STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for SW Net01

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - England and Wales

Return Period (years)	2	PIMP (%)	100
M5-60 (mm)	18.000	Add Flow / Climate Change (%)	0
Ratio R	0.357	Minimum Backdrop Height (m)	0.000
Maximum Rainfall (mm/hr)	150	Maximum Backdrop Height (m)	0.000
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)	500

Designed with Level Soffits

Surcharged Outfall Details for SW Net01

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
S1.009	S	31.170	27.217	0.000	0	0

Datum (m) 27.000 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)	Time (mins)	Depth (m)
1	3.450	19	3.450	37	3.450	55	3.450	73	3.450	91	3.450	109	3.450
2	3.450	20	3.450	38	3.450	56	3.450	74	3.450	92	3.450	110	3.450
3	3.450	21	3.450	39	3.450	57	3.450	75	3.450	93	3.450	111	3.450
4	3.450	22	3.450	40	3.450	58	3.450	76	3.450	94	3.450	112	3.450
5	3.450	23	3.450	41	3.450	59	3.450	77	3.450	95	3.450	113	3.450
6	3.450	24	3.450	42	3.450	60	3.450	78	3.450	96	3.450	114	3.450
7	3.450	25	3.450	43	3.450	61	3.450	79	3.450	97	3.450	115	3.450
8	3.450	26	3.450	44	3.450	62	3.450	80	3.450	98	3.450	116	3.450
9	3.450	27	3.450	45	3.450	63	3.450	81	3.450	99	3.450	117	3.450
10	3.450	28	3.450	46	3.450	64	3.450	82	3.450	100	3.450	118	3.450
11	3.450	29	3.450	47	3.450	65	3.450	83	3.450	101	3.450	119	3.450
12	3.450	30	3.450	48	3.450	66	3.450	84	3.450	102	3.450	120	3.450
13	3.450	31	3.450	49	3.450	67	3.450	85	3.450	103	3.450	121	3.450
14	3.450	32	3.450	50	3.450	68	3.450	86	3.450	104	3.450	122	3.450
15	3.450	33	3.450	51	3.450	69	3.450	87	3.450	105	3.450	123	3.450
16	3.450	34	3.450	52	3.450	70	3.450	88	3.450	106	3.450	124	3.450
17	3.450	35	3.450	53	3.450	71	3.450	89	3.450	107	3.450	125	3.450
18	3.450	36	3.450	54	3.450	72	3.450	90	3.450	108	3.450	126	3.450

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Surcharged Outfall Details for SW Net01

