute 30 year Winter I+0%	15	1	24.700	23.109	-0.166	0.000	0.40	0.187	54.6	OK
S11.004	S1124	15 minute 30 year Winter I+0%	15	1	24.210	22.645	-0.065	0.000	0.95	0.587	66.0	OK
S13.000	S1150	15 minute 30 year Winter I+0%	15	1	24.347	22.757	-0.165	0.000	0.16	0.062	11.4	OK
S11.005	S1125	15 minute 30 year Winter I+0%	15	1	24.340	22.483	-0.129	0.000	0.60	0.544	97.0	OK
S11.006	S1126	15 minute 30 year Winter I+0%	15	1	22.588	21.203	0.040	0.000	0.52	1.096	126.4	SURCHARGED
S11.007	S1127	15 minute 30 year Winter I+0%	15	1	22.250	21.097	0.347	0.000	1.23	3.004	132.4	SURCHARGED
S11.008	S1128	15 minute 30 year Winter I+0%	15	1	22.189	20.989	0.301	0.000	1.11	1.247	133.4	SURCHARGED
S11.009	S1129	15 minute 30 year Winter I+0%	15	1	22.093	20.879	0.286	0.000	0.84	1.338	136.9	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	15 minute 30 year Winter I+0%	15	1	21.820	20.760	0.339	0.000	1.76	2.492	138.8	SURCHARGED
S14.000	S1160	15 minute 30 year Winter I+0%	15	1	21.558	20.635	0.201	0.000	0.04	0.818	3.5	SURCHARGED
S11.011	S1131	15 minute 30 year Winter I+0%	15	1	21.725	20.634	0.239	0.000	1.50	2.815	146.0	SURCHARGED
S9.005	S1105	15 minute 30 year Winter I+0%	15	1	21.723	20.267	0.029	0.000	1.06	5.826	238.4	SURCHARGED
S15.000	S1169	15 minute 30 year Winter I+0%	15	1	24.601	23.028	-0.187	0.000	0.07	0.037	5.5	OK
S15.001	S1170	15 minute 30 year Winter I+0%	15	1	23.616	22.060	-0.120	0.000	0.45	0.138	28.9	OK
S15.002	S1171	15 minute 30 year Winter I+0%	15	1	23.461	21.840	-0.204	0.000	0.22	0.126	32.3	OK
S15.003	S1172	15 minute 30 year Winter I+0%	15	1	22.404	21.397	-0.181	0.000	0.33	0.188	45.5	OK
S15.004	S1173	15 minute 30 year Winter I+0%	15	1	22.405	21.174	-0.105	0.000	0.37	0.324	49.1	OK
S15.005	S1174	15 minute 30 year Winter I+0%	15	1	21.950	21.139	0.260	0.000	0.32	1.999	38.3	SURCHARGED
S16.000	SH119	15 minute 30 year Winter I+0%	15	1	21.753	21.139	0.439	0.000	0.47	0.831	27.8	SURCHARGED
S15.006	S1175	15 minute 30 year Winter I+0%	15	1	21.840	21.119	0.466	0.000	1.06	2.026	67.1	SURCHARGED
S15.007	S1176	15 minute 30 year Winter I+0%	15	1	22.088	20.931	0.448	0.000	1.59	3.657	84.6	SURCHARGED
S17.000	S1200	15 minute 30 year Summer I+0%	15	1	25.344	23.694	-0.150	0.000	0.00	0.000	0.0	OK
S17.001	S1201	15 minute 30 year Winter I+0%	15	1	25.284	23.540	-0.154	0.000	0.22	0.105	13.3	OK
S17.002	S1202	15 minute 30 year Winter I+0%	15	1	24.984	23.296	-0.077	0.000	0.76	0.271	26.8	OK
S18.000	S1220	15 minute 30 year Winter I+0%	15	1	24.890	23.297	-0.089	0.000	0.34	0.063	5.9	OK
S17.003	S1203	15 minute 30 year Winter I+0%	15	1	24.846	23.181	-0.094	0.000	0.62	0.358	43.7	OK
S17.004	S1204	15 minute 30 year Winter I+0%	15	1	24.117	22.534	-0.083	0.000	0.70	0.228	49.7	OK
S17.005	S1205	15 minute 30 year Winter I+0%	15	1	23.788	22.204	-0.084	0.000	0.69	0.216	54.0	OK
S19.000	S1230	15 minute 30 year Winter I+0%	15	1	23.400	22.226	-0.136	0.000	0.33	0.095	12.0	OK
S19.001	S1231	15 minute 30 year Winter I+0%	15	1	23.300	22.136	-0.152	0.000	0.23	0.135	19.9	OK
S17.006	S1206	15 minute 30 year Winter I+0%	15	1	23.200	21.684	-0.180	0.000	0.51	0.311	85.9	OK
S17.007	S1207	15 minute 30 year Winter I+0%	15	1	23.000	21.511	-0.106	0.000	0.84	1.138	106.8	OK
S17.008	S1208	15 minute 30 year Winter I+0%	15	1	22.890	21.417	-0.095	0.000	0.90	1.222	119.3	OK
S17.009	S1209	15 minute 30 year Winter I+0%	15	1	22.660	21.279	-0.119	0.000	0.80	1.219	131.5	OK
S17.010	S1210	15 minute 30 year Winter I+0%	15	1	22.325	21.012	-0.210	0.000	0.40	0.487	138.3	OK
S15.008	S1177	15 minute 30 year Winter I+0%	15	1	21.960	20.810	0.363	0.000	2.08	2.769	219.5	SURCHARGED
S15.009	S1178	15 minute 30 year Winter I+0%	15	1	21.925	20.665	0.245	0.000	1.13	2.344	226.8	SURCHARGED
S15.010	S1179	15 minute 30 year Winter I+0%	15	1	21.794	20.508	0.215	0.000	1.36	2.128	229.3	SURCHARGED
S15.011	S1180	15 minute 30 year Winter I+0%	15	1	21.717	20.346	0.130	0.000	1.67	2.329	230.0	SURCHARGED
S15.012	S1181	15 minute 30 year Winter I+0%	15	1	21.740	20.178	0.011	0.000	1.09	2.777	230.0	SURCHARGED
S20.000	S1240	15 minute 30 year Winter I+0%	15	1	22.551	20.940	-0.111	0.000	0.15	0.038	2.6	OK
S20.001	S1241	15 minute 30 year Winter I+0%	15	1	22.187	20.558	-0.106	0.000	0.74	0.222	58.8	OK
S20.002	S1242	15 minute 30 year Winter I+0%	15	1	22.030	20.407	-0.123	0.000	0.64	0.522	60.8	OK
S21.000	S1250	15 minute 30 year Winter I+0%	15	1	22.489	21.110	-0.103	0.000	0.21	0.048	3.5	OK
S21.001	S1251	15 minute 30 year Winter I+0%	15	1	22.756	20.855	-0.116	0.000	0.47	0.133	15.8	OK
S21.002	S1252	15 minute 30 year Winter I+0%	15	1	22.692	20.810	-0.039	0.000	0.56	0.626	28.1	OK
S21.003	S1253	15 minute 30 year Winter I+0%	15	1	22.582	20.789	0.075	0.000	0.34	0.738	27.0	SURCHARGED
S22.000	S1270	15 minute 30 year Winter I+0%	15	1	23.967	22.468	-0.150	0.000	0.24	0.079	11.6	OK
S23.000	S1280	15 minute 30 year Winter I+0%	15	1	24.231	22.608	-0.101	0.000	0.23	0.050	8.2	OK
S22.001	S1271	15 minute 30 year Winter I+0%	15	1	24.084	22.119	-0.202	0.000	0.23	0.108	30.6	OK
S24.000	S1290	15 minute 30 year Winter I+0%	15	1	23.135	21.571	-0.064	0.000	0.62	0.092	10.7	OK
S22.002	S1272	15 minute 30 year Winter I+0%	15	1	23.338	21.395	-0.097	0.000	0.65	0.647	63.2	OK
S22.003	S1273	15 minute 30 year Winter I+0%	15	1	23.510	21.350	-0.109	0.000	0.50	2.544	63.0	OK
S22.004	S1274	15 minute 30 year Winter I+0%	15	1	23.371	21.327	-0.088	0.000	0.51	2.071	73.0	OK

PFA Consulting		Page 8
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A (FSR 15 & 30)	
Date 15/05/2023	Designed by BF/DRB	
File (FSR 15 + 30) 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	15 minute 30 year Winter I+0%	15	1	23.170	21.299	-0.058	0.000	0.53	2.777	83.3	OK
S25.000	S1300	15 minute 30 year Winter I+0%	15	1	23.321	21.791	-0.105	0.000	0.55	0.130	40.1	OK
S22.006	S1277	15 minute 30 year Summer I+0%	15	1	22.897	21.260	0.000	0.000	1.07	4.956	110.5	OK
S22.007	S1278	15 minute 30 year Winter I+0%	15	1	22.785	20.973	-0.250	0.000	0.40	0.697	127.1	OK
S22.008	S1279	15 minute 30 year Winter I+0%	15	1	22.460	20.847	0.040	0.000	0.52	3.817	157.9	SURCHARGED
S26.000	SH310	15 minute 30 year Winter I+0%	15	1	22.925	21.257	-0.168	0.000	0.14	0.059	10.8	OK
S27.000	S1320	15 minute 30 year Winter I+0%	15	1	22.334	20.940	-0.110	0.000	0.09	0.125	3.1	OK
S27.001	S1321	15 minute 30 year Winter I+0%	15	1	22.453	20.937	-0.042	0.000	0.20	0.489	7.2	OK
S26.001	S1311	15 minute 30 year Winter I+0%	15	1	22.687	20.930	0.072	0.000	0.61	1.404	45.9	SURCHARGED
S26.002	S1312	15 minute 30 year Winter I+0%	15	1	22.300	20.882	0.236	0.000	1.11	3.311	75.6	SURCHARGED
S21.004	S1254	15 minute 30 year Winter I+0%	15	1	22.251	20.768	0.258	0.000	1.15	9.471	292.6	SURCHARGED
S21.005	S1255	30 minute 30 year Winter I+0%	30	1	21.929	20.705	0.264	0.000	1.68	10.846	267.4	SURCHARGED
S21.006	S1256	30 minute 30 year Winter I+0%	30	1	21.861	20.670	0.254	0.000	1.64	4.615	272.2	SURCHARGED
S21.007	S1257	30 minute 30 year Winter I+0%	30	1	21.952	20.629	0.242	0.000	1.75	5.132	278.6	SURCHARGED
S21.008	S1258	30 minute 30 year Winter I+0%	30	1	22.067	20.560	0.212	0.000	1.65	6.499	275.7	SURCHARGED
