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Date 10.08.16 File SW Network 1, Rev C.mdx	Designed by CD Checked by SG	
Micro Drainage	Network 2014.1.1	


Surcharged Outfall Details for SW1.SWS

Outfall	Outfall	C. Level	I. Level	Min	D,L	W
Pipe Number	Name	(m)	(m)	I. Level	(mm)	(mm)
				(m)		

1.012 14 102.473 102.040 102.040 600 0


Datum (m) 102.040 Offset (mins) 0

Time	Depth	Time	Depth	Time	Depth	Time	Depth	Time	Depth	Time	Depth	Time	Depth
(mins)	(m)	(mins)	(m)	(mins)	(m)	(mins)	(m)	(mins)	(m)	(mins)	(m)	(mins)	(m)
1	0.520	37	0.520	73	0.520	109	0.520	145	0.520	181	0.520	217	0.520
2	0.520	38	0.520	74	0.520	110	0.520	146	0.520	182	0.520	218	0.520
3	0.520	39	0.520	75	0.520	111	0.520	147	0.520	183	0.520	219	0.520
4	0.520	40	0.520	76	0.520	112	0.520	148	0.520	184	0.520	220	0.520
5	0.520	41	0.520	77	0.520	113	0.520	149	0.520	185	0.520	221	0.520
6	0.520	42	0.520	78	0.520	114	0.520	150	0.520	186	0.520	222	0.520
7	0.520	43	0.520	79	0.520	115	0.520	151	0.520	187	0.520	223	0.520
8	0.520	44	0.520	80	0.520	116	0.520	152	0.520	188	0.520	224	0.520
9	0.520	45	0.520	81	0.520	117	0.520	153	0.520	189	0.520	225	0.520
10	0.520	46	0.520	82	0.520	118	0.520	154	0.520	190	0.520	226	0.520
11	0.520	47	0.520	83	0.520	119	0.520	155	0.520	191	0.520	227	0.520
12	0.520	48	0.520	84	0.520	120	0.520	156	0.520	192	0.520	228	0.520
13	0.520	49	0.520	85	0.520	121	0.520	157	0.520	193	0.520	229	0.520
14	0.520	50	0.520	86	0.520	122	0.520	158	0.520	194	0.520	230	0.520
15	0.520	51	0.520	87	0.520	123	0.520	159	0.520	195	0.520	231	0.520
16	0.520	52	0.520	88	0.520	124	0.520	160	0.520	196	0.520	232	0.520
17	0.520	53	0.520	89	0.520	125	0.520	161	0.520	197	0.520	233	0.520
18	0.520	54	0.520	90	0.520	126	0.520	162	0.520	198	0.520	234	0.520
19	0.520	55	0.520	91	0.520	127	0.520	163	0.520	199	0.520	235	0.520
20	0.520	56	0.520	92	0.520	128	0.520	164	0.520	200	0.520	236	0.520
21	0.520	57	0.520	93	0.520	129	0.520	165	0.520	201	0.520	237	0.520
22	0.520	58	0.520	94	0.520	130	0.520	166	0.520	202	0.520	238	0.520
23	0.520	59	0.520	95	0.520	131	0.520	167	0.520	203	0.520	239	0.520
24	0.520	60	0.520	96	0.520	132	0.520	168	0.520	204	0.520	240	0.520
25	0.520	61	0.520	97	0.520	133	0.520	169	0.520	205	0.520	241	0.520
26	0.520	62	0.520	98	0.520	134	0.520	170	0.520	206	0.520	242	0.520
27	0.520	63	0.520	99	0.520	135	0.520	171	0.520	207	0.520	243	0.520
28	0.520	64	0.520	100	0.520	136	0.520	172	0.520	208	0.520	244	0.520
29	0.520	65	0.520	101	0.520	137	0.520	173	0.520	209	0.520	245	0.520
30	0.520	66	0.520	102	0.520	138	0.520	174	0.520	210	0.520	246	0.520
31	0.520	67	0.520	103	0.520	139	0.520	175	0.520	211	0.520	247	0.520
32	0.520	68	0.520	104	0.520	140	0.520	176	0.520	212	0.520	248	0.520
33	0.520	69	0.520	105	0.520	141	0.520	177	0.520	213	0.520	249	0.520
34	0.520	70	0.520	106	0.520	142	0.520	178	0.520	214	0.520	250	0.520
35	0.520	71	0.520	107	0.520	143	0.520	179	0.520	215	0.520	251	0.520
36	0.520	72	0.520	108	0.520	144	0.520	180	0.520	216	0.520	252	0.520

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Surcharged Outfall Details for SW1.SWS

Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)
253	0.520	269	0.520	285	0.520	301	0.520	317	0.520	333	0.520	349	0.520
254	0.520	270	0.520	286	0.520	302	0.520	318	0.520	334	0.520	350	0.520
255	0.520	271	0.520	287	0.520	303	0.520	319	0.520	335	0.520	351	0.520
256	0.520	272	0.520	288	0.520	304	0.520	320	0.520	336	0.520	352	0.520
257	0.520	273	0.520	289	0.520	305	0.520	321	0.520	337	0.520	353	0.520
258	0.520	274	0.520	290	0.520	306	0.520	322	0.520	338	0.520	354	0.520
259	0.520	275	0.520	291	0.520	307	0.520	323	0.520	339	0.520	355	0.520
260	0.520	276	0.520	292	0.520	308	0.520	324	0.520	340	0.520	356	0.520
261	0.520	277	0.520	293	0.520	309	0.520	325	0.520	341	0.520	357	0.520
262	0.520	278	0.520	294	0.520	310	0.520	326	0.520	342	0.520	358	0.520
263	0.520	279	0.520	295	0.520	311	0.520	327	0.520	343	0.520	359	0.520
264	0.520	280	0.520	296	0.520	312	0.520	328	0.520	344	0.520	360	0.520
265	0.520	281	0.520	297	0.520	313	0.520	329	0.520	345	0.520		
266	0.520	282	0.520	298	0.520	314	0.520	330	0.520	346	0.520		
267	0.520	283	0.520	299	0.520	315	0.520	331	0.520	347	0.520		
268	0.520	284	0.520	300	0.520	316	0.520	332	0.520	348	0.520		

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Summary of Critical Results by Maximum Level (Rank 1) for SW1.SWS

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


Synthetic Rainfall Details

Rainfall Model FSR Ratio R 0.282
Region England and Wales Cv (Summer) 0.750
M5-60 (mm) 18.800 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
Return Period(s) (years) 30
Climate Change (%) 0


PN	Storm	Return Period	Climate Change	First X Surcharge	First Y Flood	First Z Overflow	O/F Act.	Lvl Exc.
1.000	180 Winter	30	0%					
1.001	180 Winter	30	0%					
2.000	15 Winter	30	0%					
2.001	15 Winter	30	0%					
2.002	15 Winter	30	0%	30/15 Summer				
2.003	15 Winter	30	0%	30/15 Summer				
1.002	180 Winter	30	0%					
3.000	15 Winter	30	0%					
3.001	15 Winter	30	0%					
1.003	180 Winter	30	0%					
1.004	240 Winter	30	0%					
1.005	240 Winter	30	0%					
1.006	180 Winter	30	0%					
1.007	180 Winter	30	0%					
1.008	180 Winter	30	0%					
4.000	15 Winter	30	0%					
4.001	180 Winter	30	0%					
1.009	180 Winter	30	0%					

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Summary of Critical Results by Maximum Level (Rank 1) for SW1.SWS

PN	Storm	Return Period	Climate Change	First X Surcharge	First Y Flood	First Z Overflow	O/F Act.	Lvl Exc.
1.010	180 Winter	30	0%					
5.000	15 Winter	30	0%					
5.001	15 Winter	30	0%					
5.002	15 Winter	30	0%					
5.003	15 Winter	30	0%					
5.004	15 Winter	30	0%					
5.005	15 Winter	30	0%					
5.006	15 Winter	30	0%					
5.007	15 Winter	30	0%					
5.008	15 Winter	30	0%	30/15 Winter				
5.009	15 Winter	30	0%	30/15 Summer				
5.010	15 Winter	30	0%	30/15 Summer				
5.011	15 Winter	30	0%					
5.012	15 Winter	30	0%					
6.000	15 Winter	30	0%					
6.001	15 Winter	30	0%					
6.002	15 Winter	30	0%					
6.003	15 Winter	30	0%					
5.013	15 Winter	30	0%	30/15 Summer				
5.014	15 Winter	30	0%	30/15 Summer				
5.015	30 Winter	30	0%	30/15 Summer				
5.016	30 Winter	30	0%	30/15 Summer				
7.000	30 Winter	30	0%	30/15 Winter				
5.017	30 Winter	30	0%	30/15 Summer				
5.018	30 Winter	30	0%	30/15 Summer				
5.019	30 Winter	30	0%	30/15 Summer				
5.020	180 Winter	30	0%					
5.021	180 Winter	30	0%					
5.022	180 Winter	30	0%					
1.011	180 Winter	30	0%	30/180 Winter				
1.012	180 Winter	30	0%	30/15 Summer				

