



Haigh Huddleston & Associates

Civil & Structural Engineering Consultants

Firth Buildings, 99 - 101 Leeds Road, Dewsbury, WF12 7BU

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PROPOSED DRAINAGE CALCULATIONS

SITE:

DEVELOPMENT AT LOW BARUGH

FOR:

BARRATT DAVID WILSON HOMES

REF: E14/6120

REVISION A

DATE – NOVEMBER 2016

PREPARED BY:

T. HAIGH. BSc.,C.Eng.M.I.C.E.

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Firth Buildings 99-101 Leeds Road Dewsbury WF12 7BU	BDWH Low Barugh Surface Water REV A	
Date NOV 2016 File 6120 SURFACE3.mdx	Designed by HH Checked by	
Micro Drainage	Network 2016.1	

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for 6120 SURFACE3.SWS

Pipe Sizes 6120 SURFACE2 Manhole Sizes 6120 SURFACE2

FSR Rainfall Model - England and Wales

Return Period (years)	2	Add Flow / Climate Change (%)	0
M5-60 (mm)	19.000	Minimum Backdrop Height (m)	0.000
Ratio R	0.375	Maximum Backdrop Height (m)	0.000
Maximum Rainfall (mm/hr)	50	Min Design Depth for Optimisation (m)	1.200
Maximum Time of Concentration (mins)	30	Min Vel for Auto Design only (m/s)	1.00
Foul Sewage (l/s/ha)	0.000	Min Slope for Optimisation (1:X)	500
Volumetric Runoff Coeff.	0.750		

Designed with Level Soffits

Network Design Table for 6120 SURFACE3.SWS

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
S1.000	44.577	0.557	80.0	0.145	4.00	0.0	0.600	o	225	Pipe/Conduit	
S1.001	41.251	2.063	20.0	0.068	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.002	70.810	4.721	15.0	0.138	0.00	0.0	0.600	o	375	Pipe/Conduit	
S1.003	22.812	1.521	15.0	0.144	0.00	0.0	0.600	o	375	Pipe/Conduit	
S2.000	55.884	1.863	30.0	0.102	4.00	0.0	0.600	o	225	Pipe/Conduit	
S2.001	62.719	3.050	20.6	0.163	0.00	0.0	0.600	o	300	Pipe/Conduit	
S2.002	32.385	0.648	50.0	0.094	0.00	0.0	0.600	o	375	Pipe/Conduit	
S1.004	8.187	0.205	39.9	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
S1.005	50.891	1.272	40.0	0.160	0.00	0.0	0.600	o	450	Pipe/Conduit	
S1.006	60.079	1.502	40.0	0.152	0.00	0.0	0.600	o	450	Pipe/Conduit	
S1.007	34.140	2.254	15.1	0.184	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)
S1.000	50.00	4.51	71.200	0.145	0.0	0.0	0.0	1.46	58.2	19.6
S1.001	50.00	4.70	70.568	0.213	0.0	0.0	0.0	3.53	249.7	28.8
S1.002	50.00	4.95	68.430	0.351	0.0	0.0	0.0	4.70	519.0	47.5
S1.003	50.00	5.03	63.709	0.495	0.0	0.0	0.0	4.70	519.0	67.0
S2.000	50.00	4.39	67.900	0.102	0.0	0.0	0.0	2.40	95.3	13.8
S2.001	50.00	4.69	65.962	0.265	0.0	0.0	0.0	3.48	246.2	35.9
S2.002	50.00	4.90	62.837	0.359	0.0	0.0	0.0	2.57	283.7	48.6
S1.004	50.00	5.08	62.113	0.854	0.0	0.0	0.0	3.22	512.9	115.6
S1.005	50.00	5.34	61.908	1.014	0.0	0.0	0.0	3.22	512.4	137.3
S1.006	50.00	5.65	60.636	1.166	0.0	0.0	0.0	3.22	512.5	157.9
S1.007	50.00	5.76	59.134	1.350	0.0	0.0	0.0	5.24	834.1	182.8