S21.009	S1259	30 minute 30 year Winter I+0%	30	1	21.898	20.516	0.198	0.000	1.62	5.208	277.9	SURCHARGED
S21.010	S1260	30 minute 30 year Winter I+0%	30	1	21.875	20.470	0.183	0.000	1.41	5.343	275.2	SURCHARGED
S21.011	S1261	30 minute 30 year Winter I+0%	30	1	21.892	20.440	0.167	0.000	1.22	2.824	285.5	SURCHARGED
S28.000	S1330	30 minute 30 year Winter I+0%	30	1	21.676	20.361	-0.034	0.000	0.12	0.589	12.0	OK
S28.001	S1331	30 minute 30 year Winter I+0%	30	1	21.339	20.360	-0.005	0.000	0.28	2.174	27.5	OK
S28.002	S1332	30 minute 30 year Winter I+0%	30	1	21.250	20.355	-0.270	0.000	0.11	3.378	27.9	OK
S28.003	S1333	30 minute 30 year Winter I+0%	30	1	21.589	20.354	-0.241	0.000	0.12	6.140	27.7	OK
S28.004	S1334	30 minute 30 year Winter I+0%	30	1	21.694	20.352	-0.218	0.000	0.05	5.701	35.7	OK
S21.012	S1262	30 minute 30 year Winter I+0%	30	1	21.693	20.350	0.000	0.000	0.81	24.368	265.1	OK
S21.013	S1263	30 minute 30 year Winter I+0%	30	1	21.600	20.286	-0.014	0.000	0.64	14.864	265.0	OK
S20.003	S1243	30 minute 30 year Winter I+0%	30	1	21.642	20.271	0.000	0.000	1.43	5.608	290.5	OK
S1.021	S1025-Basin A1	30 minute 30 year Winter I+0%	30	1	20.650	19.625	0.145	0.000	0.59	761.711	53.7	SURCHARGED
S1.022	S1026-Con	30 minute 30 year Winter I+0%	30	1	21.144	19.606	0.162	0.000	0.75	2.595	53.6	SURCHARGED
S1.023	S1027	30 minute 30 year Winter I+0%	30	1	21.298	19.298	-2.000	0.000	0.00	0.604	53.6	OK
S1.024	S1028	30 minute 30 year Winter I+0%	30	1	21.261	19.218	-2.043	0.000	0.00	2.064	53.6	OK
S1.025	S1029	30 minute 30 year Winter I+0%	30	1	21.175	19.122	-2.053	0.000	0.00	1.964	53.6	OK
S1.026	S1030	30 minute 30 year Winter I+0%	30	1	21.018	19.098	-1.920	0.000	0.00	0.404	53.6	OK
S1.027	S1031	30 minute 30 year Winter I+0%	30	1	20.969	18.975	-1.994	0.000	0.00	0.140	53.6	OK

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Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A (FSR 15 & 30)	
Date 15/05/2023	Designed by BF/DRB	
File (FSR 15 + 30) 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

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 FSR M5-60 (mm) 20.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.350 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) 15, 30
 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	15 minute 100 year Winter I+40%	15	1	28.000	26.763	-0.037	0.000	0.25	0.208	12.8	OK
S1.001	S989	15 minute 100 year Winter I+40%	15	1	27.700	26.736	0.249	0.000	0.93	1.572	41.0	SURCHARGED
S1.002	S990	15 minute 100 year Winter I+40%	15	1	27.550	26.554	0.367	0.000	1.50	2.506	65.0	SURCHARGED
S2.000	S1000	15 minute 100 year Winter I+40%	15	1	29.870	28.512	-0.158	0.000	0.19	0.070	15.4	OK
S2.001	S1001	15 minute 100 year Winter I+40%	15	1	29.525	27.867	-0.133	0.000	0.35	0.120	27.9	OK
S2.002	S1002	15 minute 100 year Winter I+40%	15	1	28.930	27.225	-0.120	0.000	0.44	0.137	33.5	OK
S2.003	S1003	15 minute 100 year Winter I+40%	15	1	28.225	26.505	-0.080	0.000	0.73	0.178	55.5	OK
S3.000	S980	15 minute 100 year Winter I+40%	15	1	27.550	26.203	-0.147	0.000	0.26	0.129	20.1	OK
S1.003	S1004	15 minute 100 year Winter I+40%	15	1	27.260	26.139	0.146	0.000	0.88	2.596	130.8	SURCHARGED
S1.004	S1005	15 minute 100 year Winter I+40%	15	1	26.950	25.837	0.329	0.000	0.94	2.059	150.1	SURCHARGED
S1.005	S1006	15 minute 100 year Winter I+40%	15	1	25.960	25.242	0.491	0.000	1.08	3.466	184.5	SURCHARGED
S4.000	S1040	15 minute 100 year Winter I+40%	15	1	26.400	26.403	1.553	2.882	2.19	4.772	34.4	FLOOD
S4.001	S1041	15 minute 100 year Winter I+40%	15	1	26.170	26.050	1.345	0.000	1.02	2.031	55.8	FLOOD RISK
S4.002	S1042	15 minute 100 year Winter I+40%	15	1	25.290	25.296	1.274	5.929	1.95	9.699	76.9	FLOOD
S4.003	S1043	15 minute 100 year Winter I+40%	15	1	25.215	25.182	1.242	0.000	2.03	1.998	76.9	FLOOD RISK
S4.004	S1044	15 minute 100 year Winter I+40%	15	1	25.220	25.071	1.203	0.000	1.95	1.908	78.5	FLOOD RISK
S4.005	S1045	15 minute 100 year Winter I+40%	15	1	25.310	24.489	0.879	0.000	1.85	2.812	154.2	SURCHARGED
S4.006	S1046	15 minute 100 year Winter I+40%	15	1	25.115	24.121	0.626	0.000	2.55	1.957	161.5	SURCHARGED
S1.006	S1007	15 minute 100 year Winter I+40%	15	1	25.050	23.752	0.321	0.000	1.29	3.109	381.9	SURCHARGED
S5.000	S1050	15 minute 100 year Winter I+40%	15	1	25.208	23.694	-0.090	0.000	0.66	0.147	24.2	OK
S5.001	S1051	15 minute 100 year Winter I+40%	15	1	25.006	23.637	-0.055	0.000	0.85	0.537	49.8	OK
S5.002	S1052	15 minute 100 year Winter I+40%	15	1	24.945	23.611	-0.031	0.000	0.91	0.893	58.1	OK
S5.003	S1053	15 minute 100 year Winter I+40%	15	1	24.885	23.584	0.007	0.000	0.45	1.290	71.9	SURCHARGED

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Stratton Park House	SW Drainage - Planning	
Wanborough Road	Catchment A (FSR 15 & 30)	
Swindon SN3 4HG	Designed by BF/DRB	
Date 15/05/2023	Checked by	
File (FSR 15 + 30) 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	15 minute 100 year Winter I+40%	15	1	24.800	23.567	0.058	0.000	0.33	3.183	85.9	SURCHARGED
S1.007	S1008	15 minute 100 year Winter I+40%	15	1	24.900	23.542	0.261	0.000	0.81	7.974	451.3	SURCHARGED
S1.008	S1009	15 minute 100 year Winter I+40%	15	1	24.690	23.493	0.288	0.000	0.76	9.424	459.9	SURCHARGED
S6.000	S1060	15 minute 100 year Winter I+40%	15	1	26.097	24.976	1.584	0.000	2.23	2.125	158.5	SURCHARGED
S1.009	S1010	15 minute 100 year Winter I+40%	15	1	24.750	23.432	0.340	0.000	0.91	17.793	623.9	SURCHARGED
S7.000	S1070	15 minute 100 year Winter I+40%	15	1	26.242	26.243	0.826	1.072	0.90	2.254	34.2	FLOOD
S7.001	S1071	15 minute 100 year Winter I+40%	15	1	26.395	26.219	0.923	0.000	1.27	1.967	44.2	FLOOD RISK
S7.002	S1072	15 minute 100 year Winter I+40%	15	1	27.477	26.094	0.948	0.000	1.33	2.169	51.8	SURCHARGED
S7.003	S1073	15 minute 100 year Winter I+40%	15	1	28.150	25.820	0.844	0.000	1.78	2.172	61.1	SURCHARGED
S7.004	S1074	15 minute 100 year Winter I+40%	15	1	28.423	25.584	0.683	0.000	1.78	1.481	65.5	SURCHARGED
S7.005	S1075	15 minute 100 year Winter I+40%	15	1	29.003	25.151	0.404	0.000	1.42	1.782	108.6	SURCHARGED
S7.006	S1076	15 minute 100 year Winter I+40%	15	1	27.350	24.528	-0.005	0.000	0.86	3.025	146.2	OK
S7.007	S1077	15 minute 100 year Winter I+40%	15	1	26.816	24.481	0.015	0.000	0.93	2.141	157.4	SURCHARGED
S7.008	S1078	15 minute 100 year Winter I+40%	15	1	26.402	24.430	0.023	0.000	1.07	1.961	181.4	SURCHARGED
S7.009	S1079	15 minute 100 year Winter I+40%	15	1	26.065	24.130	-0.211	0.000	0.54	0.962	185.0	OK
S7.010	S1080	15 minute 100 year Winter I+40%	15	1	25.389	23.682	-0.249	0.000	0.40	0.622	232.2	OK
S1.010	S1011	15 minute 100 year Winter I+40%	15	1	25.092	23.266	0.372	0.000	1.43	23.365	866.3	SURCHARGED
S1.011	S1012	15 minute 100 year Winter I+40%	15	1	25.346	22.951	0.204	0.000	1.49	16.244	904.1	SURCHARGED
S1.012	S1014	15 minute 100 year Winter I+40%	15	1	25.568	22.630	0.000	0.000	1.04	12.415	903.1	OK
S1.013	S1016	15 minute 100 year Winter I+40%	15	1	25.300	22.521	-0.024	0.000	0.81	12.339	893.9	OK
S1.014	S1018	15 minute 100 year Winter I+40%	15	1	23.845	22.359	0.073	0.000	1.03	36.539	921.9	SURCHARGED
S8.000	S1091	15 minute 100 year Winter I+40%	15	1	24.214	22.623	-0.166	0.000	0.15	0.061	13.6	OK
