Trafford Wharf Road Trafford Park Manchester M17 1HH	
Date 04/11/2020 15:26	Designed by MOSSROOR.KHAN
File PARCEL B-RIMINGTON.MDX	Checked by
Micro Drainage	Network 2019.1

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for SW2

Pipe Sizes Standard Manhole Sizes Standard

FSR Rainfall Model - England and Wales

Return Period (years)	100	PIMP (%)	100
M5-60 (mm)	19.200	Add Flow / Climate Change (%)	0
Ratio R	0.250	Minimum Backdrop Height (m)	0.200
Maximum Rainfall (mm/hr)	50	Maximum Backdrop Height (m)	1.500
Maximum Time of Concentration (mins)	30	Min Design Depth for Optimisation (m)	1.200
Foul Sewage (l/s/ha)	0.000	Min Vel for Auto Design only (m/s)	1.00
Volumetric Runoff Coeff.	0.750	Min Slope for Optimisation (1:X)	450

Designed with Level Soffits

Network Design Table for SW2

« - Indicates pipe capacity < flow

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
1.000	20.650	0.340	60.7	0.010	5.00	0.0	0.600	o	150	Pipe/Conduit	
1.001	18.265	0.180	101.5	0.010	0.00	0.0	0.600	o	150	Pipe/Conduit	
1.002	17.506	0.200	87.5	0.010	0.00	0.0	0.600	o	150	Pipe/Conduit	
1.003	9.682	0.896	10.8	0.005	0.00	0.0	0.600	o	150	Pipe/Conduit	
2.000	33.681	1.070	31.5	0.010	5.00	0.0	0.600	o	150	Pipe/Conduit	
2.001	29.999	0.240	125.0	0.010	0.00	0.0	0.600	o	150	Pipe/Conduit	
2.002	29.107	0.240	121.3	0.010	0.00	0.0	0.600	o	150	Pipe/Conduit	
2.003	23.429	0.230	101.9	0.010	0.00	0.0	0.600	o	150	Pipe/Conduit	
2.004	7.112	0.249	28.6	0.005	0.00	0.0	0.600	o	150	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)
1.000	50.00	5.27	147.520	0.010	0.0	0.0	0.0	1.29	22.8	1.4
1.001	50.00	5.57	147.180	0.020	0.0	0.0	0.0	1.00	17.6	2.7
1.002	50.00	5.84	147.000	0.030	0.0	0.0	0.0	1.07	19.0	4.1
1.003	50.00	5.90	146.800	0.035	0.0	0.0	0.0	3.08	54.5	4.7
2.000	50.00	5.31	149.030	0.010	0.0	0.0	0.0	1.80	31.8	1.4
2.001	50.00	5.87	147.960	0.020	0.0	0.0	0.0	0.90	15.9	2.7
2.002	50.00	6.40	147.720	0.030	0.0	0.0	0.0	0.91	16.1	4.1
2.003	50.00	6.79	147.480	0.040	0.0	0.0	0.0	1.00	17.6	5.4
2.004	50.00	6.86	147.250	0.045	0.0	0.0	0.0	1.89	33.4	6.1

Network Design Table for SW2

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
3.000	26.689	1.000	26.7	0.010	5.00	0.0	0.600	o	150	Pipe/Conduit	
3.001	34.098	2.130	16.0	0.015	0.00	0.0	0.600	o	150	Pipe/Conduit	
3.002	32.657	0.320	102.1	0.010	0.00	0.0	0.600	o	150	Pipe/Conduit	
3.003	45.319	0.350	129.5	0.015	0.00	0.0	0.600	o	150	Pipe/Conduit	
3.004	38.622	0.300	128.7	0.015	0.00	0.0	0.600	o	150	Pipe/Conduit	
3.005	4.604	0.060	76.7	0.010	0.00	0.0	0.600	o	150	Pipe/Conduit	
3.006	24.395	0.350	69.7	0.010	0.00	0.0	0.600	o	150	Pipe/Conduit	
3.007	16.659	0.999	16.7	0.010	0.00	0.0	0.600	o	150	Pipe/Conduit	
2.005	20.486	0.171	119.8	0.010	0.00	0.0	0.600	o	150	Pipe/Conduit	
2.006	47.353	0.980	48.3	0.015	0.00	0.0	0.600	o	150	Pipe/Conduit	
4.000	19.438	1.007	19.3	0.010	5.00	0.0	0.600	o	150	Pipe/Conduit	
5.000	9.400	0.075	125.0	0.000	5.00	0.0	0.600	o	150	Pipe/Conduit	
1.004	22.715	1.740	13.1	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
1.005	30.145	3.349	9.0	0.000	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)
3.000	50.00	5.23	152.510	0.010	0.0	0.0	0.0	1.96	34.6	1.4
3.001	50.00	5.45	151.510	0.025	0.0	0.0	0.0	2.53	44.7	3.4
3.002	50.00	6.00	149.380	0.035	0.0	0.0	0.0	0.99	17.6	4.7
3.003	50.00	6.86	149.060	0.050	0.0	0.0	0.0	0.88	15.6	6.8
3.004	50.00	7.58	148.710	0.065	0.0	0.0	0.0	0.88	15.6	8.8
3.005	50.00	7.65	148.410	0.075	0.0	0.0	0.0	1.15	20.3	10.2
3.006	50.00	7.99	148.350	0.085	0.0	0.0	0.0	1.21	21.3	11.5
3.007	50.00	8.10	148.000	0.095	0.0	0.0	0.0	2.48	43.8	12.9
2.005	50.00	8.47	147.001	0.150	0.0	0.0	0.0	0.92	16.2«	20.3
2.006	50.00	9.02	146.880	0.165	0.0	0.0	0.0	1.45	25.6	22.3
4.000	50.00	5.14	146.907	0.010	0.0	0.0	0.0	2.30	40.7	1.4
5.000	50.00	5.17	145.975	0.000	0.0	0.0	0.0	0.90	15.9	0.0
1.004	50.00	9.12	146.450	0.210	0.0	0.0	0.0	3.64	144.8	28.4
1.005	50.00	9.23	144.635	0.210	0.0	0.0	0.0	4.39	174.5	28.4