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Micro Drainage						Network 2016.1							
Network Design Table for 6120 SURFACE3.SWS													
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		
S1.008	19.830	0.496	40.0	0.031	0.00	0.0	0.600	o	450	Pipe/Conduit			
S3.000	39.081	0.489	80.0	0.184	4.00	0.0	0.600	o	225	Pipe/Conduit			
S4.000	20.770	1.339	15.5	0.042	4.00	0.0	0.600	o	225	Pipe/Conduit			
S3.001	19.881	0.249	80.0	0.027	0.00	0.0	0.600	o	300	Pipe/Conduit			
S3.002	42.139	0.527	80.0	0.033	0.00	0.0	0.600	o	375	Pipe/Conduit			
S3.003	31.503	1.575	20.0	0.142	0.00	0.0	0.600	o	375	Pipe/Conduit			
S3.004	12.832	0.594	21.6	0.012	0.00	0.0	0.600	o	375	Pipe/Conduit			
S5.000	11.506	0.144	79.9	0.119	4.00	0.0	0.600	o	225	Pipe/Conduit			
S5.001	47.116	0.314	150.1	0.091	0.00	0.0	0.600	o	300	Pipe/Conduit			
S5.002	31.602	0.211	149.8	0.058	0.00	0.0	0.600	o	375	Pipe/Conduit			
S3.005	8.285	0.055	150.6	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit			
S3.006	53.398	0.153	349.0	0.167	0.00	0.0	0.600	o	1800	Pipe/Conduit			
S3.007	7.989	0.023	349.0	0.000	0.00	0.0	0.600	o	1800	Pipe/Conduit			
S3.008	26.556	0.076	349.4	0.071	0.00	0.0	0.600	o	1800	Pipe/Conduit			
S1.009	71.947	0.206	349.9	0.236	0.00	0.0	0.600	o	1800	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)			
S1.008	50.00	5.86	56.880	1.381	0.0	0.0	0.0	3.22	512.6	187.0			
S3.000	50.00	4.45	60.350	0.184	0.0	0.0	0.0	1.46	58.2	24.9			
S4.000	50.00	4.10	61.200	0.042	0.0	0.0	0.0	3.34	132.8	5.7			
S3.001	50.00	4.63	59.786	0.253	0.0	0.0	0.0	1.76	124.4	34.3			
S3.002	50.00	4.98	59.463	0.286	0.0	0.0	0.0	2.03	224.0	38.7			
S3.003	50.00	5.11	58.936	0.428	0.0	0.0	0.0	4.07	449.2	58.0			
S3.004	50.00	5.16	57.360	0.440	0.0	0.0	0.0	3.91	432.2	59.6			
S5.000	50.00	4.13	57.585	0.119	0.0	0.0	0.0	1.46	58.2	16.1			
S5.001	50.00	4.74	57.366	0.210	0.0	0.0	0.0	1.28	90.6	28.4			
S5.002	50.00	5.10	56.977	0.268	0.0	0.0	0.0	1.48	163.3	36.3			
S3.005	50.00	5.26	56.766	0.708	0.0	0.0	0.0	1.47	162.8	95.9			
S3.006	50.00	5.60	55.286	0.875	0.0	0.0	0.0	2.56	6515.8	118.5			
S3.007	50.00	5.66	55.133	0.875	0.0	0.0	0.0	2.56	6515.8	118.5			
S3.008	50.00	5.83	55.110	0.946	0.0	0.0	0.0	2.56	6511.9	128.1			
S1.009	50.00	6.33	55.034	2.563	0.0	0.0	0.0	2.56	6507.1	347.1			
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Micro Drainage								Network 2016.1			
Manhole Schedules for 6120 SURFACE3.SWS											
MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam., L*W (mm)	PN	Pipe Out Invert Level (m)	Diameter (mm)	PN	Pipes In Invert Level (m)	Diameter (mm)	Backdrop (mm)