S1.015	S1019	15 minute 100 year Winter I+40%	15	1	23.962	22.208	0.061	0.000	1.20	16.370	922.6	SURCHARGED
S1.016	S1020-Basin A2	30 minute 100 year Winter I+40%	30	1	22.350	21.825	0.579	0.000	1.87	839.618	109.3	SURCHARGED
S1.017	S1021-Con	30 minute 100 year Winter I+40%	30	1	22.043	21.635	0.435	0.000	2.06	3.111	109.1	SURCHARGED
S1.018	S1022	30 minute 100 year Winter I+40%	30	1	22.030	21.233	-0.797	0.000	0.04	0.871	109.0	OK
S1.019	S1023	30 minute 100 year Winter I+40%	30	1	21.545	21.193	0.129	0.000	1.74	19.603	106.8	SURCHARGED*
S1.020	S1024	30 minute 100 year Winter I+40%	30	1	21.545	20.852	-0.693	0.000	0.02	0.350	106.8	OK
S9.000	S1100	15 minute 100 year Winter I+40%	15	1	24.028	22.392	-0.137	0.000	0.32	0.094	19.9	OK
S10.000	S1110	15 minute 100 year Winter I+40%	15	1	23.557	22.088	-0.044	0.000	0.50	0.199	22.6	OK
S9.001	S1101	15 minute 100 year Winter I+40%	15	1	23.690	22.048	0.059	0.000	1.12	1.237	100.6	SURCHARGED
S9.002	S1102	15 minute 100 year Winter I+40%	15	1	23.194	21.763	-0.007	0.000	0.76	1.058	105.6	OK
S9.003	S1103	15 minute 100 year Winter I+40%	15	1	22.891	21.604	0.138	0.000	0.84	1.098	108.6	SURCHARGED
S9.004	S1104	15 minute 100 year Winter I+40%	15	1	22.624	21.423	0.224	0.000	0.76	1.302	126.6	SURCHARGED
S11.000	S1120	15 minute 100 year Winter I+40%	15	1	25.814	24.807	0.493	0.000	1.32	0.721	43.3	SURCHARGED
S12.000	S1140	15 minute 100 year Winter I+40%	15	1	25.553	24.308	0.255	0.000	1.05	0.452	17.1	SURCHARGED
S11.001	S1121	15 minute 100 year Winter I+40%	15	1	25.718	24.193	0.293	0.000	0.98	0.961	62.5	SURCHARGED
S11.002	S1122	15 minute 100 year Winter I+40%	15	1	24.960	23.840	0.380	0.000	1.06	1.472	75.9	SURCHARGED
S11.003	S1123	15 minute 100 year Winter I+40%	15	1	24.700	23.614	0.339	0.000	0.58	0.999	80.0	SURCHARGED
S11.004	S1124	15 minute 100 year Winter I+40%	15	1	24.210	23.456	0.746	0.000	1.32	3.280	91.9	SURCHARGED
S13.000	S1150	15 minute 100 year Winter I+40%	15	1	24.347	23.334	0.412	0.000	0.26	0.715	19.1	SURCHARGED
S11.005	S1125	15 minute 100 year Winter I+40%	15	1	24.340	23.311	0.699	0.000	0.80	2.425	128.5	SURCHARGED
S11.006	S1126	15 minute 100 year Winter I+40%	15	1	22.588	22.493	1.330	0.000	0.72	6.315	174.3	FLOOD RISK
S11.007	S1127	15 minute 100 year Winter I+40%	15	1	22.250	22.253	1.503	3.141	1.70	7.660	182.6	FLOOD
S11.008	S1128	15 minute 100 year Winter I+40%	15	1	22.189	22.096	1.408	0.000	1.58	2.831	190.2	FLOOD RISK
S11.009	S1129	15 minute 100 year Winter I+40%	15	1	22.093	21.925	1.332	0.000	1.21	2.836	196.9	FLOOD RISK

PFA Consulting		Page 11
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Planning Catchment A (FSR 15 & 30)	
Date 15/05/2023	Designed by BF/DRB	
File (FSR 15 + 30) 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
S11.010	S1130	15 minute 100 year Winter I+40%	15	1	21.820	21.725	1.304	0.000	2.55	3.874	200.9	FLOOD RISK
S14.000	S1160	15 minute 100 year Winter I+40%	15	1	21.558	21.509	1.075	0.000	0.06	2.068	5.4	FLOOD RISK
S11.011	S1131	15 minute 100 year Winter I+40%	15	1	21.725	21.509	1.114	0.000	2.16	4.067	210.6	FLOOD RISK
S9.005	S1105	15 minute 100 year Winter I+40%	15	1	21.723	20.866	0.628	0.000	1.65	8.869	373.0	SURCHARGED
S15.000	S1169	15 minute 100 year Winter I+40%	15	1	24.601	23.042	-0.173	0.000	0.12	0.053	10.0	OK
S15.001	S1170	15 minute 100 year Winter I+40%	15	1	23.616	22.220	0.040	0.000	0.79	0.491	50.9	SURCHARGED
S15.002	S1171	15 minute 100 year Winter I+40%	15	1	23.461	22.124	0.080	0.000	0.38	0.703	54.2	SURCHARGED
S15.003	S1172	15 minute 100 year Winter I+40%	15	1	22.404	22.073	0.495	0.000	0.47	2.314	64.9	SURCHARGED
S15.004	S1173	15 minute 100 year Winter I+40%	15	1	22.405	22.001	0.722	0.000	0.54	1.720	70.7	SURCHARGED
S15.005	S1174	15 minute 100 year Winter I+40%	15	1	21.950	21.882	1.003	0.000	0.60	2.968	71.4	FLOOD RISK
S16.000	SH119	15 minute 100 year Winter I+40%	15	1	21.753	21.766	1.066	13.564	1.39	14.984	81.7	FLOOD
S15.006	S1175	15 minute 100 year Winter I+40%	15	1	21.840	21.801	1.148	0.000	1.65	2.797	104.1	FLOOD RISK
S15.007	S1176	15 minute 100 year Winter I+40%	15	1	22.088	21.704	1.221	0.000	2.20	4.531	117.4	SURCHARGED
S17.000	S1200	15 minute 100 year Summer I+40%	15	1	25.344	23.694	-0.150	0.000	0.00	0.000	0.0	OK
S17.001	S1201	15 minute 100 year Winter I+40%	15	1	25.284	23.643	-0.051	0.000	0.39	0.332	23.7	OK
S17.002	S1202	15 minute 100 year Winter I+40%	15	1	24.984	23.608	0.235	0.000	1.23	1.198	43.3	SURCHARGED
S18.000	S1220	15 minute 100 year Winter I+40%	15	1	24.890	23.538	0.152	0.000	0.56	0.336	9.7	SURCHARGED
S17.003	S1203	15 minute 100 year Winter I+40%	15	1	24.846	23.510	0.235	0.000	0.95	1.278	66.9	SURCHARGED
S17.004	S1204	15 minute 100 year Winter I+40%	15	1	24.117	23.030	0.413	0.000	1.00	1.574	71.1	SURCHARGED
S17.005	S1205	15 minute 100 year Winter I+40%	15	1	23.788	22.739	0.451	0.000	0.96	1.240	74.7	SURCHARGED
S19.000	S1230	15 minute 100 year Winter I+40%	15	1	23.400	22.398	0.036	0.000	0.59	0.289	21.9	SURCHARGED
S19.001	S1231	15 minute 100 year Winter I+40%	15	1	23.300	22.375	0.087	0.000	0.39	0.710	34.4	SURCHARGED
S17.006	S1206	15 minute 100 year Winter I+40%	15	1	23.200	22.340	0.476	0.000	0.71	2.239	119.4	SURCHARGED
S17.007	S1207	15 minute 100 year Winter I+40%	15	1	23.000	22.233	0.616	0.000	1.11	3.496	141.1	SURCHARGED
S17.008	S1208	15 minute 100 year Winter I+40%	15	1	22.890	22.106	0.594	0.000	1.18	2.724	156.3	SURCHARGED
S17.009	S1209	15 minute 100 year Winter I+40%	15	1	22.660	21.949	0.551	0.000	1.05	2.969	173.1	SURCHARGED
S17.010	S1210	15 minute 100 year Winter I+40%	15	1	22.325	21.753	0.531	0.000	0.53	2.749	184.0	SURCHARGED
S15.008	S1177	15 minute 100 year Winter I+40%	15	1	21.960	21.534	1.087	0.000	2.76	4.244	291.3	SURCHARGED
S15.009	S1178	15 minute 100 year Winter I+40%	15	1	21.925	21.269	0.849	0.000	1.52	3.208	305.2	SURCHARGED
S15.010	S1179	15 minute 100 year Winter I+40%	15	1	21.794	20.974	0.681	0.000	1.83	2.795	309.3	SURCHARGED
S15.011	S1180	15 minute 100 year Winter I+40%	15	1	21.717	20.667	0.451	0.000	2.29	2.792	315.0	SURCHARGED
S15.012	S1181	15 minute 100 year Winter I+40%	15	1	21.740	20.351	0.184	0.000	1.49	3.191	315.1	SURCHARGED
S20.000	S1240	15 minute 100 year Winter I+40%	15	1	22.551	20.954	-0.097	0.000	0.27	0.055	4.6	OK
S20.001	S1241	15 minute 100 year Winter I+40%	15	1	22.187	20.846	0.182	0.000	1.27	0.956	100.4	SURCHARGED
S20.002	S1242	15 minute 100 year Winter I+40%	15	1	22.030	20.658	0.128	0.000	1.08	1.445	102.2	SURCHARGED
S21.000	S1250	15 minute 100 year Winter I+40%	15	1	22.489	22.224	1.011	0.000	0.36	1.308	6.1	FLOOD RISK
S21.001	S1251	15 minute 100 year Winter I+40%	15	1	22.756	22.209	1.238	0.000	0.59	2.103	20.2	SURCHARGED
S21.002	S1252	15 minute 100 year Winter I+40%	15	1	22.692	22.178	1.329	0.000	0.69	2.521	34.8	SURCHARGED
S21.003	S1253	15 minute 100 year Winter I+40%	15	1	22.582	22.144	1.430	0.000	0.37	2.303	29.3	SURCHARGED
S22.000	S1270	15 minute 100 year Winter I+40%	15	1	23.967	22.716	0.098	0.000	0.43	0.360	21.0	SURCHARGED
S23.000	S1280	15 minute 100 year Winter I+40%	15	1	24.231	22.712	0.003	0.000	0.42	0.167	14.8	SURCHARGED
S22.001	S1271	15 minute 100 year Winter I+40%	15	1	24.084	22.683	0.362	0.000	0.41	1.981	54.8	SURCHARGED