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)
127	3.450	172	3.450	217	3.450	262	3.450	307	3.450	352	3.450	397	3.450
128	3.450	173	3.450	218	3.450	263	3.450	308	3.450	353	3.450	398	3.450
129	3.450	174	3.450	219	3.450	264	3.450	309	3.450	354	3.450	399	3.450
130	3.450	175	3.450	220	3.450	265	3.450	310	3.450	355	3.450	400	3.450
131	3.450	176	3.450	221	3.450	266	3.450	311	3.450	356	3.450	401	3.450
132	3.450	177	3.450	222	3.450	267	3.450	312	3.450	357	3.450	402	3.450
133	3.450	178	3.450	223	3.450	268	3.450	313	3.450	358	3.450	403	3.450
134	3.450	179	3.450	224	3.450	269	3.450	314	3.450	359	3.450	404	3.450
135	3.450	180	3.450	225	3.450	270	3.450	315	3.450	360	3.450	405	3.450
136	3.450	181	3.450	226	3.450	271	3.450	316	3.450	361	3.450	406	3.450
137	3.450	182	3.450	227	3.450	272	3.450	317	3.450	362	3.450	407	3.450
138	3.450	183	3.450	228	3.450	273	3.450	318	3.450	363	3.450	408	3.450
139	3.450	184	3.450	229	3.450	274	3.450	319	3.450	364	3.450	409	3.450
140	3.450	185	3.450	230	3.450	275	3.450	320	3.450	365	3.450	410	3.450
141	3.450	186	3.450	231	3.450	276	3.450	321	3.450	366	3.450	411	3.450
142	3.450	187	3.450	232	3.450	277	3.450	322	3.450	367	3.450	412	3.450
143	3.450	188	3.450	233	3.450	278	3.450	323	3.450	368	3.450	413	3.450
144	3.450	189	3.450	234	3.450	279	3.450	324	3.450	369	3.450	414	3.450
145	3.450	190	3.450	235	3.450	280	3.450	325	3.450	370	3.450	415	3.450
146	3.450	191	3.450	236	3.450	281	3.450	326	3.450	371	3.450	416	3.450
147	3.450	192	3.450	237	3.450	282	3.450	327	3.450	372	3.450	417	3.450
148	3.450	193	3.450	238	3.450	283	3.450	328	3.450	373	3.450	418	3.450
149	3.450	194	3.450	239	3.450	284	3.450	329	3.450	374	3.450	419	3.450
150	3.450	195	3.450	240	3.450	285	3.450	330	3.450	375	3.450	420	3.450
151	3.450	196	3.450	241	3.450	286	3.450	331	3.450	376	3.450	421	3.450
152	3.450	197	3.450	242	3.450	287	3.450	332	3.450	377	3.450	422	3.450
153	3.450	198	3.450	243	3.450	288	3.450	333	3.450	378	3.450	423	3.450
154	3.450	199	3.450	244	3.450	289	3.450	334	3.450	379	3.450	424	3.450
155	3.450	200	3.450	245	3.450	290	3.450	335	3.450	380	3.450	425	3.450
156	3.450	201	3.450	246	3.450	291	3.450	336	3.450	381	3.450	426	3.450
157	3.450	202	3.450	247	3.450	292	3.450	337	3.450	382	3.450	427	3.450
158	3.450	203	3.450	248	3.450	293	3.450	338	3.450	383	3.450	428	3.450
159	3.450	204	3.450	249	3.450	294	3.450	339	3.450	384	3.450	429	3.450
160	3.450	205	3.450	250	3.450	295	3.450	340	3.450	385	3.450	430	3.450
161	3.450	206	3.450	251	3.450	296	3.450	341	3.450	386	3.450	431	3.450
162	3.450	207	3.450	252	3.450	297	3.450	342	3.450	387	3.450	432	3.450
163	3.450	208	3.450	253	3.450	298	3.450	343	3.450	388	3.450	433	3.450
164	3.450	209	3.450	254	3.450	299	3.450	344	3.450	389	3.450	434	3.450
165	3.450	210	3.450	255	3.450	300	3.450	345	3.450	390	3.450	435	3.450
166	3.450	211	3.450	256	3.450	301	3.450	346	3.450	391	3.450	436	3.450
167	3.450	212	3.450	257	3.450	302	3.450	347	3.450	392	3.450	437	3.450
168	3.450	213	3.450	258	3.450	303	3.450	348	3.450	393	3.450	438	3.450
169	3.450	214	3.450	259	3.450	304	3.450	349	3.450	394	3.450	439	3.450
170	3.450	215	3.450	260	3.450	305	3.450	350	3.450	395	3.450	440	3.450
171	3.450	216	3.450	261	3.450	306	3.450	351	3.450	396	3.450	441	3.450

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Commercial Wharf
6 Commercial Street
Manchester M15 4PZ

Date 12/11/2021 14:51 | Designed by andyj
File 211028 SW-FW Network_SO.MDX | Checked by
XP Solutions | Network 2020.1