PN	US/MH Name	Water		Flooded		Pipe		Status
		Level (m)	Surch'd Depth (m)	Volume (m³)	Flow / Cap.	O'flow (l/s)	Flow (l/s)	
1.000	1	103.693	-0.513	0.000	0.01	0.0	12.6	OK
1.001	2	103.694	-0.425	0.000	0.01	0.0	12.5	OK
2.000	15	104.964	-0.126	0.000	0.39	0.0	14.2	OK
2.001	16	104.798	-0.138	0.000	0.31	0.0	18.8	OK
2.002	17	104.606	0.098	0.000	0.97	0.0	31.9	SURCHARGED
2.003	18	104.556	0.105	0.000	1.14	0.0	60.1	SURCHARGED
1.002	3	103.694	-0.397	0.000	0.02	0.0	27.6	OK
3.000	19	104.090	-0.187	0.000	0.30	0.0	21.3	OK
3.001	20	103.793	-0.303	0.000	0.23	0.0	23.8	OK
1.003	4	103.694	-0.371	0.000	0.02	0.0	31.2	OK

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Summary of Critical Results by Maximum Level (Rank 1) for SW1.SWS

PN	US/MH Name	Water	Surch'd Depth (m)	Flooded	Flow / Cap.	O'flow	Pipe	Status
		Level (m)		Volume (m³)		(l/s)	Flow (l/s)	
1.004	5	103.693	-0.330	0.000	0.01	0.0	23.1	OK
1.005	6	103.693	-0.291	0.000	0.02	0.0	18.1	OK
1.006	7	103.693	-0.267	0.000	0.01	0.0	19.5	OK
1.007	8	103.693	-0.224	0.000	0.02	0.0	21.8	OK
1.008	9	103.693	-0.202	0.000	0.01	0.0	21.4	OK
4.000	21	104.308	-0.159	0.000	0.19	0.0	12.3	OK
4.001	22	103.693	-0.177	0.000	0.05	0.0	10.7	OK
1.009	10	103.692	-0.109	0.000	0.01	0.0	29.3	OK
1.010	11	103.690	-0.031	0.000	0.02	0.0	35.3	OK
5.000	23	108.226	-0.171	0.000	0.13	0.0	9.3	OK
5.001	24	107.604	-0.130	0.000	0.37	0.0	29.9	OK
5.002	25	106.931	-0.115	0.000	0.47	0.0	29.7	OK
5.003	26	106.749	-0.099	0.000	0.59	0.0	29.5	OK
5.004	27	106.670	-0.053	0.000	1.00	0.0	169.1	OK
5.005	28	106.463	-0.194	0.000	0.62	0.0	175.0	OK
5.006	29	106.340	0.000	0.000	1.04	0.0	176.1	OK
5.007	30	106.038	-0.210	0.000	0.55	0.0	181.5	OK
5.008	31	105.915	0.004	0.000	0.62	0.0	181.1	SURCHARGED
5.009	32	105.810	0.172	0.000	2.05	0.0	194.6	SURCHARGED
5.010	33	105.687	0.072	0.000	1.96	0.0	195.1	SURCHARGED
5.011	34	105.482	-0.105	0.000	0.94	0.0	197.7	OK
5.012	35	105.339	-0.110	0.000	0.92	0.0	205.1	OK
6.000	46	108.511	-0.162	0.000	0.17	0.0	14.6	OK
6.001	47	107.324	-0.118	0.000	0.45	0.0	41.6	OK
6.002	48	105.990	-0.088	0.000	0.67	0.0	52.2	OK
6.003	49	105.476	-0.193	0.000	0.47	0.0	136.9	OK
5.013	36	105.201	0.735	0.000	1.67	0.0	291.5	SURCHARGED
5.014	37	105.079	0.658	0.000	1.47	0.0	293.1	SURCHARGED
5.015	38	104.947	0.594	0.000	1.86	0.0	284.6	SURCHARGED
5.016	39	104.813	0.498	0.000	1.95	0.0	285.7	SURCHARGED
7.000	50	104.687	0.063	0.000	0.14	0.0	7.8	SURCHARGED
5.017	40	104.676	0.378	0.000	1.70	0.0	291.2	SURCHARGED
5.018	41	104.533	0.278	0.000	1.36	0.0	299.3	SURCHARGED
5.019	42	104.223	0.134	0.000	1.42	0.0	311.3	SURCHARGED
5.020	43	103.707	-0.225	0.000	0.07	0.0	148.0	OK
5.021	44	103.704	-0.161	0.000	0.05	0.0	135.0	OK
5.022	45	103.698	-0.069	0.000	0.05	0.0	122.1	OK
1.011	12	103.687	0.005	0.000	0.04	0.0	93.7	SURCHARGED
1.012	13	103.686	1.293	0.000	0.81	0.0	49.7	SURCHARGED