S1	72.632	1.432	Open Manhole	1200	S1.000	71.200	225				
S2	72.248	1.680	Open Manhole	1200	S1.001	70.568	300	S1.000	70.643	225	
S3	70.242	1.812	Open Manhole	1500	S1.002	68.430	375	S1.001	68.505	300	
S4	65.833	2.124	Open Manhole	1500	S1.003	63.709	375	S1.002	63.709	375	
S20	69.447	1.547	Open Manhole	1200	S2.000	67.900	225				
S21	67.573	1.611	Open Manhole	1200	S2.001	65.962	300	S2.000	66.037	225	
S22	65.064	2.227	Open Manhole	1500	S2.002	62.837	375	S2.001	62.912	300	
S5	64.426	2.313	Open Manhole	1500	S1.004	62.113	450	S1.003	62.188	375	
								S2.002	62.189	375	1
S6	63.945	2.037	Open Manhole	1500	S1.005	61.908	450	S1.004	61.908	450	
S7	62.903	2.267	Open Manhole	1500	S1.006	60.636	450	S1.005	60.636	450	
S8	62.117	2.983	Open Manhole	1500	S1.007	59.134	450	S1.006	59.134	450	
S9	61.730	4.850	Open Manhole	1500	S1.008	56.880	450	S1.007	56.880	450	
S23	61.781	1.431	Open Manhole	1200	S3.000	60.350	225				
S32	62.605	1.405	Open Manhole	1200	S4.000	61.200	225				
S24	62.277	2.491	Open Manhole	1200	S3.001	59.786	300	S3.000	59.862	225	1
								S4.000	59.861	225	
S25	61.981	2.518	Open Manhole	1500	S3.002	59.463	375	S3.001	59.538	300	
S26	61.190	2.254	Open Manhole	1500	S3.003	58.936	375	S3.002	58.936	375	
S27	60.359	2.999	Open Manhole	1500	S3.004	57.360	375	S3.003	57.361	375	1
S33	59.557	1.972	Open Manhole	1200	S5.000	57.585	225				
S34	59.799	2.433	Open Manhole	1200	S5.001	57.366	300	S5.000	57.441	225	
S35	60.154	3.177	Open Manhole	1500	S5.002	56.977	375	S5.001	57.052	300	
S28	60.015	3.249	Open Manhole	1500	S3.005	56.766	375	S3.004	56.766	375	
								S5.002	56.766	375	
S29	59.808	4.522	Open Manhole	3000	S3.006	55.286	1800	S3.005	56.711	375	
S30	60.532	5.399	Open Manhole	3000	S3.007	55.133	1800	S3.006	55.133	1800	
S31	60.713	5.603	Open Manhole	3000	S3.008	55.110	1800	S3.007	55.110	1800	
S10	61.418	6.384	Open Manhole	3660	S1.009	55.034	1800	S1.008	56.384	450	
								S3.008	55.034	1800	
S36	58.327	3.161	Open Manhole	3000	S6.000	55.166	1800				
S37	58.469	3.552	Open Manhole	3000	S6.001	54.917	1800	S6.000	54.917	1800	
S38	58.581	3.684	Open Manhole	3000	S6.002	54.897	1800	S6.001	54.897	1800	
S11	58.875	4.047	Open Manhole	3660	S1.010	54.828	1800	S1.009	54.828	1800	
								S6.002	54.828	1800	
S12	58.021	3.308	Open Manhole	3000	S1.011	54.713	1800	S1.010	54.713	1800	
S13	57.827	3.204	Open Manhole	3000	S1.012	54.623	225	S1.011	54.673	1800	1625
S14	57.403	3.386	Open Manhole	2100	S1.013	54.017	-1	S1.012	54.392	225	
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Micro Drainage		Network 2016.1