Manhole Schedules for SW2

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
CP27	148.420	0.900	Open Manhole	500	1.000	147.520	150				
CP28	148.080	0.900	Open Manhole	500	1.001	147.180	150	1.000	147.180	150	
CP29	148.310	1.310	Open Manhole	500	1.002	147.000	150	1.001	147.000	150	
CP30	147.860	1.060	Open Manhole	500	1.003	146.800	150	1.002	146.800	150	
CP20	149.930	0.900	Open Manhole	500	2.000	149.030	150				
CP21	148.860	0.900	Open Manhole	500	2.001	147.960	150	2.000	147.960	150	
CP22	148.740	1.020	Open Manhole	500	2.002	147.720	150	2.001	147.720	150	
CP23	149.230	1.750	Open Manhole	500	2.003	147.480	150	2.002	147.480	150	
CP24	149.000	1.750	Open Manhole	500	2.004	147.250	150	2.003	147.250	150	
CP12	153.410	0.900	Open Manhole	500	3.000	152.510	150				
CP13	152.410	0.900	Open Manhole	500	3.001	151.510	150	3.000	151.510	150	
CP14	150.280	0.900	Open Manhole	500	3.002	149.380	150	3.001	149.380	150	
CP15	149.960	0.900	Open Manhole	500	3.003	149.060	150	3.002	149.060	150	
CP16	150.000	1.290	Open Manhole	500	3.004	148.710	150	3.003	148.710	150	
CP17	150.025	1.615	Open Manhole	500	3.005	148.410	150	3.004	148.410	150	
CP18	150.380	2.030	Open Manhole	500	3.006	148.350	150	3.005	148.350	150	
CP19	149.640	1.640	Open Manhole	500	3.007	148.000	150	3.006	148.000	150	
CP25	149.010	2.009	Open Manhole	500	2.005	147.001	150	2.004	147.001	150	
								3.007	147.001	150	
CP26	148.330	1.500	Open Manhole	500	2.006	146.880	150	2.005	146.830	150	
CP31	147.610	0.703	Open Manhole	500	4.000	146.907	150				
T2	147.339	1.364	Open Manhole	1200	5.000	145.975	150				
SW3	147.250	1.350	Open Manhole	1500	1.004	146.450	225	1.003	145.904	150	
								2.006	145.900	150	
								4.000	145.900	150	
								5.000	145.900	150	
SW4	146.060	1.425	Open Manhole	1500	1.005	144.635	225	1.004	144.710	225	75
HW2	142.110	0.824	Open Manhole	0		OUTFALL		1.005	141.286	225	

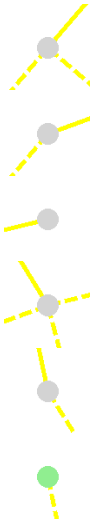
MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
CP27	383413.158	446903.793	383413.158	446903.793	Required	
CP28	383404.197	446922.397	383404.197	446922.397	Required	

Manhole Schedules for SW2

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
CP29	383397.101	446939.228	383397.101	446939.228	Required	
CP30	383390.523	446955.451	383390.523	446955.451	Required	
CP20	383420.601	446849.078	383420.601	446849.078	Required	
CP21	383395.976	446872.057	383395.976	446872.057	Required	
CP22	383374.043	446892.524	383374.043	446892.524	Required	
CP23	383352.762	446912.383	383352.762	446912.383	Required	
CP24	383335.633	446928.367	383335.633	446928.367	Required	
CP12	383458.795	446804.828	383458.795	446804.828	Required	
CP13	383433.453	446796.457	383433.453	446796.457	Required	
CP14	383408.496	446819.693	383408.496	446819.693	Required	
CP15	383384.595	446841.946	383384.595	446841.946	Required	
CP16	383351.426	446872.828	383351.426	446872.828	Required	
CP17	383323.160	446899.145	383323.160	446899.145	Required	
CP18	383319.834	446895.962	383319.834	446895.962	Required	
CP19	383319.374	446920.352	383319.374	446920.352	Required	

Manhole Schedules for SW2

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
CP25	383330.229	446932.990	383330.229	446932.990	Required	
CP26	383343.533	446948.568	383343.533	446948.568	Required	
CP31	383406.894	446969.434	383406.894	446969.434	Required	
SW3	383388.015	446964.803	383388.015	446964.803	Required	
SW4	383376.030	446984.099	383376.030	446984.099	Required	
HW2	383369.843	447013.602			No Entry	