S24.000	S1290	15 minute 100 year Winter I+40%	15	1	23.135	22.705	1.070	0.000	0.90	1.374	15.7	SURCHARGED
S22.002	S1272	15 minute 100 year Winter I+40%	15	1	23.338	22.635	1.143	0.000	0.90	5.435	87.9	SURCHARGED
S22.003	S1273	15 minute 100 year Winter I+40%	15	1	23.510	22.581	1.122	0.000	0.65	4.878	81.8	SURCHARGED
S22.004	S1274	15 minute 100 year Winter I+40%	15	1	23.371	22.556	1.141	0.000	0.62	4.402	89.4	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
S22.005	S1275	15 minute 100 year Winter I+40%	15	1	23.170	22.525	1.168	0.000	0.67	5.058	105.7	SURCHARGED
S25.000	S1300	15 minute 100 year Winter I+40%	15	1	23.321	22.804	0.908	0.000	0.89	1.276	64.9	SURCHARGED
S22.006	S1277	15 minute 100 year Winter I+40%	15	1	22.897	22.481	1.221	0.000	1.53	8.022	157.9	SURCHARGED
S22.007	S1278	15 minute 100 year Winter I+40%	15	1	22.785	22.396	1.173	0.000	0.52	3.727	164.8	SURCHARGED
S22.008	S1279	15 minute 100 year Winter I+40%	15	1	22.460	22.287	1.480	0.000	0.78	7.814	239.3	FLOOD RISK
S26.000	SH310	15 minute 100 year Winter I+40%	15	1	22.925	22.432	1.007	0.000	0.20	1.388	14.6	SURCHARGED
S27.000	S1320	15 minute 100 year Winter I+40%	15	1	22.334	22.336	1.286	1.723	0.69	3.347	23.3	FLOOD
S27.001	S1321	15 minute 100 year Winter I+40%	15	1	22.453	22.383	1.404	0.000	0.81	2.272	29.1	FLOOD RISK
S26.001	S1311	15 minute 100 year Winter I+40%	15	1	22.687	22.398	1.540	0.000	0.72	3.726	54.0	FLOOD RISK
S26.002	S1312	15 minute 100 year Winter I+40%	15	1	22.300	22.301	1.655	0.702	1.56	5.583	105.5	FLOOD
S21.004	S1254	15 minute 100 year Winter I+40%	15	1	22.251	22.110	1.600	0.000	1.71	11.876	435.2	FLOOD RISK
S21.005	S1255	15 minute 100 year Winter I+40%	15	1	21.929	21.929	1.488	0.197	2.75	13.092	437.9	FLOOD
S21.006	S1256	15 minute 100 year Winter I+40%	15	1	21.861	21.763	1.347	0.000	2.66	6.548	442.2	FLOOD RISK
S21.007	S1257	15 minute 100 year Winter I+40%	15	1	21.952	21.584	1.197	0.000	2.82	6.819	449.8	SURCHARGED
S21.008	S1258	15 minute 100 year Winter I+40%	15	1	22.067	21.361	1.013	0.000	2.68	7.913	448.6	SURCHARGED
S21.009	S1259	15 minute 100 year Winter I+40%	15	1	21.898	21.169	0.851	0.000	2.65	6.362	453.9	SURCHARGED
S21.010	S1260	15 minute 100 year Winter I+40%	15	1	21.875	20.968	0.681	0.000	2.32	6.224	451.6	SURCHARGED
S21.011	S1261	15 minute 100 year Winter I+40%	15	1	21.892	20.765	0.492	0.000	2.01	3.399	471.2	SURCHARGED
S28.000	S1330	30 minute 100 year Winter I+40%	30	1	21.676	20.516	0.121	0.000	0.22	0.811	22.0	SURCHARGED
S28.001	S1331	30 minute 100 year Winter I+40%	30	1	21.339	20.512	0.147	0.000	0.51	2.558	49.3	SURCHARGED
S28.002	S1332	30 minute 100 year Winter I+40%	30	1	21.250	20.498	-0.127	0.000	0.21	3.845	54.6	OK
S28.003	S1333	30 minute 100 year Winter I+40%	30	1	21.589	20.494	-0.101	0.000	0.25	8.294	55.6	OK
S28.004	S1334	30 minute 100 year Winter I+40%	30	1	21.694	20.489	-0.081	0.000	0.07	7.497	49.6	OK
S21.012	S1262	30 minute 100 year Winter I+40%	30	1	21.693	20.476	0.126	0.000	1.53	26.080	501.8	SURCHARGED
S21.013	S1263	30 minute 100 year Winter I+40%	30	1	21.600	20.358	0.058	0.000	1.21	15.966	502.2	SURCHARGED
S20.003	S1243	30 minute 100 year Winter I+40%	30	1	21.642	20.317	0.046	0.000	2.85	6.141	578.1	SURCHARGED
S1.021	S1025-Basin A1	30 minute 100 year Winter I+40%	30	1	20.650	19.801	0.321	0.000	0.61	1427.378	55.8	SURCHARGED
S1.022	S1026-Con	30 minute 100 year Winter I+40%	30	1	21.144	19.781	0.337	0.000	0.78	3.201	55.6	SURCHARGED
S1.023	S1027	30 minute 100 year Winter I+40%	30	1	21.298	19.301	-1.997	0.000	0.00	0.613	55.6	OK
S1.024	S1028	30 minute 100 year Winter I+40%	30	1	21.261	19.221	-2.040	0.000	0.00	2.118	55.6	OK
S1.025	S1029	30 minute 100 year Winter I+40%	30	1	21.175	19.124	-2.051	0.000	0.00	2.015	55.6	OK
S1.026	S1030	30 minute 100 year Winter I+40%	30	1	21.018	19.101	-1.917	0.000	0.00	0.417	55.6	OK
S1.027	S1031	30 minute 100 year Winter I+40%	30	1	20.969	18.977	-1.992	0.000	0.00	0.142	55.6	OK

PFA Consulting		Page 1
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Sensitivity Test Catchment A (FSR 15 & 30)	
Date 15/05/2023	Designed by BF/DRB	
File (FSR 15 + 30) 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 FSR M5-60 (mm) 20.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.350 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) 15, 30
 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	15 minute 30 year Winter I+30%	15	1	28.000	26.642	-0.158	0.000	0.19	0.070	9.6	OK
S1.001	S989	15 minute 30 year Winter I+30%	15	1	27.700	26.428	-0.059	0.000	0.80	0.393	35.3	OK
S1.002	S990	15 minute 30 year Winter I+30%	15	1	27.550	26.289	0.102	0.000	1.25	1.408	54.3	SURCHARGED
S2.000	S1000	15 minute 30 year Winter I+30%	15	1	29.870	28.501	-0.169	0.000	0.14	0.057	11.0	OK
S2.001	S1001	15 minute 30 year Winter I+30%	15	1	29.525	27.852	-0.148	0.000	0.25	0.099	20.0	OK
S2.002	S1002	15 minute 30 year Winter I+30%	15	1	28.930	27.207	-0.138	0.000	0.31	0.113	24.0	OK
S2.003	S1003	15 minute 30 year Winter I+30%	15	1	28.225	26.477	-0.108	0.000	0.52	0.133	39.8	OK
S3.000	S980	15 minute 30 year Winter I+30%	15	1	27.550	26.191	-0.159	0.000	0.19	0.107	14.4	OK
S1.003	S1004	15 minute 30 year Winter I+30%	15	1	27.260	25.889	-0.104	0.000	0.74	0.680	110.2	OK
S1.004	S1005	15 minute 30 year Winter I+30%	15	1	26.950	25.421	-0.087	0.000	0.83	0.433	132.4	OK
S1.005	S1006	15 minute 30 year Winter I+30%	15	1	25.960	24.702	-0.049	0.000	0.97	0.754	166.8	OK
S4.000	S1040	15 minute 30 year Winter I+30%	15	1	26.400	25.871	1.021	0.000	1.75	1.318	27.4	SURCHARGED
S4.001	S1041	15 minute 30 year Winter I+30%	15	1	26.170	25.423	0.718	0.000	0.80	1.321	43.6	SURCHARGED
S4.002	S1042	15 minute 30 year Winter I+30%	15	1	25.290	24.982	0.960	0.000	1.54	3.424	60.6	SURCHARGED
S4.003	S1043	15 minute 30 year Winter I+30%	15	1	25.215	24.783	0.843	0.000	1.63	1.547	61.7	SURCHARGED
S4.004	S1044	15 minute 30 year Winter I+30%	15	1	25.220	24.604	0.736	0.000	1.67	1.380	67.1	SURCHARGED
S4.005	S1045	15 minute 30 year Winter I+30%	15	1	25.310	23.984	0.374	0.000	1.49	2.241	123.8	SURCHARGED
S4.006	S1046	15 minute 30 year Winter I+30%	15	1	25.115	23.718	0.223	0.000	2.06	1.501	130.3	SURCHARGED
S1.006	S1007	15 minute 30 year Summer I+30%	15	1	25.050	23.442	0.011	0.000	1.08	1.726	321.5	SURCHARGED
S5.000	S1050	15 minute 30 year Winter I+30%	15	1	25.208	23.669	-0.115	0.000	0.47	0.118	17.4	OK
S5.001	S1051	15 minute 30 year Winter I+30%	15	1	25.006	23.563	-0.129	0.000	0.61	0.296	35.7	OK
S5.002	S1052	15 minute 30 year Winter I+30%	15	1	24.945	23.521	-0.121	0.000	0.65	0.547	41.7	OK
S5.003	S1053	15 minute 30 year Winter I+30%	15	1	24.885	23.306	-0.271	0.000	0.33	0.268	52.5	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	15 minute 30 year Winter I+30%	15	1	24.800	23.220	-0.289	0.000	0.27	0.728	69.4	OK
S1.007	S1008	15 minute 30 year Winter I+30%	15	1	24.900	23.162	-0.119	0.000	0.72	4.427	402.0	OK
S1.008	S1009	15 minute 30 year Winter I+30%	15	1	24.690	23.122	-0.083	0.000	0.64	7.350	389.0	OK
S6.000	S1060	15 minute 30 year Winter I+30%	15	1	26.097	24.021	0.629	0.000	1.70	1.045	120.3	SURCHARGED