Manhole Schedules for 6120 SURFACE3.SWS

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam., L*W (mm)	PN	Pipe Out Invert Level (m)	Diameter (mm)	PN	Pipes In Invert Level (m)	Diameter (mm)	Backdrop (mm)
S15	56.936	2.986	Open Manhole	2100	S1.014	53.950	-1	S1.013	53.950	-1	
S39	56.046	2.066	Open Manhole	2100	S7.000	53.980	-1				
S16	56.429	2.515	Open Manhole	2400	S1.015	53.914	-1	S1.014	53.914	-1	
								S7.000	53.914	-1	
S40	55.570	1.236	Open Manhole	1200	S8.000	54.334	225				
S17	56.020	2.136	Open Manhole	2400	S1.016	53.884	-1	S1.015	53.884	-1	
								S8.000	54.259	225	
S18	55.550	1.756	Open Manhole	2400	S1.017	53.794	225	S1.016	53.844	-1	425
S19	55.600	1.990	Open Manhole	1200		OUTFALL		S1.017	53.610	225	

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PIPELINE SCHEDULES for 6120 SURFACE3.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)
S3.003	o	375	S26	61.190	58.936	1.879	Open Manhole	1500
S3.004	o	375	S27	60.359	57.360	2.624	Open Manhole	1500
S5.000	o	225	S33	59.557	57.585	1.747	Open Manhole	1200
S5.001	o	300	S34	59.799	57.366	2.133	Open Manhole	1200
S5.002	o	375	S35	60.154	56.977	2.802	Open Manhole	1500
S3.005	o	375	S28	60.015	56.766	2.874	Open Manhole	1500
S3.006	o	1800	S29	59.808	55.286	2.722	Open Manhole	3000
S3.007	o	1800	S30	60.532	55.133	3.599	Open Manhole	3000
S3.008	o	1800	S31	60.713	55.110	3.803	Open Manhole	3000
S1.009	o	1800	S10	61.418	55.034	4.584	Open Manhole	3660
S6.000	o	1800	S36	58.327	55.166	1.361	Open Manhole	3000
S6.001	o	1800	S37	58.469	54.917	1.752	Open Manhole	3000
S6.002	o	1800	S38	58.581	54.897	1.884	Open Manhole	3000
S1.010	o	1800	S11	58.875	54.828	2.247	Open Manhole	3660
S1.011	o	1800	S12	58.021	54.713	1.508	Open Manhole	3000
S1.012	o	225	S13	57.827	54.623	2.979	Open Manhole	3000

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)
S3.003	31.503	20.0	S27	60.359	57.361	2.623	Open Manhole	1500
S3.004	12.832	21.6	S28	60.015	56.766	2.874	Open Manhole	1500
S5.000	11.506	79.9	S34	59.799	57.441	2.133	Open Manhole	1200
S5.001	47.116	150.1	S35	60.154	57.052	2.802	Open Manhole	1500
S5.002	31.602	149.8	S28	60.015	56.766	2.874	Open Manhole	1500
S3.005	8.285	150.6	S29	59.808	56.711	2.722	Open Manhole	3000
S3.006	53.398	349.0	S30	60.532	55.133	3.599	Open Manhole	3000
S3.007	7.989	349.0	S31	60.713	55.110	3.803	Open Manhole	3000
S3.008	26.556	349.4	S10	61.418	55.034	4.584	Open Manhole	3660
S1.009	71.947	349.9	S11	58.875	54.828	2.247	Open Manhole	3660
S6.000	86.967	349.3	S37	58.469	54.917	1.752	Open Manhole	3000
S6.001	6.924	346.2	S38	58.581	54.897	1.884	Open Manhole	3000
S6.002	24.065	348.8	S11	58.875	54.828	2.247	Open Manhole	3660
S1.010	40.004	347.9	S12	58.021	54.713	1.508	Open Manhole	3000
S1.011	14.102	349.0	S13	57.827	54.673	1.354	Open Manhole	3000
S1.012	34.661	150.0	S14	57.403	54.392	2.786	Open Manhole	2100

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PIPELINE SCHEDULES for 6120 SURFACE3.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)
S1.013	oo	-1	S14	57.403	54.017	2.786	Open Manhole	2100
S1.014	oo	-1	S15	56.936	53.950	2.386	Open Manhole	2100
S7.000	oo	-1	S39	56.046	53.980	1.466	Open Manhole	2100
S1.015	oo	-1	S16	56.429	53.914	1.915	Open Manhole	2400
S8.000	o	225	S40	55.570	54.334	1.011	Open Manhole	1200
S1.016	oo	-1	S17	56.020	53.884	1.536	Open Manhole	2400
S1.017	o	225	S18	55.550	53.794	1.531	Open Manhole	2400

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)
S1.013	23.477	350.4	S15	56.936	53.950	2.386	Open Manhole	2100
S1.014	12.732	353.7	S16	56.429	53.914	1.915	Open Manhole	2400
S7.000	22.988	348.3	S16	56.429	53.914	1.915	Open Manhole	2400
S1.015	10.458	348.6	S17	56.020	53.884	1.536	Open Manhole	2400
S8.000	11.213	149.5	S17	56.020	54.259	1.536	Open Manhole	2400
S1.016	14.091	350.0	S18	55.550	53.844	1.106	Open Manhole	2400
S1.017	27.531	149.6	S19	55.600	53.610	1.765	Open Manhole	1200