Surcharged Outfall Details for SW Net01

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)
442	3.450	487	3.450	532	3.450	577	3.450	622	3.450	667	3.450	712	3.450
443	3.450	488	3.450	533	3.450	578	3.450	623	3.450	668	3.450	713	3.450
444	3.450	489	3.450	534	3.450	579	3.450	624	3.450	669	3.450	714	3.450
445	3.450	490	3.450	535	3.450	580	3.450	625	3.450	670	3.450	715	3.450
446	3.450	491	3.450	536	3.450	581	3.450	626	3.450	671	3.450	716	3.450
447	3.450	492	3.450	537	3.450	582	3.450	627	3.450	672	3.450	717	3.450
448	3.450	493	3.450	538	3.450	583	3.450	628	3.450	673	3.450	718	3.450
449	3.450	494	3.450	539	3.450	584	3.450	629	3.450	674	3.450	719	3.450
450	3.450	495	3.450	540	3.450	585	3.450	630	3.450	675	3.450	720	3.450
451	3.450	496	3.450	541	3.450	586	3.450	631	3.450	676	3.450	721	3.450
452	3.450	497	3.450	542	3.450	587	3.450	632	3.450	677	3.450	722	3.450
453	3.450	498	3.450	543	3.450	588	3.450	633	3.450	678	3.450	723	3.450
454	3.450	499	3.450	544	3.450	589	3.450	634	3.450	679	3.450	724	3.450
455	3.450	500	3.450	545	3.450	590	3.450	635	3.450	680	3.450	725	3.450
456	3.450	501	3.450	546	3.450	591	3.450	636	3.450	681	3.450	726	3.450
457	3.450	502	3.450	547	3.450	592	3.450	637	3.450	682	3.450	727	3.450
458	3.450	503	3.450	548	3.450	593	3.450	638	3.450	683	3.450	728	3.450
459	3.450	504	3.450	549	3.450	594	3.450	639	3.450	684	3.450	729	3.450
460	3.450	505	3.450	550	3.450	595	3.450	640	3.450	685	3.450	730	3.450
461	3.450	506	3.450	551	3.450	596	3.450	641	3.450	686	3.450	731	3.450
462	3.450	507	3.450	552	3.450	597	3.450	642	3.450	687	3.450	732	3.450
463	3.450	508	3.450	553	3.450	598	3.450	643	3.450	688	3.450	733	3.450
464	3.450	509	3.450	554	3.450	599	3.450	644	3.450	689	3.450	734	3.450
465	3.450	510	3.450	555	3.450	600	3.450	645	3.450	690	3.450	735	3.450
466	3.450	511	3.450	556	3.450	601	3.450	646	3.450	691	3.450	736	3.450
467	3.450	512	3.450	557	3.450	602	3.450	647	3.450	692	3.450	737	3.450
468	3.450	513	3.450	558	3.450	603	3.450	648	3.450	693	3.450	738	3.450
469	3.450	514	3.450	559	3.450	604	3.450	649	3.450	694	3.450	739	3.450
470	3.450	515	3.450	560	3.450	605	3.450	650	3.450	695	3.450	740	3.450
471	3.450	516	3.450	561	3.450	606	3.450	651	3.450	696	3.450	741	3.450
472	3.450	517	3.450	562	3.450	607	3.450	652	3.450	697	3.450	742	3.450
473	3.450	518	3.450	563	3.450	608	3.450	653	3.450	698	3.450	743	3.450
474	3.450	519	3.450	564	3.450	609	3.450	654	3.450	699	3.450	744	3.450
475	3.450	520	3.450	565	3.450	610	3.450	655	3.450	700	3.450	745	3.450
476	3.450	521	3.450	566	3.450	611	3.450	656	3.450	701	3.450	746	3.450
477	3.450	522	3.450	567	3.450	612	3.450	657	3.450	702	3.450	747	3.450
478	3.450	523	3.450	568	3.450	613	3.450	658	3.450	703	3.450	748	3.450
479	3.450	524	3.450	569	3.450	614	3.450	659	3.450	704	3.450	749	3.450
480	3.450	525	3.450	570	3.450	615	3.450	660	3.450	705	3.450	750	3.450
481	3.450	526	3.450	571	3.450	616	3.450	661	3.450	706	3.450	751	3.450
482	3.450	527	3.450	572	3.450	617	3.450	662	3.450	707	3.450	752	3.450
483	3.450	528	3.450	573	3.450	618	3.450	663	3.450	708	3.450	753	3.450
484	3.450	529	3.450	574	3.450	619	3.450	664	3.450	709	3.450	754	3.450
485	3.450	530	3.450	575	3.450	620	3.450	665	3.450	710	3.450	755	3.450
486	3.450	531	3.450	576	3.450	621	3.450	666	3.450	711	3.450	756	3.450

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Surcharged Outfall Details for SW Net01