S1.009	S1010	15 minute 30 year Winter I+30%	15	1	24.750	23.078	-0.014	0.000	0.72	13.429	492.7	OK
S7.000	S1070	15 minute 30 year Winter I+30%	15	1	26.242	25.626	0.209	0.000	0.61	0.485	23.3	SURCHARGED
S7.001	S1071	15 minute 30 year Winter I+30%	15	1	26.395	25.581	0.285	0.000	0.92	1.246	31.9	SURCHARGED
S7.002	S1072	15 minute 30 year Winter I+30%	15	1	27.477	25.460	0.314	0.000	1.05	1.453	40.9	SURCHARGED
S7.003	S1073	15 minute 30 year Winter I+30%	15	1	28.150	25.274	0.298	0.000	1.44	1.555	49.5	SURCHARGED
S7.004	S1074	15 minute 30 year Winter I+30%	15	1	28.423	25.116	0.215	0.000	1.41	0.951	51.8	SURCHARGED
S7.005	S1075	15 minute 30 year Winter I+30%	15	1	29.003	24.817	0.070	0.000	1.10	1.276	84.5	SURCHARGED
S7.006	S1076	15 minute 30 year Winter I+30%	15	1	27.350	24.355	-0.178	0.000	0.67	1.102	113.4	OK
S7.007	S1077	15 minute 30 year Winter I+30%	15	1	26.816	24.311	-0.155	0.000	0.72	1.298	122.4	OK
S7.008	S1078	15 minute 30 year Winter I+30%	15	1	26.402	24.279	-0.128	0.000	0.85	1.314	144.0	OK
S7.009	S1079	15 minute 30 year Winter I+30%	15	1	26.065	24.097	-0.244	0.000	0.43	0.770	146.2	OK
S7.010	S1080	15 minute 30 year Winter I+30%	15	1	25.389	23.659	-0.272	0.000	0.32	0.521	185.0	OK
S1.010	S1011	15 minute 30 year Winter I+30%	15	1	25.092	22.975	0.081	0.000	1.10	21.202	667.9	SURCHARGED
S1.011	S1012	15 minute 30 year Winter I+30%	15	1	25.346	22.789	0.042	0.000	1.14	15.376	689.5	SURCHARGED
S1.012	S1014	15 minute 30 year Winter I+30%	15	1	25.568	22.344	-0.286	0.000	0.80	7.130	695.2	OK
S1.013	S1016	15 minute 30 year Winter I+30%	15	1	25.300	22.192	-0.353	0.000	0.63	6.952	697.1	OK
S1.014	S1018	15 minute 30 year Winter I+30%	15	1	23.845	22.032	-0.254	0.000	0.80	22.650	715.9	OK
S8.000	S1091	15 minute 30 year Winter I+30%	15	1	24.214	22.614	-0.175	0.000	0.11	0.051	9.8	OK
S1.015	S1019	15 minute 30 year Winter I+30%	15	1	23.962	21.942	-0.205	0.000	0.94	11.769	721.1	OK
S1.016	S1020-Basin A2	30 minute 30 year Winter I+30%	30	1	22.350	21.624	0.378	0.000	1.60	592.253	93.2	SURCHARGED
S1.017	S1021-Con	30 minute 30 year Winter I+30%	30	1	22.043	21.486	0.286	0.000	1.75	2.595	93.0	SURCHARGED
S1.018	S1022	30 minute 30 year Winter I+30%	30	1	22.030	21.194	-0.836	0.000	0.03	0.802	92.9	OK
S1.019	S1023	30 minute 30 year Winter I+30%	30	1	21.545	21.144	0.080	0.000	1.49	15.170	91.4	SURCHARGED*
S1.020	S1024	30 minute 30 year Winter I+30%	30	1	21.545	20.838	-0.707	0.000	0.02	0.305	91.4	OK
S9.000	S1100	15 minute 30 year Winter I+30%	15	1	24.028	22.377	-0.152	0.000	0.23	0.077	14.3	OK
S10.000	S1110	15 minute 30 year Winter I+30%	15	1	23.557	22.000	-0.132	0.000	0.36	0.100	16.1	OK
S9.001	S1101	15 minute 30 year Winter I+30%	15	1	23.690	21.901	-0.088	0.000	0.83	0.450	74.8	OK
S9.002	S1102	15 minute 30 year Winter I+30%	15	1	23.194	21.637	-0.133	0.000	0.59	0.422	81.1	OK
S9.003	S1103	15 minute 30 year Winter I+30%	15	1	22.891	21.350	-0.116	0.000	0.68	0.325	87.7	OK
S9.004	S1104	15 minute 30 year Winter I+30%	15	1	22.624	21.075	-0.124	0.000	0.63	0.323	105.1	OK
S11.000	S1120	15 minute 30 year Winter I+30%	15	1	25.814	24.342	0.028	0.000	1.03	0.196	34.0	SURCHARGED
S12.000	S1140	15 minute 30 year Winter I+30%	15	1	25.553	24.009	-0.044	0.000	0.82	0.114	13.4	OK
S11.001	S1121	15 minute 30 year Winter I+30%	15	1	25.718	23.833	-0.067	0.000	0.82	0.228	52.3	OK
S11.002	S1122	15 minute 30 year Winter I+30%	15	1	24.960	23.402	-0.058	0.000	0.88	0.296	63.6	OK
S11.003	S1123	15 minute 30 year Winter I+30%	15	1	24.700	23.129	-0.146	0.000	0.51	0.225	69.8	OK
S11.004	S1124	15 minute 30 year Winter I+30%	15	1	24.210	22.749	0.039	0.000	1.22	1.062	84.7	SURCHARGED
S13.000	S1150	15 minute 30 year Winter I+30%	15	1	24.347	22.766	-0.156	0.000	0.21	0.073	14.9	OK
S11.005	S1125	15 minute 30 year Winter I+30%	15	1	24.340	22.534	-0.078	0.000	0.77	0.803	123.7	OK
S11.006	S1126	15 minute 30 year Winter I+30%	15	1	22.588	21.840	0.677	0.000	0.60	3.767	147.2	SURCHARGED
S11.007	S1127	15 minute 30 year Winter I+30%	15	1	22.250	21.692	0.942	0.000	1.48	3.883	158.8	SURCHARGED
S11.008	S1128	15 minute 30 year Winter I+30%	15	1	22.189	21.529	0.841	0.000	1.32	2.020	159.7	SURCHARGED
S11.009	S1129	15 minute 30 year Winter I+30%	15	1	22.093	21.360	0.767	0.000	1.02	2.028	165.5	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	15 minute 30 year Winter I+30%	15	1	21.820	21.182	0.761	0.000	2.15	3.097	169.7	SURCHARGED
S14.000	S1160	15 minute 30 year Winter I+30%	15	1	21.558	20.998	0.564	0.000	0.06	1.338	5.2	SURCHARGED
S11.011	S1131	15 minute 30 year Winter I+30%	15	1	21.725	20.997	0.602	0.000	1.84	3.335	179.4	SURCHARGED
S9.005	S1105	15 minute 30 year Winter I+30%	15	1	21.723	20.519	0.281	0.000	1.32	7.457	298.5	SURCHARGED
S15.000	S1169	15 minute 30 year Winter I+30%	15	1	24.601	23.035	-0.180	0.000	0.09	0.045	7.1	OK
S15.001	S1170	15 minute 30 year Winter I+30%	15	1	23.616	22.079	-0.101	0.000	0.58	0.176	37.5	OK
S15.002	S1171	15 minute 30 year Winter I+30%	15	1	23.461	21.854	-0.190	0.000	0.29	0.150	42.0	OK
S15.003	S1172	15 minute 30 year Winter I+30%	15	1	22.404	21.656	0.078	0.000	0.42	1.103	57.2	SURCHARGED
S15.004	S1173	15 minute 30 year Winter I+30%	15	1	22.405	21.633	0.354	0.000	0.43	1.304	57.0	SURCHARGED
S15.005	S1174	15 minute 30 year Winter I+30%	15	1	21.950	21.591	0.712	0.000	0.37	2.639	43.6	SURCHARGED
S16.000	SH119	15 minute 30 year Winter I+30%	15	1	21.753	21.593	0.893	0.000	0.61	1.343	35.5	FLOOD RISK
S15.006	S1175	15 minute 30 year Winter I+30%	15	1	21.840	21.568	0.915	0.000	1.23	2.533	77.7	FLOOD RISK
S15.007	S1176	15 minute 30 year Winter I+30%	15	1	22.088	21.307	0.824	0.000	1.91	4.081	102.0	SURCHARGED
S17.000	S1200	15 minute 30 year Summer I+30%	15	1	25.344	23.694	-0.150	0.000	0.00	0.000	0.0	OK
S17.001	S1201	15 minute 30 year Winter I+30%	15	1	25.284	23.551	-0.143	0.000	0.29	0.122	17.3	OK
S17.002	S1202	15 minute 30 year Winter I+30%	15	1	24.984	23.327	-0.046	0.000	0.99	0.357	34.9	OK
S18.000	S1220	15 minute 30 year Winter I+30%	15	1	24.890	23.306	-0.080	0.000	0.44	0.074	7.6	OK
S17.003	S1203	15 minute 30 year Winter I+30%	15	1	24.846	23.207	-0.068	0.000	0.81	0.489	56.8	OK
S17.004	S1204	15 minute 30 year Winter I+30%	15	1	24.117	22.564	-0.053	0.000	0.91	0.296	64.6	OK
S17.005	S1205	15 minute 30 year Winter I+30%	15	1	23.788	22.233	-0.055	0.000	0.90	0.279	70.2	OK
S19.000	S1230	15 minute 30 year Winter I+30%	15	1	23.400	22.240	-0.122	0.000	0.43	0.111	15.7	OK
S19.001	S1231	15 minute 30 year Winter I+30%	15	1	23.300	22.147	-0.141	0.000	0.29	0.156	25.9	OK
S17.006	S1206	15 minute 30 year Winter I+30%	15	1	23.200	21.753	-0.111	0.000	0.66	0.501	110.9	OK
S17.007	S1207	15 minute 30 year Winter I+30%	15	1	23.000	21.646	0.029	0.000	1.06	2.154	134.2	SURCHARGED
S17.008	S1208	15 minute 30 year Winter I+30%	15	1	22.890	21.536	0.024	0.000	1.12	1.821	147.5	SURCHARGED
S17.009	S1209	15 minute 30 year Winter I+30%	15	1	22.660	21.421	0.023	0.000	0.94	2.085	154.1	SURCHARGED
S17.010	S1210	15 minute 30 year Winter I+30%	15	1	22.325	21.286	0.064	0.000	0.45	1.946	153.4	SURCHARGED
S15.008	S1177	15 minute 30 year Winter I+30%	15	1	21.960	21.136	0.689	0.000	2.42	3.636	256.1	SURCHARGED