PIPELINE SCHEDULES for SW2

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)
1.000	o	150	CP27	148.420	147.520	0.750	Open Manhole	500
1.001	o	150	CP28	148.080	147.180	0.750	Open Manhole	500
1.002	o	150	CP29	148.310	147.000	1.160	Open Manhole	500
1.003	o	150	CP30	147.860	146.800	0.910	Open Manhole	500
2.000	o	150	CP20	149.930	149.030	0.750	Open Manhole	500
2.001	o	150	CP21	148.860	147.960	0.750	Open Manhole	500
2.002	o	150	CP22	148.740	147.720	0.870	Open Manhole	500
2.003	o	150	CP23	149.230	147.480	1.600	Open Manhole	500
2.004	o	150	CP24	149.000	147.250	1.600	Open Manhole	500
3.000	o	150	CP12	153.410	152.510	0.750	Open Manhole	500
3.001	o	150	CP13	152.410	151.510	0.750	Open Manhole	500
3.002	o	150	CP14	150.280	149.380	0.750	Open Manhole	500
3.003	o	150	CP15	149.960	149.060	0.750	Open Manhole	500
3.004	o	150	CP16	150.000	148.710	1.140	Open Manhole	500
3.005	o	150	CP17	150.025	148.410	1.465	Open Manhole	500
3.006	o	150	CP18	150.380	148.350	1.880	Open Manhole	500
3.007	o	150	CP19	149.640	148.000	1.490	Open Manhole	500
2.005	o	150	CP25	149.010	147.001	1.859	Open Manhole	500

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)
1.000	20.650	60.7	CP28	148.080	147.180	0.750	Open Manhole	500
1.001	18.265	101.5	CP29	148.310	147.000	1.160	Open Manhole	500
1.002	17.506	87.5	CP30	147.860	146.800	0.910	Open Manhole	500
1.003	9.682	10.8	SW3	147.250	145.904	1.196	Open Manhole	1500
2.000	33.681	31.5	CP21	148.860	147.960	0.750	Open Manhole	500
2.001	29.999	125.0	CP22	148.740	147.720	0.870	Open Manhole	500
2.002	29.107	121.3	CP23	149.230	147.480	1.600	Open Manhole	500
2.003	23.429	101.9	CP24	149.000	147.250	1.600	Open Manhole	500
2.004	7.112	28.6	CP25	149.010	147.001	1.859	Open Manhole	500
3.000	26.689	26.7	CP13	152.410	151.510	0.750	Open Manhole	500
3.001	34.098	16.0	CP14	150.280	149.380	0.750	Open Manhole	500
3.002	32.657	102.1	CP15	149.960	149.060	0.750	Open Manhole	500
3.003	45.319	129.5	CP16	150.000	148.710	1.140	Open Manhole	500
3.004	38.622	128.7	CP17	150.025	148.410	1.465	Open Manhole	500
3.005	4.604	76.7	CP18	150.380	148.350	1.880	Open Manhole	500
3.006	24.395	69.7	CP19	149.640	148.000	1.490	Open Manhole	500
3.007	16.659	16.7	CP25	149.010	147.001	1.859	Open Manhole	500
2.005	20.486	119.8	CP26	148.330	146.830	1.350	Open Manhole	500

PIPELINE SCHEDULES for SW2

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)
2.006	o	150	CP26	148.330	146.880	1.300	Open Manhole	500
4.000	o	150	CP31	147.610	146.907	0.553	Open Manhole	500
5.000	o	150	T2	147.339	145.975	1.214	Open Manhole	1200
1.004	o	225	SW3	147.250	146.450	0.575	Open Manhole	1500
1.005	o	225	SW4	146.060	144.635	1.200	Open Manhole	1500

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)
2.006	47.353	48.3	SW3	147.250	145.900	1.200	Open Manhole	1500
4.000	19.438	19.3	SW3	147.250	145.900	1.200	Open Manhole	1500
5.000	9.400	125.0	SW3	147.250	145.900	1.200	Open Manhole	1500
1.004	22.715	13.1	SW4	146.060	144.710	1.125	Open Manhole	1500
1.005	30.145	9.0	HW2	142.110	141.286	0.599	Open Manhole	0

Surcharged Outfall Details for SW2

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
1.005	HW2	142.110	141.286	0.000	0	0

Datum (m) 141.286 Offset (mins) 0

Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)
15	1.000	165	1.000	315	1.000	465	1.000	615	1.000	765	1.000
30	1.000	180	1.000	330	1.000	480	1.000	630	1.000	780	1.000
45	1.000	195	1.000	345	1.000	495	1.000	645	1.000	795	1.000
60	1.000	210	1.000	360	1.000	510	1.000	660	1.000	810	1.000
75	1.000	225	1.000	375	1.000	525	1.000	675	1.000	825	1.000
90	1.000	240	1.000	390	1.000	540	1.000	690	1.000	840	1.000
105	1.000	255	1.000	405	1.000	555	1.000	705	1.000	855	1.000
120	1.000	270	1.000	420	1.000	570	1.000	720	1.000	870	1.000
135	1.000	285	1.000	435	1.000	585	1.000	735	1.000	885	1.000
150	1.000	300	1.000	450	1.000	600	1.000	750	1.000	900	1.000