Free Flowing Outfall Details for 6120 SURFACE3.SWS

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D, L (mm)	W (mm)
S1.017	S19	55.600	53.610	0.000	1200	0

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Micro Drainage Network 2016.1		
<u>Simulation Criteria for 6120 SURFACE3.SWS</u> 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 Coefficient 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 1 Number of Online Controls 2 Number of Time/Area Diagrams 0 Number of Offline Controls 0 Number of Real Time Controls 0 <u>Synthetic Rainfall Details</u> 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) 19.000 Storm Duration (mins) 30 Ratio R 0.375		
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Online Controls for 6120 SURFACE3.SWS

Hydro-Brake Optimum® Manhole: S13, DS/PN: S1.012, Volume (m³): 50.9

Unit Reference MD-SHE-0113-8000-2300-8000
Design Head (m) 2.300
Design Flow (l/s) 8.0
Flush-Flo™ Calculated
Objective Minimise upstream storage
Application Surface
Sump Available Yes
Diameter (mm) 113
Invert Level (m) 54.673
Minimum Outlet Pipe Diameter (mm) 150
Suggested Manhole Diameter (mm) 1200

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	2.300	8.0
Flush-Flo™	0.493	6.8
Kick-Flo®	1.009	5.4
Mean Flow over Head Range	-	6.4

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	3.9	1.200	5.9	3.000	9.1	7.000	13.6
0.200	6.0	1.400	6.3	3.500	9.7	7.500	14.0
0.300	6.6	1.600	6.7	4.000	10.4	8.000	14.4
0.400	6.8	1.800	7.1	4.500	11.0	8.500	14.9
0.500	6.8	2.000	7.5	5.000	11.5	9.000	15.3
0.600	6.8	2.200	7.8	5.500	12.1	9.500	15.7
0.800	6.5	2.400	8.2	6.000	12.6		
1.000	5.5	2.600	8.5	6.500	13.1		

Hydro-Brake Optimum® Manhole: S18, DS/PN: S1.017, Volume (m³): 14.5

Unit Reference MD-SHE-0157-1230-1200-1230
Design Head (m) 1.200
Design Flow (l/s) 12.3
Flush-Flo™ Calculated
Objective Minimise upstream storage
Application Surface
Sump Available Yes
Diameter (mm) 157
Invert Level (m) 53.840
Minimum Outlet Pipe Diameter (mm) 225
Suggested Manhole Diameter (mm) 1200

Haigh Huddleston & Associates			Page 10																																																																								
Firth Buildings 99-101 Leeds Road Dewsbury WF12 7BU		BDWH Low Barugh Surface Water REV A																																																																									
Date NOV 2016 File 6120 SURFACE3.mdx		Designed by HH Checked by																																																																									
Micro Drainage		Network 2016.1																																																																									
<u>Hydro-Brake Optimum® Manhole: S18, DS/PN: S1.017, Volume (m³): 14.5</u>																																																																											
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Micro Drainage	Network 2016.1									
<u>Storage Structures for 6120 SURFACE3.SWS</u> <u>Tank or Pond Manhole: S13, DS/PN: S1.012</u> Invert Level (m) 56.700 <table><tr><th>Depth (m)</th><th>Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th></tr><tr><td>0.000</td><td>1245.0</td><td>0.900</td><td>2500.0</td></tr></table>			Depth (m)	Area (m²)	Depth (m)	Area (m²)	0.000	1245.0	0.900	2500.0
Depth (m)	Area (m²)	Depth (m)	Area (m²)							
0.000	1245.0	0.900	2500.0							
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Hydro-Brake Optimum® Design Tool

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Design Inputs

Project Information

Reference No.