S15.009	S1178	15 minute 30 year Winter I+30%	15	1	21.925	20.929	0.509	0.000	1.31	2.721	263.7	SURCHARGED
S15.010	S1179	15 minute 30 year Winter I+30%	15	1	21.794	20.707	0.414	0.000	1.57	2.413	266.3	SURCHARGED
S15.011	S1180	15 minute 30 year Winter I+30%	15	1	21.717	20.480	0.264	0.000	1.96	2.524	269.4	SURCHARGED
S15.012	S1181	15 minute 30 year Winter I+30%	15	1	21.740	20.250	0.083	0.000	1.27	3.033	269.5	SURCHARGED
S20.000	S1240	15 minute 30 year Winter I+30%	15	1	22.551	20.946	-0.105	0.000	0.19	0.045	3.3	OK
S20.001	S1241	15 minute 30 year Winter I+30%	15	1	22.187	20.598	-0.066	0.000	0.97	0.302	76.4	OK
S20.002	S1242	15 minute 30 year Winter I+30%	15	1	22.030	20.443	-0.087	0.000	0.83	0.685	78.0	OK
S21.000	S1250	15 minute 30 year Winter I+30%	15	1	22.489	21.340	0.127	0.000	0.27	0.308	4.5	SURCHARGED
S21.001	S1251	15 minute 30 year Winter I+30%	15	1	22.756	21.324	0.353	0.000	0.57	1.103	19.3	SURCHARGED
S21.002	S1252	15 minute 30 year Winter I+30%	15	1	22.692	21.302	0.453	0.000	0.65	1.530	32.6	SURCHARGED
S21.003	S1253	15 minute 30 year Winter I+30%	15	1	22.582	21.279	0.565	0.000	0.36	1.324	28.6	SURCHARGED
S22.000	S1270	15 minute 30 year Winter I+30%	15	1	23.967	22.479	-0.139	0.000	0.31	0.092	15.0	OK
S23.000	S1280	15 minute 30 year Winter I+30%	15	1	24.231	22.615	-0.094	0.000	0.30	0.058	10.6	OK
S22.001	S1271	15 minute 30 year Winter I+30%	15	1	24.084	22.134	-0.187	0.000	0.29	0.135	39.6	OK
S24.000	S1290	15 minute 30 year Winter I+30%	15	1	23.135	21.692	0.057	0.000	0.80	0.229	14.0	SURCHARGED
S22.002	S1272	15 minute 30 year Winter I+30%	15	1	23.338	21.648	0.156	0.000	0.80	2.064	77.9	SURCHARGED
S22.003	S1273	15 minute 30 year Winter I+30%	15	1	23.510	21.604	0.145	0.000	0.64	3.479	81.0	SURCHARGED
S22.004	S1274	15 minute 30 year Winter I+30%	15	1	23.371	21.583	0.168	0.000	0.63	3.009	90.9	SURCHARGED

PFA Consulting		Page 4
Stratton Park House Wanborough Road Swindon SN3 4HG	M380: Boorley Gardens SW Drainage - Sensitivity Test Catchment A (FSR 15 & 30)	
Date 15/05/2023	Designed by BF/DRB	
File (FSR 15 + 30) 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	15 minute 30 year Winter I+30%	15	1	23.170	21.556	0.199	0.000	0.66	3.671	103.7	SURCHARGED
S25.000	S1300	15 minute 30 year Winter I+30%	15	1	23.321	21.813	-0.083	0.000	0.71	0.155	52.1	OK
S22.006	S1277	15 minute 30 year Winter I+30%	15	1	22.897	21.517	0.257	0.000	1.48	6.188	152.8	SURCHARGED
S22.007	S1278	15 minute 30 year Winter I+30%	15	1	22.785	21.452	0.229	0.000	0.46	2.376	144.1	SURCHARGED
S22.008	S1279	15 minute 30 year Winter I+30%	15	1	22.460	21.369	0.562	0.000	0.64	6.500	196.6	SURCHARGED
S26.000	SH310	15 minute 30 year Winter I+30%	15	1	22.925	21.485	0.060	0.000	0.19	0.316	14.0	SURCHARGED
S27.000	S1320	15 minute 30 year Winter I+30%	15	1	22.334	21.475	0.425	0.000	0.14	0.730	4.9	SURCHARGED
S27.001	S1321	15 minute 30 year Winter I+30%	15	1	22.453	21.472	0.493	0.000	0.27	1.241	9.7	SURCHARGED
S26.001	S1311	15 minute 30 year Winter I+30%	15	1	22.687	21.464	0.606	0.000	0.63	2.669	47.1	SURCHARGED
S26.002	S1312	15 minute 30 year Winter I+30%	15	1	22.300	21.404	0.758	0.000	1.32	3.902	89.6	SURCHARGED
S21.004	S1254	15 minute 30 year Winter I+30%	15	1	22.251	21.254	0.744	0.000	1.36	10.363	346.2	SURCHARGED
S21.005	S1255	15 minute 30 year Winter I+30%	15	1	21.929	21.165	0.724	0.000	2.20	11.660	349.8	SURCHARGED
S21.006	S1256	15 minute 30 year Winter I+30%	15	1	21.861	21.108	0.692	0.000	2.12	5.389	352.7	SURCHARGED
S21.007	S1257	15 minute 30 year Winter I+30%	15	1	21.952	21.041	0.654	0.000	2.24	5.860	356.8	SURCHARGED
S21.008	S1258	15 minute 30 year Winter I+30%	15	1	22.067	20.903	0.555	0.000	2.10	7.105	351.8	SURCHARGED
S21.009	S1259	15 minute 30 year Winter I+30%	15	1	21.898	20.783	0.465	0.000	2.06	5.681	352.5	SURCHARGED
S21.010	S1260	15 minute 30 year Winter I+30%	15	1	21.875	20.658	0.371	0.000	1.81	5.677	352.3	SURCHARGED
S21.011	S1261	30 minute 30 year Winter I+30%	30	1	21.892	20.538	0.265	0.000	1.52	2.999	356.9	SURCHARGED
S28.000	S1330	30 minute 30 year Winter I+30%	30	1	21.676	20.393	-0.002	0.000	0.15	0.634	15.2	OK
S28.001	S1331	30 minute 30 year Winter I+30%	30	1	21.339	20.388	0.023	0.000	0.35	2.287	34.3	SURCHARGED
S28.002	S1332	30 minute 30 year Winter I+30%	30	1	21.250	20.379	-0.246	0.000	0.13	3.521	33.7	OK
S28.003	S1333	30 minute 30 year Winter I+30%	30	1	21.589	20.376	-0.219	0.000	0.15	6.499	33.3	OK
S28.004	S1334	30 minute 30 year Winter I+30%	30	1	21.694	20.373	-0.197	0.000	0.05	5.987	37.4	OK
S21.012	S1262	30 minute 30 year Winter I+30%	30	1	21.693	20.368	0.018	0.000	1.17	24.711	384.4	SURCHARGED
S21.013	S1263	30 minute 30 year Winter I+30%	30	1	21.600	20.296	-0.004	0.000	0.92	15.025	383.6	OK
S20.003	S1243	15 minute 30 year Winter I+30%	15	1	21.642	20.271	0.000	0.000	1.94	5.608	393.4	OK
S1.021	S1025-Basin A1	30 minute 30 year Winter I+30%	30	1	20.650	19.692	0.212	0.000	0.60	1006.766	54.9	SURCHARGED
S1.022	S1026-Con	30 minute 30 year Winter I+30%	30	1	21.144	19.672	0.228	0.000	0.77	2.824	54.8	SURCHARGED
S1.023	S1027	30 minute 30 year Winter I+30%	30	1	21.298	19.300	-1.998	0.000	0.00	0.609	54.8	OK
S1.024	S1028	30 minute 30 year Winter I+30%	30	1	21.261	19.220	-2.041	0.000	0.00	2.096	54.8	OK
S1.025	S1029	30 minute 30 year Winter I+30%	30	1	21.175	19.123	-2.052	0.000	0.00	1.995	54.8	OK
S1.026	S1030	30 minute 30 year Winter I+30%	30	1	21.018	19.100	-1.918	0.000	0.00	0.412	54.8	OK
S1.027	S1031	30 minute 30 year Winter I+30%	30	1	20.969	18.976	-1.993	0.000	0.00	0.141	54.8	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 * 10m ³ /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	FSR M5-60 (mm) 20.000	Cv (Summer) 0.750
Region England and Wales	Ratio R 0.350	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)	15, 30
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 (m ³)	Flow / Cap.	Maximum Vol (m ³)	Pipe Flow (l/s)	Status
S1.000	S988	15 minute 100 year Winter I+30%	15	1	28.000	26.656	-0.144	0.000	0.25	0.086	12.5	OK
S1.001	S989	15 minute 100 year Winter I+30%	15	1	27.700	26.622	0.135	0.000	0.92	1.220	40.3	SURCHARGED
S1.002	S990	15 minute 100 year Winter I+30%	15	1	27.550	26.431	0.244	0.000	1.49	2.143	64.6	SURCHARGED
S2.000	S1000	15 minute 100 year Winter I+30%	15	1	29.870	28.509	-0.161	0.000	0.18	0.067	14.3	OK
S2.001	S1001	15 minute 100 year Winter I+30%	15	1	29.525	27.863	-0.137	0.000	0.32	0.115	25.9	OK
S2.002	S1002	15 minute 100 year Winter I+30%	15	1	28.930	27.221	-0.124	0.000	0.41	0.131	31.1	OK
S2.003	S1003	15 minute 100 year Winter I+30%	15	1	28.225	26.498	-0.087	0.000	0.68	0.166	51.5	OK
S3.000	S980	15 minute 100 year Winter I+30%	15	1	27.550	26.200	-0.150	0.000	0.24	0.124	18.7	OK
S1.003	S1004	15 minute 100 year Winter I+30%	15	1	27.260	26.003	0.010	0.000	0.89	1.588	131.7	SURCHARGED
S1.004	S1005	15 minute 100 year Winter I+30%	15	1	26.950	25.706	0.198	0.000	0.94	1.566	150.0	SURCHARGED
S1.005	S1006	15 minute 100 year Winter I+30%	15	1	25.960	25.114	0.363	0.000	1.07	2.810	183.4	SURCHARGED
S4.000	S1040	15 minute 100 year Winter I+30%	15	1	26.400	26.402	1.552	1.570	2.12	3.478	33.3	FLOOD