Surcharged Outfall Details for SW2

Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)
915	1.000	1665	1.000	2415	1.000	3165	1.000	3915	1.000	4665	1.000
930	1.000	1680	1.000	2430	1.000	3180	1.000	3930	1.000	4680	1.000
945	1.000	1695	1.000	2445	1.000	3195	1.000	3945	1.000	4695	1.000
960	1.000	1710	1.000	2460	1.000	3210	1.000	3960	1.000	4710	1.000
975	1.000	1725	1.000	2475	1.000	3225	1.000	3975	1.000	4725	1.000
990	1.000	1740	1.000	2490	1.000	3240	1.000	3990	1.000	4740	1.000
1005	1.000	1755	1.000	2505	1.000	3255	1.000	4005	1.000	4755	1.000
1020	1.000	1770	1.000	2520	1.000	3270	1.000	4020	1.000	4770	1.000
1035	1.000	1785	1.000	2535	1.000	3285	1.000	4035	1.000	4785	1.000
1050	1.000	1800	1.000	2550	1.000	3300	1.000	4050	1.000	4800	1.000
1065	1.000	1815	1.000	2565	1.000	3315	1.000	4065	1.000	4815	1.000
1080	1.000	1830	1.000	2580	1.000	3330	1.000	4080	1.000	4830	1.000
1095	1.000	1845	1.000	2595	1.000	3345	1.000	4095	1.000	4845	1.000
1110	1.000	1860	1.000	2610	1.000	3360	1.000	4110	1.000	4860	1.000
1125	1.000	1875	1.000	2625	1.000	3375	1.000	4125	1.000	4875	1.000
1140	1.000	1890	1.000	2640	1.000	3390	1.000	4140	1.000	4890	1.000
1155	1.000	1905	1.000	2655	1.000	3405	1.000	4155	1.000	4905	1.000
1170	1.000	1920	1.000	2670	1.000	3420	1.000	4170	1.000	4920	1.000
1185	1.000	1935	1.000	2685	1.000	3435	1.000	4185	1.000	4935	1.000
1200	1.000	1950	1.000	2700	1.000	3450	1.000	4200	1.000	4950	1.000
1215	1.000	1965	1.000	2715	1.000	3465	1.000	4215	1.000	4965	1.000
1230	1.000	1980	1.000	2730	1.000	3480	1.000	4230	1.000	4980	1.000
1245	1.000	1995	1.000	2745	1.000	3495	1.000	4245	1.000	4995	1.000
1260	1.000	2010	1.000	2760	1.000	3510	1.000	4260	1.000	5010	1.000
1275	1.000	2025	1.000	2775	1.000	3525	1.000	4275	1.000	5025	1.000
1290	1.000	2040	1.000	2790	1.000	3540	1.000	4290	1.000	5040	1.000
1305	1.000	2055	1.000	2805	1.000	3555	1.000	4305	1.000	5055	1.000
1320	1.000	2070	1.000	2820	1.000	3570	1.000	4320	1.000	5070	1.000
1335	1.000	2085	1.000	2835	1.000	3585	1.000	4335	1.000	5085	1.000
1350	1.000	2100	1.000	2850	1.000	3600	1.000	4350	1.000	5100	1.000
1365	1.000	2115	1.000	2865	1.000	3615	1.000	4365	1.000	5115	1.000
1380	1.000	2130	1.000	2880	1.000	3630	1.000	4380	1.000	5130	1.000
1395	1.000	2145	1.000	2895	1.000	3645	1.000	4395	1.000	5145	1.000
1410	1.000	2160	1.000	2910	1.000	3660	1.000	4410	1.000	5160	1.000
1425	1.000	2175	1.000	2925	1.000	3675	1.000	4425	1.000	5175	1.000
1440	1.000	2190	1.000	2940	1.000	3690	1.000	4440	1.000	5190	1.000
1455	1.000	2205	1.000	2955	1.000	3705	1.000	4455	1.000	5205	1.000
1470	1.000	2220	1.000	2970	1.000	3720	1.000	4470	1.000	5220	1.000
1485	1.000	2235	1.000	2985	1.000	3735	1.000	4485	1.000	5235	1.000
1500	1.000	2250	1.000	3000	1.000	3750	1.000	4500	1.000	5250	1.000
1515	1.000	2265	1.000	3015	1.000	3765	1.000	4515	1.000	5265	1.000
1530	1.000	2280	1.000	3030	1.000	3780	1.000	4530	1.000	5280	1.000
1545	1.000	2295	1.000	3045	1.000	3795	1.000	4545	1.000	5295	1.000
1560	1.000	2310	1.000	3060	1.000	3810	1.000	4560	1.000	5310	1.000
1575	1.000	2325	1.000	3075	1.000	3825	1.000	4575	1.000	5325	1.000
1590	1.000	2340	1.000	3090	1.000	3840	1.000	4590	1.000	5340	1.000
1605	1.000	2355	1.000	3105	1.000	3855	1.000	4605	1.000	5355	1.000
1620	1.000	2370	1.000	3120	1.000	3870	1.000	4620	1.000	5370	1.000
1635	1.000	2385	1.000	3135	1.000	3885	1.000	4635	1.000	5385	1.000
1650	1.000	2400	1.000	3150	1.000	3900	1.000	4650	1.000	5400	1.000