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)
757	3.450	802	3.450	847	3.450	892	3.450	937	3.450	982	3.450	1027	3.450
758	3.450	803	3.450	848	3.450	893	3.450	938	3.450	983	3.450	1028	3.450
759	3.450	804	3.450	849	3.450	894	3.450	939	3.450	984	3.450	1029	3.450
760	3.450	805	3.450	850	3.450	895	3.450	940	3.450	985	3.450	1030	3.450
761	3.450	806	3.450	851	3.450	896	3.450	941	3.450	986	3.450	1031	3.450
762	3.450	807	3.450	852	3.450	897	3.450	942	3.450	987	3.450	1032	3.450
763	3.450	808	3.450	853	3.450	898	3.450	943	3.450	988	3.450	1033	3.450
764	3.450	809	3.450	854	3.450	899	3.450	944	3.450	989	3.450	1034	3.450
765	3.450	810	3.450	855	3.450	900	3.450	945	3.450	990	3.450	1035	3.450
766	3.450	811	3.450	856	3.450	901	3.450	946	3.450	991	3.450	1036	3.450
767	3.450	812	3.450	857	3.450	902	3.450	947	3.450	992	3.450	1037	3.450
768	3.450	813	3.450	858	3.450	903	3.450	948	3.450	993	3.450	1038	3.450
769	3.450	814	3.450	859	3.450	904	3.450	949	3.450	994	3.450	1039	3.450
770	3.450	815	3.450	860	3.450	905	3.450	950	3.450	995	3.450	1040	3.450
771	3.450	816	3.450	861	3.450	906	3.450	951	3.450	996	3.450	1041	3.450
772	3.450	817	3.450	862	3.450	907	3.450	952	3.450	997	3.450	1042	3.450
773	3.450	818	3.450	863	3.450	908	3.450	953	3.450	998	3.450	1043	3.450
774	3.450	819	3.450	864	3.450	909	3.450	954	3.450	999	3.450	1044	3.450
775	3.450	820	3.450	865	3.450	910	3.450	955	3.450	1000	3.450	1045	3.450
776	3.450	821	3.450	866	3.450	911	3.450	956	3.450	1001	3.450	1046	3.450
777	3.450	822	3.450	867	3.450	912	3.450	957	3.450	1002	3.450	1047	3.450
778	3.450	823	3.450	868	3.450	913	3.450	958	3.450	1003	3.450	1048	3.450
779	3.450	824	3.450	869	3.450	914	3.450	959	3.450	1004	3.450	1049	3.450
780	3.450	825	3.450	870	3.450	915	3.450	960	3.450	1005	3.450	1050	3.450
781	3.450	826	3.450	871	3.450	916	3.450	961	3.450	1006	3.450	1051	3.450
782	3.450	827	3.450	872	3.450	917	3.450	962	3.450	1007	3.450	1052	3.450
783	3.450	828	3.450	873	3.450	918	3.450	963	3.450	1008	3.450	1053	3.450
784	3.450	829	3.450	874	3.450	919	3.450	964	3.450	1009	3.450	1054	3.450
785	3.450	830	3.450	875	3.450	920	3.450	965	3.450	1010	3.450	1055	3.450
786	3.450	831	3.450	876	3.450	921	3.450	966	3.450	1011	3.450	1056	3.450
787	3.450	832	3.450	877	3.450	922	3.450	967	3.450	1012	3.450	1057	3.450
788	3.450	833	3.450	878	3.450	923	3.450	968	3.450	1013	3.450	1058	3.450
789	3.450	834	3.450	879	3.450	924	3.450	969	3.450	1014	3.450	1059	3.450
790	3.450	835	3.450	880	3.450	925	3.450	970	3.450	1015	3.450	1060	3.450
791	3.450	836	3.450	881	3.450	926	3.450	971	3.450	1016	3.450	1061	3.450
792	3.450	837	3.450	882	3.450	927	3.450	972	3.450	1017	3.450	1062	3.450
793	3.450	838	3.450	883	3.450	928	3.450	973	3.450	1018	3.450	1063	3.450
794	3.450	839	3.450	884	3.450	929	3.450	974	3.450	1019	3.450	1064	3.450
795	3.450	840	3.450	885	3.450	930	3.450	975	3.450	1020	3.450	1065	3.450
796	3.450	841	3.450	886	3.450	931	3.450	976	3.450	1021	3.450	1066	3.450
797	3.450	842	3.450	887	3.450	932	3.450	977	3.450	1022	3.450	1067	3.450
798	3.450	843	3.450	888	3.450	933	3.450	978	3.450	1023	3.450	1068	3.450
799	3.450	844	3.450	889	3.450	934	3.450	979	3.450	1024	3.450	1069	3.450
800	3.450	845	3.450	890	3.450	935	3.450	980	3.450	1025	3.450	1070	3.450
801	3.450	846	3.450	891	3.450	936	3.450	981	3.450	1026	3.450	1071	3.450

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Surcharged Outfall Details for SW Net01