S4.001	S1041	15 minute 100 year Winter I+30%	15	1	26.170	26.005	1.300	0.000	0.98	1.980	53.5	FLOOD RISK
S4.002	S1042	15 minute 100 year Winter I+30%	15	1	25.290	25.293	1.271	3.347	1.91	7.111	75.2	FLOOD
S4.003	S1043	15 minute 100 year Winter I+30%	15	1	25.215	25.136	1.196	0.000	2.00	1.945	75.6	FLOOD RISK
S4.004	S1044	15 minute 100 year Winter I+30%	15	1	25.220	24.989	1.121	0.000	1.92	1.816	77.1	FLOOD RISK
S4.005	S1045	15 minute 100 year Winter I+30%	15	1	25.310	24.341	0.731	0.000	1.79	2.644	149.2	SURCHARGED
S4.006	S1046	15 minute 100 year Winter I+30%	15	1	25.115	23.989	0.494	0.000	2.47	1.807	156.4	SURCHARGED
S1.006	S1007	15 minute 100 year Winter I+30%	15	1	25.050	23.646	0.215	0.000	1.25	2.648	370.4	SURCHARGED
S5.000	S1050	15 minute 100 year Winter I+30%	15	1	25.208	23.687	-0.097	0.000	0.61	0.140	22.5	OK
S5.001	S1051	15 minute 100 year Winter I+30%	15	1	25.006	23.597	-0.095	0.000	0.79	0.387	46.3	OK
S5.002	S1052	15 minute 100 year Winter I+30%	15	1	24.945	23.557	-0.085	0.000	0.84	0.690	54.0	OK
S5.003	S1053	15 minute 100 year Winter I+30%	15	1	24.885	23.485	-0.092	0.000	0.42	0.926	67.9	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	15 minute 100 year Winter I+30%	15	1	24.800	23.468	-0.041	0.000	0.34	2.688	88.4	OK
S1.007	S1008	15 minute 100 year Winter I+30%	15	1	24.900	23.443	0.162	0.000	0.81	7.669	450.3	SURCHARGED
S1.008	S1009	15 minute 100 year Winter I+30%	15	1	24.690	23.396	0.191	0.000	0.73	9.177	441.5	SURCHARGED
S6.000	S1060	15 minute 100 year Winter I+30%	15	1	26.097	24.688	1.296	0.000	2.10	1.800	149.1	SURCHARGED
S1.009	S1010	15 minute 100 year Winter I+30%	15	1	24.750	23.338	0.246	0.000	0.88	17.494	599.5	SURCHARGED
S7.000	S1070	15 minute 100 year Winter I+30%	15	1	26.242	26.159	0.742	0.000	0.73	1.088	27.8	FLOOD RISK
S7.001	S1071	15 minute 100 year Winter I+30%	15	1	26.395	26.090	0.794	0.000	1.12	1.822	39.3	SURCHARGED
S7.002	S1072	15 minute 100 year Winter I+30%	15	1	27.477	25.918	0.772	0.000	1.28	1.970	50.1	SURCHARGED
S7.003	S1073	15 minute 100 year Winter I+30%	15	1	28.150	25.657	0.681	0.000	1.75	1.988	59.9	SURCHARGED
S7.004	S1074	15 minute 100 year Winter I+30%	15	1	28.423	25.436	0.535	0.000	1.73	1.314	63.6	SURCHARGED
S7.005	S1075	15 minute 100 year Winter I+30%	15	1	29.003	25.030	0.283	0.000	1.35	1.645	103.5	SURCHARGED
S7.006	S1076	15 minute 100 year Winter I+30%	15	1	27.350	24.461	-0.072	0.000	0.81	2.279	137.3	OK
S7.007	S1077	15 minute 100 year Winter I+30%	15	1	26.816	24.422	-0.044	0.000	0.87	1.919	147.4	OK
S7.008	S1078	15 minute 100 year Winter I+30%	15	1	26.402	24.381	-0.026	0.000	1.00	1.793	169.1	OK
S7.009	S1079	15 minute 100 year Winter I+30%	15	1	26.065	24.118	-0.223	0.000	0.51	0.892	172.1	OK
S7.010	S1080	15 minute 100 year Winter I+30%	15	1	25.389	23.679	-0.252	0.000	0.39	0.608	223.1	OK
S1.010	S1011	15 minute 100 year Winter I+30%	15	1	25.092	23.183	0.289	0.000	1.36	22.919	825.0	SURCHARGED
S1.011	S1012	15 minute 100 year Winter I+30%	15	1	25.346	22.898	0.151	0.000	1.41	16.097	856.1	SURCHARGED
S1.012	S1014	15 minute 100 year Winter I+30%	15	1	25.568	22.521	-0.109	0.000	0.98	10.653	853.2	OK
S1.013	S1016	15 minute 100 year Winter I+30%	15	1	25.300	22.446	-0.099	0.000	0.75	11.316	836.2	OK
S1.014	S1018	15 minute 100 year Winter I+30%	15	1	23.845	22.300	0.014	0.000	0.97	34.951	866.3	SURCHARGED
S8.000	S1091	15 minute 100 year Winter I+30%	15	1	24.214	22.621	-0.168	0.000	0.14	0.059	12.7	OK
S1.015	S1019	15 minute 100 year Winter I+30%	15	1	23.962	22.167	0.020	0.000	1.13	15.934	865.9	SURCHARGED
S1.016	S1020-Basin A2	30 minute 100 year Winter I+30%	30	1	22.350	21.778	0.532	0.000	1.81	779.726	105.7	SURCHARGED
S1.017	S1021-Con	30 minute 100 year Winter I+30%	30	1	22.043	21.601	0.401	0.000	1.99	2.991	105.5	SURCHARGED
S1.018	S1022	30 minute 100 year Winter I+30%	30	1	22.030	21.224	-0.806	0.000	0.04	0.862	105.4	OK
S1.019	S1023	30 minute 100 year Winter I+30%	30	1	21.545	21.181	0.117	0.000	1.68	18.407	103.3	SURCHARGED*
S1.020	S1024	30 minute 100 year Winter I+30%	30	1	21.545	20.850	-0.695	0.000	0.02	0.343	103.3	OK
S9.000	S1100	15 minute 100 year Winter I+30%	15	1	24.028	22.388	-0.141	0.000	0.29	0.090	18.5	OK
S10.000	S1110	15 minute 100 year Winter I+30%	15	1	23.557	22.044	-0.088	0.000	0.46	0.150	20.8	OK
S9.001	S1101	15 minute 100 year Winter I+30%	15	1	23.690	22.007	0.018	0.000	1.03	1.038	92.9	SURCHARGED
S9.002	S1102	15 minute 100 year Winter I+30%	15	1	23.194	21.665	-0.105	0.000	0.74	0.532	101.8	OK
S9.003	S1103	15 minute 100 year Winter I+30%	15	1	22.891	21.480	0.014	0.000	0.82	0.726	106.5	SURCHARGED
S9.004	S1104	15 minute 100 year Winter I+30%	15	1	22.624	21.309	0.110	0.000	0.74	1.078	123.1	SURCHARGED
S11.000	S1120	15 minute 100 year Winter I+30%	15	1	25.814	24.630	0.316	0.000	1.28	0.521	42.2	SURCHARGED
S12.000	S1140	15 minute 100 year Winter I+30%	15	1	25.553	24.106	0.053	0.000	1.02	0.224	16.6	SURCHARGED
S11.001	S1121	15 minute 100 year Winter I+30%	15	1	25.718	23.993	0.093	0.000	0.98	0.640	62.3	SURCHARGED
S11.002	S1122	15 minute 100 year Winter I+30%	15	1	24.960	23.651	0.191	0.000	1.03	1.009	74.3	SURCHARGED
S11.003	S1123	15 minute 100 year Winter I+30%	15	1	24.700	23.438	0.163	0.000	0.59	0.795	81.4	SURCHARGED
S11.004	S1124	15 minute 100 year Winter I+30%	15	1	24.210	23.293	0.583	0.000	1.27	3.092	87.9	SURCHARGED
S13.000	S1150	15 minute 100 year Winter I+30%	15	1	24.347	23.182	0.260	0.000	0.25	0.543	17.7	SURCHARGED
S11.005	S1125	15 minute 100 year Winter I+30%	15	1	24.340	23.161	0.549	0.000	0.78	2.255	125.2	SURCHARGED
S11.006	S1126	15 minute 100 year Winter I+30%	15	1	22.588	22.419	1.256	0.000	0.65	6.130	157.6	FLOOD RISK
S11.007	S1127	15 minute 100 year Winter I+30%	15	1	22.250	22.246	1.496	0.000	1.61	4.676	172.4	FLOOD RISK
S11.008	S1128	15 minute 100 year Winter I+30%	15	1	22.189	22.052	1.364	0.000	1.44	2.769	174.1	FLOOD RISK
S11.009	S1129	15 minute 100 year Winter I+30%	15	1	22.093	21.854	1.261	0.000	1.12	2.734	181.5	FLOOD RISK

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	15 minute 100 year Winter I+30%	15	1	21.820	21.643	1.222	0.000	2.39	3.756	188.2	FLOOD RISK
S14.000	S1160	15 minute 100 year Winter I+30%	15	1	21.558	21.426	0.992	0.000	0.08	1.949	6.7	FLOOD RISK
S11.011	S1131	15 minute 100 year Winter I+30%	15	1	21.725	21.424	1.029	0.000	2.10	3.946	204.5	SURCHARGED
S9.005	S1105	15 minute 100 year Winter I+30%	15	1	21.723	20.785	0.547	0.000	1.59	8.538	358.1	SURCHARGED
S15.000	S1169	15 minute 100 year Winter I+30%	15	1	24.601	23.040	-0.175	0.000	0.11	0.051	9.3	OK
S15.001	S1170	15 minute 100 year Winter I+30%	15	1	23.616	22.124	-0.056	0.000	0.75	0.269	48.6	OK
S15.002	S1171	15 minute 100 year Winter I+30%	15	1	23.461	22.043	-0.001	0.000	0.36	0.567	52.2	OK
S15.003	S1172	15 minute 100 year Winter I+30%	15	1	22.404	21.997	0.419	0.000	0.46	2.219	63.0	SURCHARGED
S15.004	S1173	15 minute 100 year Winter I+30%	15	1	22.405	21.950	0.671	0.000	0.50	1.662	65.2	SURCHARGED
S15.005	S1174	15 minute 100 year Winter I+30%	15	1	21.950	21.848	0.969	0.000	0.55	2.929	65.8	FLOOD RISK
S16.000	SH119	15 minute 100 year Winter I+30%	15	1	21.753	21.762	1.062	8.605	1.24	10.125	72.8	FLOOD