Surcharged Outfall Details for SW2

Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)
5415	1.000	6165	1.000	6915	1.000	7665	1.000	8415	1.000	9165	1.000
5430	1.000	6180	1.000	6930	1.000	7680	1.000	8430	1.000	9180	1.000
5445	1.000	6195	1.000	6945	1.000	7695	1.000	8445	1.000	9195	1.000
5460	1.000	6210	1.000	6960	1.000	7710	1.000	8460	1.000	9210	1.000
5475	1.000	6225	1.000	6975	1.000	7725	1.000	8475	1.000	9225	1.000
5490	1.000	6240	1.000	6990	1.000	7740	1.000	8490	1.000	9240	1.000
5505	1.000	6255	1.000	7005	1.000	7755	1.000	8505	1.000	9255	1.000
5520	1.000	6270	1.000	7020	1.000	7770	1.000	8520	1.000	9270	1.000
5535	1.000	6285	1.000	7035	1.000	7785	1.000	8535	1.000	9285	1.000
5550	1.000	6300	1.000	7050	1.000	7800	1.000	8550	1.000	9300	1.000
5565	1.000	6315	1.000	7065	1.000	7815	1.000	8565	1.000	9315	1.000
5580	1.000	6330	1.000	7080	1.000	7830	1.000	8580	1.000	9330	1.000
5595	1.000	6345	1.000	7095	1.000	7845	1.000	8595	1.000	9345	1.000
5610	1.000	6360	1.000	7110	1.000	7860	1.000	8610	1.000	9360	1.000
5625	1.000	6375	1.000	7125	1.000	7875	1.000	8625	1.000	9375	1.000
5640	1.000	6390	1.000	7140	1.000	7890	1.000	8640	1.000	9390	1.000
5655	1.000	6405	1.000	7155	1.000	7905	1.000	8655	1.000	9405	1.000
5670	1.000	6420	1.000	7170	1.000	7920	1.000	8670	1.000	9420	1.000
5685	1.000	6435	1.000	7185	1.000	7935	1.000	8685	1.000	9435	1.000
5700	1.000	6450	1.000	7200	1.000	7950	1.000	8700	1.000	9450	1.000
5715	1.000	6465	1.000	7215	1.000	7965	1.000	8715	1.000	9465	1.000
5730	1.000	6480	1.000	7230	1.000	7980	1.000	8730	1.000	9480	1.000
5745	1.000	6495	1.000	7245	1.000	7995	1.000	8745	1.000	9495	1.000
5760	1.000	6510	1.000	7260	1.000	8010	1.000	8760	1.000	9510	1.000
5775	1.000	6525	1.000	7275	1.000	8025	1.000	8775	1.000	9525	1.000
5790	1.000	6540	1.000	7290	1.000	8040	1.000	8790	1.000	9540	1.000
5805	1.000	6555	1.000	7305	1.000	8055	1.000	8805	1.000	9555	1.000
5820	1.000	6570	1.000	7320	1.000	8070	1.000	8820	1.000	9570	1.000
5835	1.000	6585	1.000	7335	1.000	8085	1.000	8835	1.000	9585	1.000
5850	1.000	6600	1.000	7350	1.000	8100	1.000	8850	1.000	9600	1.000
5865	1.000	6615	1.000	7365	1.000	8115	1.000	8865	1.000	9615	1.000
5880	1.000	6630	1.000	7380	1.000	8130	1.000	8880	1.000	9630	1.000
5895	1.000	6645	1.000	7395	1.000	8145	1.000	8895	1.000	9645	1.000
5910	1.000	6660	1.000	7410	1.000	8160	1.000	8910	1.000	9660	1.000
5925	1.000	6675	1.000	7425	1.000	8175	1.000	8925	1.000	9675	1.000
5940	1.000	6690	1.000	7440	1.000	8190	1.000	8940	1.000	9690	1.000
5955	1.000	6705	1.000	7455	1.000	8205	1.000	8955	1.000	9705	1.000
5970	1.000	6720	1.000	7470	1.000	8220	1.000	8970	1.000	9720	1.000
5985	1.000	6735	1.000	7485	1.000	8235	1.000	8985	1.000	9735	1.000
6000	1.000	6750	1.000	7500	1.000	8250	1.000	9000	1.000	9750	1.000
6015	1.000	6765	1.000	7515	1.000	8265	1.000	9015	1.000	9765	1.000
6030	1.000	6780	1.000	7530	1.000	8280	1.000	9030	1.000	9780	1.000
6045	1.000	6795	1.000	7545	1.000	8295	1.000	9045	1.000	9795	1.000
6060	1.000	6810	1.000	7560	1.000	8310	1.000	9060	1.000	9810	1.000
6075	1.000	6825	1.000	7575	1.000	8325	1.000	9075	1.000	9825	1.000
6090	1.000	6840	1.000	7590	1.000	8340	1.000	9090	1.000	9840	1.000
6105	1.000	6855	1.000	7605	1.000	8355	1.000	9105	1.000	9855	1.000
6120	1.000	6870	1.000	7620	1.000	8370	1.000	9120	1.000	9870	1.000
6135	1.000	6885	1.000	7635	1.000	8385	1.000	9135	1.000	9885	1.000
6150	1.000	6900	1.000	7650	1.000	8400	1.000	9150	1.000	9900	1.000