6120 MHS13

Site Name

LOW BARUGH

Primary Design Point

Design Head (m)

2.3

Design Flow (l/s)

8

Customised Hydraulic Response

Objective



Flush-Flo™ (l/s)

Note: Leave Blank to Match Flush-Flow™ to Design Flow Rate

Site Options

Water Type



Sump Available



Mechanical Build Options

Mounting Style



Adjustable Inlet

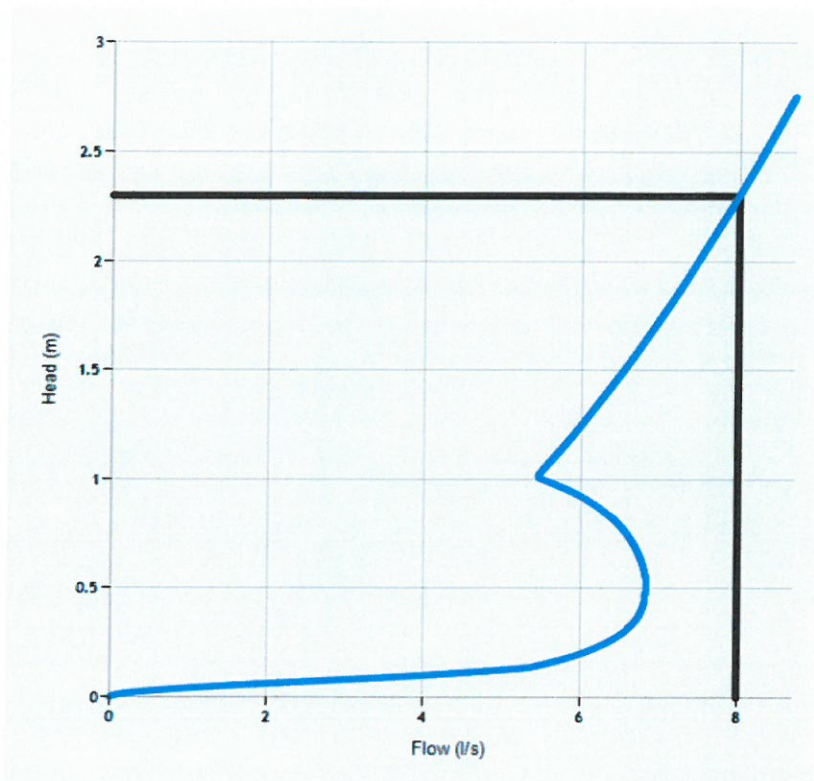
[Design Hydro-Brake Optimum®](#)

Design Outputs

Hydraulic Characteristics

Hydro-Brake Optimum®

Product No: SHE-0113-8000-2300-8000



Control Points

Primary Design Point

Head (m)

2.300

Flow (l/s)

8.000

Flush-Flo

0.493

6.842

Kick-Flo

1.009

5.440

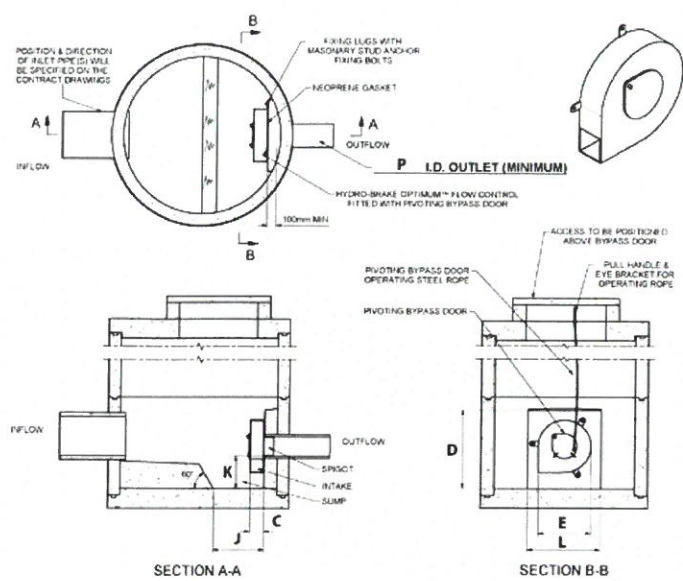
Performance

Mean Flow Over Head Range

Flow (l/s)

6.415

Key Dimensions



Unit Dimensions (mm)

Unit Outlet Diameter	113
Internal Clearance	0.0102m ²
Unit Depth (C)	120
Unit Width (E)	685

Installation Dimensions (mm)

Minimum Outlet Pipe Diameter (P)	150
Suggested Manhole Diameter	1200
Minimum Sump Depth (K)	410
Minimum Sump Width (J)	240
Minimum Mounting Block Width (L)	890
Minimum Mounting Block Height (D)	1030

Design File Service

- ☐ Hydraulic Characteristic Chart (.pdf)
- ☐ Dimensioned Drawing (.pdf)

Data Format

None (Default)

▼

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Design Tool

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Design Inputs

Project Information

Reference No.