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)
1072	3.450	1117	3.450	1162	3.450	1207	3.450	1252	3.450	1297	3.450	1342	3.450
1073	3.450	1118	3.450	1163	3.450	1208	3.450	1253	3.450	1298	3.450	1343	3.450
1074	3.450	1119	3.450	1164	3.450	1209	3.450	1254	3.450	1299	3.450	1344	3.450
1075	3.450	1120	3.450	1165	3.450	1210	3.450	1255	3.450	1300	3.450	1345	3.450
1076	3.450	1121	3.450	1166	3.450	1211	3.450	1256	3.450	1301	3.450	1346	3.450
1077	3.450	1122	3.450	1167	3.450	1212	3.450	1257	3.450	1302	3.450	1347	3.450
1078	3.450	1123	3.450	1168	3.450	1213	3.450	1258	3.450	1303	3.450	1348	3.450
1079	3.450	1124	3.450	1169	3.450	1214	3.450	1259	3.450	1304	3.450	1349	3.450
1080	3.450	1125	3.450	1170	3.450	1215	3.450	1260	3.450	1305	3.450	1350	3.450
1081	3.450	1126	3.450	1171	3.450	1216	3.450	1261	3.450	1306	3.450	1351	3.450
1082	3.450	1127	3.450	1172	3.450	1217	3.450	1262	3.450	1307	3.450	1352	3.450
1083	3.450	1128	3.450	1173	3.450	1218	3.450	1263	3.450	1308	3.450	1353	3.450
1084	3.450	1129	3.450	1174	3.450	1219	3.450	1264	3.450	1309	3.450	1354	3.450
1085	3.450	1130	3.450	1175	3.450	1220	3.450	1265	3.450	1310	3.450	1355	3.450
1086	3.450	1131	3.450	1176	3.450	1221	3.450	1266	3.450	1311	3.450	1356	3.450
1087	3.450	1132	3.450	1177	3.450	1222	3.450	1267	3.450	1312	3.450	1357	3.450
1088	3.450	1133	3.450	1178	3.450	1223	3.450	1268	3.450	1313	3.450	1358	3.450
1089	3.450	1134	3.450	1179	3.450	1224	3.450	1269	3.450	1314	3.450	1359	3.450
1090	3.450	1135	3.450	1180	3.450	1225	3.450	1270	3.450	1315	3.450	1360	3.450
1091	3.450	1136	3.450	1181	3.450	1226	3.450	1271	3.450	1316	3.450	1361	3.450
1092	3.450	1137	3.450	1182	3.450	1227	3.450	1272	3.450	1317	3.450	1362	3.450
1093	3.450	1138	3.450	1183	3.450	1228	3.450	1273	3.450	1318	3.450	1363	3.450
1094	3.450	1139	3.450	1184	3.450	1229	3.450	1274	3.450	1319	3.450	1364	3.450
1095	3.450	1140	3.450	1185	3.450	1230	3.450	1275	3.450	1320	3.450	1365	3.450
1096	3.450	1141	3.450	1186	3.450	1231	3.450	1276	3.450	1321	3.450	1366	3.450
1097	3.450	1142	3.450	1187	3.450	1232	3.450	1277	3.450	1322	3.450	1367	3.450
1098	3.450	1143	3.450	1188	3.450	1233	3.450	1278	3.450	1323	3.450	1368	3.450
1099	3.450	1144	3.450	1189	3.450	1234	3.450	1279	3.450	1324	3.450	1369	3.450
1100	3.450	1145	3.450	1190	3.450	1235	3.450	1280	3.450	1325	3.450	1370	3.450
1101	3.450	1146	3.450	1191	3.450	1236	3.450	1281	3.450	1326	3.450	1371	3.450
1102	3.450	1147	3.450	1192	3.450	1237	3.450	1282	3.450	1327	3.450	1372	3.450
1103	3.450	1148	3.450	1193	3.450	1238	3.450	1283	3.450	1328	3.450	1373	3.450
1104	3.450	1149	3.450	1194	3.450	1239	3.450	1284	3.450	1329	3.450	1374	3.450
1105	3.450	1150	3.450	1195	3.450	1240	3.450	1285	3.450	1330	3.450	1375	3.450
1106	3.450	1151	3.450	1196	3.450	1241	3.450	1286	3.450	1331	3.450	1376	3.450
1107	3.450	1152	3.450	1197	3.450	1242	3.450	1287	3.450	1332	3.450	1377	3.450
1108	3.450	1153	3.450	1198	3.450	1243	3.450	1288	3.450	1333	3.450	1378	3.450
1109	3.450	1154	3.450	1199	3.450	1244	3.450	1289	3.450	1334	3.450	1379	3.450
1110	3.450	1155	3.450	1200	3.450	1245	3.450	1290	3.450	1335	3.450	1380	3.450
1111	3.450	1156	3.450	1201	3.450	1246	3.450	1291	3.450	1336	3.450	1381	3.450
1112	3.450	1157	3.450	1202	3.450	1247	3.450	1292	3.450	1337	3.450	1382	3.450
1113	3.450	1158	3.450	1203	3.450	1248	3.450	1293	3.450	1338	3.450	1383	3.450
1114	3.450	1159	3.450	1204	3.450	1249	3.450	1294	3.450	1339	3.450	1384	3.450
1115	3.450	1160	3.450	1205	3.450	1250	3.450	1295	3.450	1340	3.450	1385	3.450
1116	3.450	1161	3.450	1206	3.450	1251	3.450	1296	3.450	1341	3.450	1386	3.450