Surcharged Outfall Details for SW2

Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)
9915	1.000	10065	1.000	10215	1.000	10365	1.000	10515	1.000	10665	1.000
9930	1.000	10080	1.000	10230	1.000	10380	1.000	10530	1.000	10680	1.000
9945	1.000	10095	1.000	10245	1.000	10395	1.000	10545	1.000	10695	1.000
9960	1.000	10110	1.000	10260	1.000	10410	1.000	10560	1.000	10710	1.000
9975	1.000	10125	1.000	10275	1.000	10425	1.000	10575	1.000	10725	1.000
9990	1.000	10140	1.000	10290	1.000	10440	1.000	10590	1.000	10740	1.000
10005	1.000	10155	1.000	10305	1.000	10455	1.000	10605	1.000	10755	1.000
10020	1.000	10170	1.000	10320	1.000	10470	1.000	10620	1.000	10770	1.000
10035	1.000	10185	1.000	10335	1.000	10485	1.000	10635	1.000	10785	1.000
10050	1.000	10200	1.000	10350	1.000	10500	1.000	10650	1.000	10800	1.000

Simulation Criteria for SW2

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	2.000
Hot Start (mins)	0	Inlet Coeffiecient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs	0	Number of Storage Structures	4
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.200	Storm Duration (mins)	30
Ratio R	0.250		

Online Controls for SW2

Hydro-Brake® Optimum Manhole: SW3, DS/PN: 1.004, Volume (m³): 2.9

Unit Reference	MD-SHE-0109-5000-0800-5000
Design Head (m)	0.800
Design Flow (l/s)	5.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	109
Invert Level (m)	146.450
Minimum Outlet Pipe Diameter (mm)	150
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	0.800	5.0
Flush-Flo™	0.241	5.0
Kick-Flo®	0.537	4.2
Mean Flow over Head Range	-	4.3

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)
0.100	3.7	1.200	6.0	3.000	9.3	7.000	13.9
0.200	5.0	1.400	6.5	3.500	10.0	7.500	14.4
0.300	5.0	1.600	6.9	4.000	10.6	8.000	14.8
0.400	4.8	1.800	7.3	4.500	11.3	8.500	15.2
0.500	4.5	2.000	7.7	5.000	11.8	9.000	15.7
0.600	4.4	2.200	8.0	5.500	12.4	9.500	16.1
0.800	5.0	2.400	8.4	6.000	12.9		
1.000	5.5	2.600	8.7	6.500	13.4		

Storage Structures for SW2

Filter Drain Manhole: CP30, DS/PN: 1.003

Infiltration Coefficient Base (m/hr)	0.00000	Pipe Diameter (m)	0.150
Infiltration Coefficient Side (m/hr)	0.00000	Pipe Depth above Invert (m)	0.900
Safety Factor	2.0	Number of Pipes	1
Porosity	0.30	Slope (1:X)	125.0
Invert Level (m)	146.800	Cap Volume Depth (m)	0.800
Trench Width (m)	0.6	Cap Infiltration Depth (m)	0.600
Trench Length (m)	135.0		

Filter Drain Manhole: CP19, DS/PN: 3.007

Infiltration Coefficient Base (m/hr)	0.00000	Pipe Diameter (m)	0.150
Infiltration Coefficient Side (m/hr)	0.00000	Pipe Depth above Invert (m)	1.500
Safety Factor	2.0	Number of Pipes	1
Porosity	0.30	Slope (1:X)	125.0
Invert Level (m)	146.450	Cap Volume Depth (m)	1.300
Trench Width (m)	0.6	Cap Infiltration Depth (m)	1.100
Trench Length (m)	135.0		

Filter Drain Manhole: CP26, DS/PN: 2.006

Infiltration Coefficient Base (m/hr)	0.00000	Pipe Diameter (m)	0.150
Infiltration Coefficient Side (m/hr)	0.00000	Pipe Depth above Invert (m)	1.000
Safety Factor	2.0	Number of Pipes	1
Porosity	0.30	Slope (1:X)	125.0
Invert Level (m)	146.800	Cap Volume Depth (m)	0.800
Trench Width (m)	0.6	Cap Infiltration Depth (m)	0.600
Trench Length (m)	135.0		

Tank or Pond Manhole: T2, DS/PN: 5.000

Invert Level (m) 145.975

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	100.0	0.400	100.0	0.800	100.0	0.801	0.0

1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for SW2

Simulation Criteria

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

Number of Input Hydrographs	0	Number of Storage Structures	4
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.225
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	18.600	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 960, 1440
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 20