S15.006	S1175	15 minute 100 year Winter I+30%	15	1	21.840	21.778	1.125	0.000	1.52	2.771	95.5	FLOOD RISK
S15.007	S1176	15 minute 100 year Winter I+30%	15	1	22.088	21.645	1.162	0.000	2.14	4.463	114.3	SURCHARGED
S17.000	S1200	15 minute 100 year Summer I+30%	15	1	25.344	23.694	-0.150	0.000	0.00	0.000	0.0	OK
S17.001	S1201	15 minute 100 year Winter I+30%	15	1	25.284	23.564	-0.130	0.000	0.37	0.142	22.4	OK
S17.002	S1202	15 minute 100 year Winter I+30%	15	1	24.984	23.473	0.100	0.000	1.23	0.831	43.2	SURCHARGED
S18.000	S1220	15 minute 100 year Winter I+30%	15	1	24.890	23.399	0.013	0.000	0.54	0.179	9.3	SURCHARGED
S17.003	S1203	15 minute 100 year Winter I+30%	15	1	24.846	23.373	0.098	0.000	0.95	1.117	66.6	SURCHARGED
S17.004	S1204	15 minute 100 year Winter I+30%	15	1	24.117	22.887	0.270	0.000	1.01	1.177	72.0	SURCHARGED
S17.005	S1205	15 minute 100 year Winter I+30%	15	1	23.788	22.600	0.312	0.000	0.96	1.080	75.0	SURCHARGED
S19.000	S1230	15 minute 100 year Winter I+30%	15	1	23.400	22.257	-0.105	0.000	0.55	0.131	20.3	OK
S19.001	S1231	15 minute 100 year Winter I+30%	15	1	23.300	22.233	-0.055	0.000	0.38	0.397	33.6	OK
S17.006	S1206	15 minute 100 year Winter I+30%	15	1	23.200	22.201	0.337	0.000	0.70	2.004	117.1	SURCHARGED
S17.007	S1207	15 minute 100 year Winter I+30%	15	1	23.000	22.100	0.483	0.000	1.12	3.306	142.2	SURCHARGED
S17.008	S1208	15 minute 100 year Winter I+30%	15	1	22.890	21.985	0.473	0.000	1.19	2.550	156.8	SURCHARGED
S17.009	S1209	15 minute 100 year Winter I+30%	15	1	22.660	21.839	0.441	0.000	1.01	2.811	165.6	SURCHARGED
S17.010	S1210	15 minute 100 year Winter I+30%	15	1	22.325	21.657	0.435	0.000	0.51	2.612	175.5	SURCHARGED
S15.008	S1177	15 minute 100 year Winter I+30%	15	1	21.960	21.457	1.010	0.000	2.70	4.134	285.3	SURCHARGED
S15.009	S1178	15 minute 100 year Winter I+30%	15	1	21.925	21.199	0.779	0.000	1.48	3.108	296.5	SURCHARGED
S15.010	S1179	15 minute 100 year Winter I+30%	15	1	21.794	20.916	0.623	0.000	1.79	2.712	302.5	SURCHARGED
S15.011	S1180	15 minute 100 year Winter I+30%	15	1	21.717	20.624	0.408	0.000	2.23	2.729	306.4	SURCHARGED
S15.012	S1181	15 minute 100 year Winter I+30%	15	1	21.740	20.328	0.161	0.000	1.44	3.158	305.5	SURCHARGED
S20.000	S1240	15 minute 100 year Winter I+30%	15	1	22.551	20.952	-0.099	0.000	0.25	0.052	4.3	OK
S20.001	S1241	15 minute 100 year Winter I+30%	15	1	22.187	20.764	0.100	0.000	1.21	0.727	96.1	SURCHARGED
S20.002	S1242	15 minute 100 year Winter I+30%	15	1	22.030	20.568	0.038	0.000	1.03	1.227	97.5	SURCHARGED
S21.000	S1250	15 minute 100 year Winter I+30%	15	1	22.489	22.014	0.801	0.000	0.35	1.070	5.9	SURCHARGED
S21.001	S1251	15 minute 100 year Winter I+30%	15	1	22.756	22.001	1.030	0.000	0.61	1.869	20.6	SURCHARGED
S21.002	S1252	15 minute 100 year Winter I+30%	15	1	22.692	21.975	1.126	0.000	0.65	2.292	32.8	SURCHARGED
S21.003	S1253	15 minute 100 year Winter I+30%	15	1	22.582	21.947	1.233	0.000	0.36	2.080	28.5	SURCHARGED
S22.000	S1270	15 minute 100 year Winter I+30%	15	1	23.967	22.493	-0.125	0.000	0.40	0.107	19.5	OK
S23.000	S1280	15 minute 100 year Winter I+30%	15	1	24.231	22.624	-0.085	0.000	0.39	0.068	13.8	OK
S22.001	S1271	15 minute 100 year Winter I+30%	15	1	24.084	22.434	0.113	0.000	0.38	1.343	51.3	SURCHARGED
S24.000	S1290	15 minute 100 year Winter I+30%	15	1	23.135	22.450	0.815	0.000	0.90	1.086	15.6	SURCHARGED
S22.002	S1272	15 minute 100 year Winter I+30%	15	1	23.338	22.389	0.897	0.000	0.86	5.083	83.9	SURCHARGED
S22.003	S1273	15 minute 100 year Winter I+30%	15	1	23.510	22.341	0.882	0.000	0.65	4.534	81.9	SURCHARGED
S22.004	S1274	15 minute 100 year Winter I+30%	15	1	23.371	22.317	0.902	0.000	0.65	4.060	92.7	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	15 minute 100 year Winter I+30%	15	1	23.170	22.288	0.931	0.000	0.67	4.718	105.4	SURCHARGED
S25.000	S1300	15 minute 100 year Winter I+30%	15	1	23.321	22.521	0.625	0.000	0.85	0.956	61.9	SURCHARGED
S22.006	S1277	15 minute 100 year Winter I+30%	15	1	22.897	22.245	0.985	0.000	1.48	7.685	152.9	SURCHARGED
S22.007	S1278	15 minute 100 year Winter I+30%	15	1	22.785	22.169	0.946	0.000	0.50	3.403	156.2	SURCHARGED
S22.008	S1279	15 minute 100 year Winter I+30%	15	1	22.460	22.072	1.265	0.000	0.75	7.506	229.9	SURCHARGED
S26.000	SH310	15 minute 100 year Winter I+30%	15	1	22.925	22.265	0.840	0.000	0.19	1.199	14.4	SURCHARGED
S27.000	S1320	15 minute 100 year Winter I+30%	15	1	22.334	22.253	1.203	0.000	0.19	1.609	6.5	FLOOD RISK
S27.001	S1321	15 minute 100 year Winter I+30%	15	1	22.453	22.250	1.271	0.000	0.37	2.121	13.2	FLOOD RISK
S26.001	S1311	15 minute 100 year Winter I+30%	15	1	22.687	22.241	1.383	0.000	0.65	3.548	48.8	SURCHARGED
S26.002	S1312	15 minute 100 year Winter I+30%	15	1	22.300	22.151	1.505	0.000	1.50	4.746	102.1	FLOOD RISK
S21.004	S1254	15 minute 100 year Winter I+30%	15	1	22.251	21.919	1.409	0.000	1.63	11.538	416.1	SURCHARGED
S21.005	S1255	15 minute 100 year Winter I+30%	15	1	21.929	21.759	1.318	0.000	2.63	12.709	418.4	FLOOD RISK
S21.006	S1256	15 minute 100 year Winter I+30%	15	1	21.861	21.599	1.183	0.000	2.52	6.257	419.7	FLOOD RISK
S21.007	S1257	15 minute 100 year Winter I+30%	15	1	21.952	21.437	1.050	0.000	2.68	6.559	426.3	SURCHARGED
S21.008	S1258	15 minute 100 year Winter I+30%	15	1	22.067	21.238	0.890	0.000	2.55	7.697	426.2	SURCHARGED
S21.009	S1259	15 minute 100 year Winter I+30%	15	1	21.898	21.065	0.747	0.000	2.52	6.178	430.5	SURCHARGED
S21.010	S1260	15 minute 100 year Winter I+30%	15	1	21.875	20.883	0.596	0.000	2.20	6.075	428.2	SURCHARGED
S21.011	S1261	15 minute 100 year Winter I+30%	15	1	21.892	20.700	0.427	0.000	1.91	3.284	446.3	SURCHARGED
S28.000	S1330	30 minute 100 year Winter I+30%	30	1	21.676	20.479	0.084	0.000	0.19	0.758	19.5	SURCHARGED
S28.001	S1331	30 minute 100 year Winter I+30%	30	1	21.339	20.475	0.110	0.000	0.46	2.500	45.2	SURCHARGED
S28.002	S1332	30 minute 100 year Winter I+30%	30	1	21.250	20.462	-0.163	0.000	0.19	3.749	48.9	OK
S28.003	S1333	30 minute 100 year Winter I+30%	30	1	21.589	20.458	-0.137	0.000	0.23	7.781	50.7	OK
S28.004	S1334	30 minute 100 year Winter I+30%	30	1	21.694	20.453	-0.117	0.000	0.06	7.054	45.5	OK
S21.012	S1262	30 minute 100 year Winter I+30%	30	1	21.693	20.444	0.094	0.000	1.44	25.767	470.7	SURCHARGED
S21.013	S1263	30 minute 100 year Winter I+30%	30	1	21.600	20.340	0.040	0.000	1.14	15.709	471.5	SURCHARGED
S20.003	S1243	30 minute 100 year Winter I+30%	30	1	21.642	20.303	0.032	0.000	2.66	5.983	539.1	SURCHARGED
S1.021	S1025-Basin A1	30 minute 100 year Winter I+30%	30	1	20.650	19.775	0.295	0.000	0.61	1324.320	55.7	SURCHARGED
S1.022	S1026-Con	30 minute 100 year Winter I+30%	30	1	21.144	19.755	0.311	0.000	0.78	3.110	55.5	SURCHARGED
S1.023	S1027	30 minute 100 year Winter I+30%	30	1	21.298	19.301	-1.997	0.000	0.00	0.612	55.5	OK
S1.024	S1028	30 minute 100 year Winter I+30%	30	1	21.261	19.221	-2.040	0.000	0.00	2.116	55.5	OK
S1.025	S1029	30 minute 100 year Winter I+30%	30	1	21.175	19.124	-2.051	0.000	0.00	2.013	55.5	OK
S1.026	S1030	30 minute 100 year Winter I+30%	30	1	21.018	19.100	-1.918	0.000	0.00	0.416	55.5	OK
S1.027	S1031	30 minute 100 year Winter I+30%	30	1	20.969	18.977	-1.992	0.000	0.00	0.142	55.5	OK