6120 MH 518

Site Name

LOW BARUGH

Primary Design Point

Design Head (m)

1.2

Design Flow (l/s)

12.3

Customised Hydraulic Response

Objective



Flush-Flo™ (l/s)

Note: Leave Blank to Match Flush-Flow™ to Design Flow Rate

Site Options

Water Type



Sump Available



Mechanical Build Options

Mounting Style



Adjustable Inlet

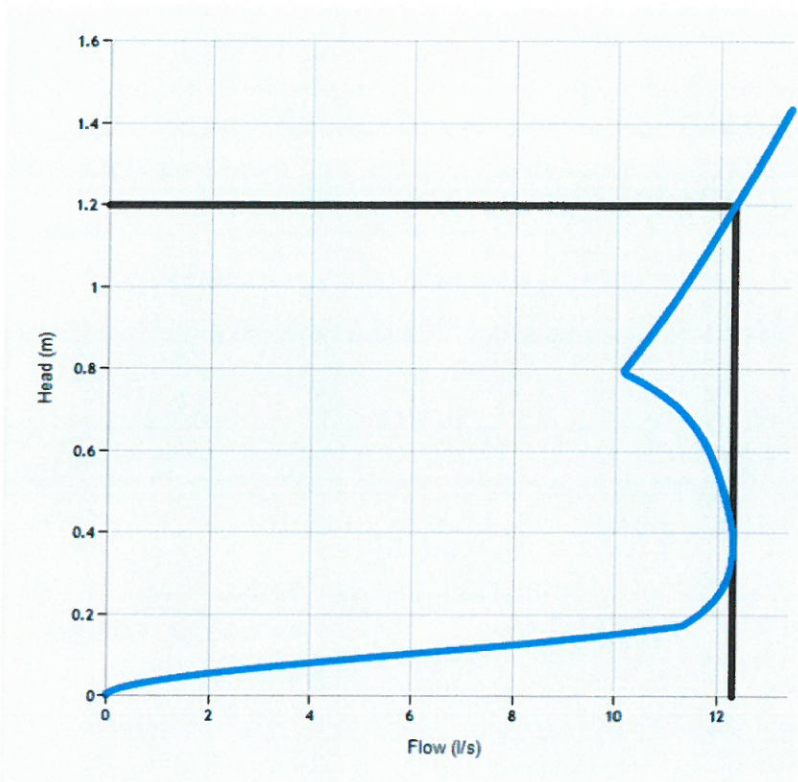
[Design Hydro-Brake Optimum®](#)

Design Outputs

Hydraulic Characteristics

Hydro-Brake Optimum®

Product No: SHE-0157-1230-1200-1230



Control Points

Primary Design Point

Head (m)

1.200

Flow (l/s)

12.300

Flush-Flo

0.360

12.299

Kick-Flo

0.791

10.111

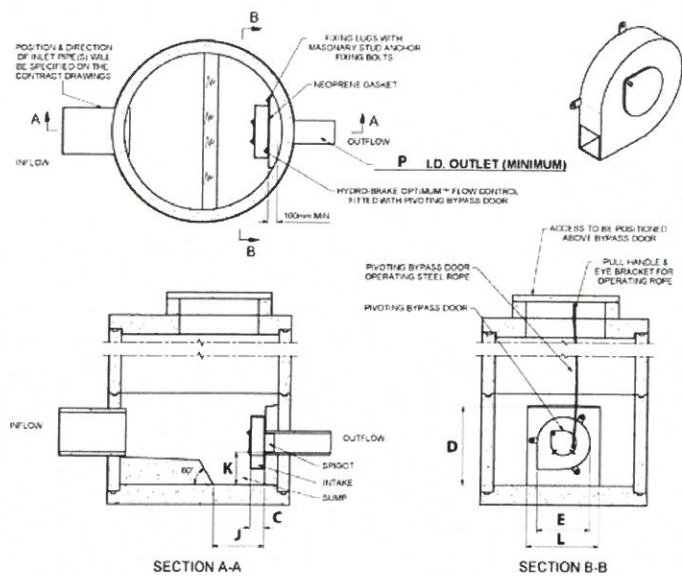
Performance

Mean Flow Over Head Range

Flow (l/s)