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
1.000	CP27	15 Winter	1	+0%				
1.001	CP28	15 Winter	1	+0%				
1.002	CP29	15 Winter	1	+0%	100/480 Winter			
1.003	CP30	15 Winter	1	+0%	100/360 Winter			
2.000	CP20	15 Winter	1	+0%				
2.001	CP21	15 Winter	1	+0%				
2.002	CP22	15 Winter	1	+0%				
2.003	CP23	15 Winter	1	+0%				
2.004	CP24	15 Winter	1	+0%	100/15 Summer			
3.000	CP12	15 Winter	1	+0%				
3.001	CP13	15 Winter	1	+0%				
3.002	CP14	15 Winter	1	+0%	100/15 Summer			
3.003	CP15	15 Winter	1	+0%	100/15 Summer			
3.004	CP16	15 Winter	1	+0%	30/15 Summer			
3.005	CP17	15 Winter	1	+0%	30/15 Summer			
3.006	CP18	15 Winter	1	+0%	100/15 Summer			
3.007	CP19	1440 Winter	1	+0%				
2.005	CP25	15 Winter	1	+0%	100/15 Summer			
2.006	CP26	15 Winter	1	+0%	100/15 Summer			

1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for SW2

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
1.000	CP27	147.541	-0.129	0.000	0.05		1.1	OK	
1.001	CP28	147.215	-0.115	0.000	0.12		2.0	OK	
1.002	CP29	147.040	-0.110	0.000	0.16		2.9	OK	
1.003	CP30	146.826	-0.124	0.000	0.07		3.3	OK	
2.000	CP20	149.048	-0.132	0.000	0.03		1.1	OK	
2.001	CP21	147.996	-0.114	0.000	0.13		1.9	OK	
2.002	CP22	147.763	-0.107	0.000	0.18		2.8	OK	
2.003	CP23	147.528	-0.102	0.000	0.22		3.6	OK	
2.004	CP24	147.288	-0.112	0.000	0.14		4.1	OK	
3.000	CP12	152.528	-0.132	0.000	0.03		1.1	OK	
3.001	CP13	151.533	-0.127	0.000	0.06		2.4	OK	
3.002	CP14	149.425	-0.105	0.000	0.20		3.3	OK	
3.003	CP15	149.117	-0.093	0.000	0.30		4.5	OK	
3.004	CP16	148.775	-0.085	0.000	0.37		5.7	OK	
3.005	CP17	148.478	-0.082	0.000	0.42		6.4	OK	
3.006	CP18	148.412	-0.088	0.000	0.36		7.2	OK	
3.007	CP19	148.016	-0.134	0.000	0.03		1.0	OK	
2.005	CP25	147.060	-0.091	0.000	0.32		4.9	OK	
2.006	CP26	146.930	-0.100	0.000	0.24		6.0	OK	

1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for SW2

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
4.000	CP31	15 Winter	1	+0%	100/360 Winter			
5.000	T2	1440 Winter	1	+0%	1/240 Summer			
1.004	SW3	1440 Winter	1	+0%	100/240 Winter			
1.005	SW4	1440 Winter	1	+0%				

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
4.000	CP31	146.924	-0.133	0.000	0.03		1.1	OK	
5.000	T2	146.481	0.356	0.000	0.02		0.2	SURCHARGED	
1.004	SW3	146.481	-0.194	0.000	0.00		0.5	OK	
1.005	SW4	144.638	-0.222	0.000	0.00		0.5	OK	

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for SW2

Simulation Criteria

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

Number of Input Hydrographs	0	Number of Storage Structures	4
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model		FSR	Ratio R 0.225
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	18.600	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 960, 1440
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 20

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
1.000	CP27	15 Winter	30	+0%					147.555
1.001	CP28	15 Winter	30	+0%					147.239
1.002	CP29	15 Winter	30	+0%	100/480 Winter				147.071
1.003	CP30	15 Winter	30	+0%	100/360 Winter				146.845
2.000	CP20	15 Winter	30	+0%					149.059
2.001	CP21	15 Winter	30	+0%					148.022
2.002	CP22	15 Winter	30	+0%					147.797
2.003	CP23	15 Winter	30	+0%					147.567
2.004	CP24	15 Winter	30	+0%	100/15 Summer				147.317
3.000	CP12	15 Winter	30	+0%					152.538
3.001	CP13	15 Winter	30	+0%					151.550
3.002	CP14	15 Winter	30	+0%	100/15 Summer				149.461
3.003	CP15	15 Winter	30	+0%	100/15 Summer				149.171
3.004	CP16	15 Winter	30	+0%	30/15 Summer				148.886
3.005	CP17	15 Winter	30	+0%	30/15 Summer				148.570
3.006	CP18	15 Winter	30	+0%	100/15 Summer				148.467
3.007	CP19	240 Winter	30	+0%					148.038
2.005	CP25	15 Winter	30	+0%	100/15 Summer				147.118
2.006	CP26	15 Winter	30	+0%	100/15 Summer				146.973