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Surcharged Outfall Details for SW Net01

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)
1387	3.450	1395	3.450	1403	3.450	1411	3.450	1419	3.450	1427	3.450	1435	3.450
1388	3.450	1396	3.450	1404	3.450	1412	3.450	1420	3.450	1428	3.450	1436	3.450
1389	3.450	1397	3.450	1405	3.450	1413	3.450	1421	3.450	1429	3.450	1437	3.450
1390	3.450	1398	3.450	1406	3.450	1414	3.450	1422	3.450	1430	3.450	1438	3.450
1391	3.450	1399	3.450	1407	3.450	1415	3.450	1423	3.450	1431	3.450	1439	3.450
1392	3.450	1400	3.450	1408	3.450	1416	3.450	1424	3.450	1432	3.450	1440	3.450
1393	3.450	1401	3.450	1409	3.450	1417	3.450	1425	3.450	1433	3.450		
1394	3.450	1402	3.450	1410	3.450	1418	3.450	1426	3.450	1434	3.450		

Simulation Criteria for SW Net01

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	0.000
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 Offline Controls 0 Number of Time/Area Diagrams 0
Number of Online Controls 4 Number of Storage Structures 2 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	2	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Storm Duration (mins)	30
Ratio R	0.357		

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for SW Net01

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	0.000
Hot Start Level (mm)	0	Inlet 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 4 Number of Storage Structures 2 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.357
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880
Return Period(s) (years)	100
Climate Change (%)	40

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

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
S1.000	S1.0	1440 Winter	100	+40%	100/15 Summer	100/60 Summer		
S2.000	S1.1	15 Winter	100	+40%				
S2.001	S1.2	1440 Winter	100	+40%	100/15 Summer			
S1.001	S1.3	1440 Winter	100	+40%	100/15 Summer	100/60 Winter		
S3.000	S1.4	1440 Winter	100	+40%	100/15 Summer	100/60 Summer		
S1.002	S1.5	1440 Winter	100	+40%	100/15 Summer	100/60 Summer		
S1.003	S1.6	1440 Winter	100	+40%	100/15 Summer	100/60 Summer		
S4.000	ST1	1440 Winter	100	+40%	100/15 Summer			
S1.004	S1.7	1440 Winter	100	+40%	100/15 Summer	100/60 Summer		
S5.000	S1.8	60 Winter	100	+40%	100/30 Summer			
S1.005	SJ1	15 Summer	100	+40%				

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for SW Net01

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
S1.000	S1.0	30.020	0.850	50.172	0.18			17.3	FLOOD	24
S2.000	S1.1	30.336	-0.074	0.000	0.51			20.5	OK	
S2.001	S1.2	30.020	0.870	0.000	0.06			1.0	SURCHARGED	
S1.001	S1.3	30.020	1.006	30.250	0.24			17.9	FLOOD	23
S3.000	S1.4	30.020	0.970	29.733	0.21			5.8	FLOOD	24
S1.002	S1.5	30.020	1.170	30.260	0.27			18.5	FLOOD	24
S1.003	S1.6	30.021	1.247	30.947	0.11			17.4	FLOOD	24
S4.000	ST1	30.022	1.722	0.000	0.29		420	22.9	SURCHARGED*	
S1.004	S1.7	30.022	1.824	31.635	0.30			20.2	FLOOD	24
S5.000	S1.8	30.058	0.378	0.000	0.15			12.0	SURCHARGED	
S1.005	SJ1	28.124	0.000	0.000	0.10			13.3	SURCHARGED*	