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for SW2

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
1.000	CP27	-0.115	0.000	0.12		2.6	OK	
1.001	CP28	-0.091	0.000	0.32		5.3	OK	
1.002	CP29	-0.079	0.000	0.45		8.0	OK	
1.003	CP30	-0.105	0.000	0.19		9.2	OK	
2.000	CP20	-0.121	0.000	0.08		2.6	OK	
2.001	CP21	-0.088	0.000	0.34		5.2	OK	
2.002	CP22	-0.073	0.000	0.50		7.8	OK	
2.003	CP23	-0.063	0.000	0.62		10.3	OK	
2.004	CP24	-0.083	0.000	0.40		11.5	OK	
3.000	CP12	-0.122	0.000	0.08		2.6	OK	
3.001	CP13	-0.110	0.000	0.16		6.8	OK	
3.002	CP14	-0.069	0.000	0.55		9.3	OK	
3.003	CP15	-0.039	0.000	0.85		12.9	OK	
3.004	CP16	0.026	0.000	1.01		15.3	SURCHARGED	
3.005	CP17	0.010	0.000	1.12		17.2	SURCHARGED	
3.006	CP18	-0.033	0.000	0.95		19.2	OK	
3.007	CP19	-0.112	0.000	0.14		5.8	OK	
2.005	CP25	-0.033	0.000	0.91		13.9	OK	
2.006	CP26	-0.057	0.000	0.68		17.0	OK	

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for SW2

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
4.000	CP31	15 Winter	30	+0%	100/360 Winter				146.933
5.000	T2	960 Winter	30	+0%	1/240 Summer				146.561
1.004	SW3	960 Winter	30	+0%	100/240 Winter				146.562
1.005	SW4	960 Winter	30	+0%					144.659

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
4.000	CP31	-0.124	0.000	0.07		2.6	OK	
5.000	T2	0.436	0.000	0.05		0.7	SURCHARGED	
1.004	SW3	-0.113	0.000	0.03		4.2	OK	
1.005	SW4	-0.201	0.000	0.03		4.2	OK	

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for SW2

Simulation Criteria

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

Number of Input Hydrographs	0	Number of Storage Structures	4
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model		FSR	Ratio R 0.225
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	18.600	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 960, 1440
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 20

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
1.000	CP27	15 Winter	100	+20%					147.564
1.001	CP28	15 Winter	100	+20%					147.256
1.002	CP29	480 Winter	100	+20%	100/480 Winter				147.204
1.003	CP30	480 Winter	100	+20%	100/360 Winter				147.201
2.000	CP20	15 Winter	100	+20%					149.066
2.001	CP21	15 Winter	100	+20%					148.039
2.002	CP22	15 Winter	100	+20%					147.822
2.003	CP23	15 Winter	100	+20%					147.614
2.004	CP24	120 Winter	100	+20%	100/15 Summer				147.578
3.000	CP12	15 Winter	100	+20%					152.545
3.001	CP13	15 Winter	100	+20%					151.560
3.002	CP14	15 Winter	100	+20%	100/15 Summer				149.695
3.003	CP15	15 Winter	100	+20%	100/15 Summer				149.545
3.004	CP16	15 Winter	100	+20%	30/15 Summer				149.188
3.005	CP17	15 Winter	100	+20%	30/15 Summer				148.703
3.006	CP18	15 Winter	100	+20%	100/15 Summer				148.595
3.007	CP19	60 Winter	100	+20%					148.069
2.005	CP25	120 Winter	100	+20%	100/15 Summer				147.562
2.006	CP26	120 Winter	100	+20%	100/15 Summer				147.264

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for SW2

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
1.000	CP27	-0.106	0.000	0.19		4.0	OK	
1.001	CP28	-0.074	0.000	0.49		8.2	OK	
1.002	CP29	0.054	0.000	0.12		2.1	SURCHARGED	
1.003	CP30	0.251	0.000	0.05		2.5	SURCHARGED	
2.000	CP20	-0.114	0.000	0.13		4.0	OK	
2.001	CP21	-0.071	0.000	0.52		8.0	OK	
2.002	CP22	-0.048	0.000	0.78		12.0	OK	
2.003	CP23	-0.016	0.000	0.92		15.4	OK	
2.004	CP24	0.178	0.000	0.28		7.9	SURCHARGED	
3.000	CP12	-0.115	0.000	0.12		4.0	OK	
3.001	CP13	-0.100	0.000	0.24		10.4	OK	
3.002	CP14	0.165	0.000	0.79		13.4	SURCHARGED	
3.003	CP15	0.335	0.000	1.05		15.9	SURCHARGED	
3.004	CP16	0.328	0.000	1.24		18.8	SURCHARGED	
3.005	CP17	0.143	0.000	1.37		21.0	SURCHARGED	
3.006	CP18	0.095	0.000	1.13		22.9	SURCHARGED	
3.007	CP19	-0.081	0.000	0.43		17.3	OK	
2.005	CP25	0.411	0.000	1.49		22.7	SURCHARGED	
2.006	CP26	0.234	0.000	0.83		20.8	SURCHARGED	

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for SW2

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
4.000	CP31	480 Winter	100	+20%	100/360 Winter				147.199
5.000	T2	480 Winter	100	+20%	1/240 Summer				147.198
1.004	SW3	480 Winter	100	+20%	100/240 Winter				147.198
1.005	SW4	960 Summer	100	+20%					144.661

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
4.000	CP31	0.142	0.000	0.02		0.7	SURCHARGED	
5.000	T2	1.073	0.000	0.34		4.7	FLOOD RISK	
1.004	SW3	0.523	0.000	0.04		5.0	FLOOD RISK	
1.005	SW4	-0.199	0.000	0.03		5.0	OK	