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for SW Net01

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
S6.000	SRG1	15 Winter	100	+40%				
S6.001	S1.9	15 Winter	100	+40%	100/15 Winter			
S7.000	SRG2	15 Summer	100	+40%	100/15 Summer			
S6.002	S1.10	15 Winter	100	+40%	100/15 Winter			
S8.000	S1.11	60 Winter	100	+40%	100/60 Winter			
S1.006	S1.12	60 Winter	100	+40%	100/15 Summer			
S9.000	S1.13	180 Winter	100	+40%	100/15 Summer	100/60 Winter		
S9.001	S1.14	120 Winter	100	+40%	100/15 Summer	100/60 Winter		
S10.000	S1.15	120 Winter	100	+40%	100/15 Summer	100/60 Winter		
S9.002	S1.16	120 Winter	100	+40%	100/15 Summer	100/120 Winter		
S11.000	S1.17	120 Winter	100	+40%	100/15 Winter	100/120 Winter		
S12.000	S1.18	120 Winter	100	+40%	100/15 Winter	100/120 Winter		
S9.003	S1.19	120 Winter	100	+40%	100/15 Summer			
S9.004	S1.20	120 Winter	100	+40%	100/15 Summer			
S13.000	S1.21	15 Winter	100	+40%				
S13.001	S1.22	15 Winter	100	+40%				
S13.002	S1.23	15 Winter	100	+40%				
S14.000	S1.24	180 Winter	100	+40%	100/15 Winter	100/60 Winter		
S9.005	S1.25	120 Winter	100	+40%	100/15 Summer			
S1.007	S1.26	120 Winter	100	+40%	100/15 Summer			
S1.008	S1.27	2160 Winter	100	+40%	100/15 Summer			
S1.009	S1.28	1440 Winter	100	+40%	100/15 Summer	100/30 Summer		

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
S6.000	SRG1	31.050	-0.100	0.000	0.24			8.0	OK	
S6.001	S1.9	30.959	0.119	0.000	0.82			13.1	SURCHARGED	
S7.000	SRG2	31.900	0.550	0.000	1.49			34.0	FLOOD	4
S6.002	S1.10	30.909	0.228	0.000	0.97			52.5	SURCHARGED	
S8.000	S1.11	30.143	0.093	0.000	0.35			11.7	SURCHARGED	
S1.006	S1.12	30.105	2.285	0.000	0.12			7.5	SURCHARGED	
S9.000	S1.13	30.653	1.053	2.759	0.50			9.2	FLOOD	6
S9.001	S1.14	30.652	1.230	1.656	0.25			13.1	FLOOD	5
S10.000	S1.15	30.653	1.053	2.709	0.33			9.9	FLOOD	6
S9.002	S1.16	30.650	1.514	0.032	0.38			31.1	FLOOD	1
S11.000	S1.17	30.650	1.050	0.069	0.16			7.2	FLOOD	1
S12.000	S1.18	30.650	1.050	0.046	0.15			5.4	FLOOD	1
S9.003	S1.19	30.635	2.010	0.000	0.41			23.5	FLOOD RISK	
S9.004	S1.20	30.628	2.031	0.000	0.33			24.2	FLOOD RISK	
S13.000	S1.21	32.590	-0.135	0.000	0.34			26.2	OK	

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for SW Net01

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
S13.001	S1.22	32.291	-0.134	0.000	0.34			26.2	OK	
S13.002	S1.23	32.004	-0.121	0.000	0.44			54.6	OK	
S14.000	S1.24	30.518	0.968	17.645	0.44			14.2	FLOOD	12
S9.005	S1.25	30.610	2.172	0.000	0.80			23.9	SURCHARGED	
S1.007	S1.26	30.050	2.296	0.000	0.56			34.5	SURCHARGED	
S1.008	S1.27	30.028	2.326	0.000	0.55			37.0	SURCHARGED	
S1.009	S1.28	30.011	2.399	360.579	5.09			345.3	FLOOD	26

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