10.613

Key Dimensions



Unit Dimensions (mm)

Unit Outlet Diameter	157
Internal Clearance	0.0198m ²
Unit Depth (C)	165
Unit Width (E)	670

Installation Dimensions (mm)

Minimum Outlet Pipe Diameter (P)	225
Suggested Manhole Diameter	1200
Minimum Sump Depth (K)	405
Minimum Sump Width (J)	330
Minimum Mounting Block Width (L)	875
Minimum Mounting Block Height (D)	1020

Design File Service

- ☐ Hydraulic Characteristic Chart (.pdf)
- ☐ Dimensioned Drawing (.pdf)

Data Format

None (Default)

▼

Generate And Email Files

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Summary Wizard of 15 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient 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 1
 Number of Online Controls 2 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 0.375
 Return Period (years) 2 Cv (Summer) 0.750
 Region England and Wales Cv (Winter) 0.840
 M5-60 (mm) 19.000

Margin for Flood Risk Warning (mm) 300.0 DVD Status ON
 Analysis Timestep Fine Inertia Status ON
 DTS Status ON

Profile(s) Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 5760, 7200, 8640, 10080
 Sensitivity flows(s) (%) 0

PN	US/MH Name	Storm Rank	Water Level	Surcharged Depth	Flooded Volume	Flow / Cap.	Overflow	Pipe Flow	Status
			(m)	(m)	(m³)		(l/s)	(l/s)	
S1.000	S1	1	71.308	-0.117	0.000	0.47		26.0	OK
S1.001	S2	1	70.646	-0.222	0.000	0.15		35.6	OK
S1.002	S3	1	68.514	-0.291	0.000	0.11		55.1	OK
S1.003	S4	1	63.813	-0.271	0.000	0.17		75.0	OK
S2.000	S20	1	67.968	-0.157	0.000	0.20		18.3	OK
S2.001	S21	1	66.047	-0.215	0.000	0.18		41.2	OK
S2.002	S22	1	62.955	-0.257	0.000	0.21		54.2	OK
S1.004	S5	1	62.342	-0.221	0.000	0.51		130.1	OK
S1.005	S6	1	62.086	-0.272	0.000	0.33		152.9	OK
S1.006	S7	1	60.826	-0.261	0.000	0.37		173.4	OK
S1.007	S8	1	59.293	-0.291	0.000	0.27		198.2	OK
S1.008	S9	1	57.109	-0.221	0.000	0.51		201.3	OK
S3.000	S23	1	60.475	-0.100	0.000	0.59		32.7	OK
S4.000	S32	1	61.236	-0.189	0.000	0.06		7.5	OK
S3.001	S24	1	59.919	-0.167	0.000	0.41		43.9	OK
S3.002	S25	1	59.587	-0.251	0.000	0.23		47.9	OK
S3.003	S26	1	59.040	-0.271	0.000	0.17		68.2	OK
S3.004	S27	1	57.482	-0.253	0.000	0.23		70.1	OK
S5.000	S33	1	57.688	-0.122	0.000	0.43		21.3	OK
S5.001	S34	1	57.498	-0.168	0.000	0.39		33.2	OK
S5.002	S35	1	57.133	-0.219	0.000	0.28		40.9	OK

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Summary Wizard of 15 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)			Flow (l/s)	
S3.005	S28	1	57.088	-0.053	0.000	1.00	107.1		OK
S3.006	S29	13	55.610	-1.476	0.000	0.03	126.9		OK
S3.007	S30	13	55.608	-1.325	0.000	0.05	103.9		OK
S3.008	S31	13	55.608	-1.302	0.000	0.03	105.2		OK
S1.009	S10	13	55.607	-1.227	0.000	0.06	307.4		OK
S6.000	S36	13	55.600	-1.366	0.000	0.01	33.0		OK
S6.001	S37	13	55.601	-1.116	0.000	0.01	13.3		OK
S6.002	S38	13	55.601	-1.096	0.000	0.00	6.6		OK
S1.010	S11	13	55.601	-1.027	0.000	0.03	115.9		OK
S1.011	S12	13	55.600	-0.913	0.000	0.01	36.6		OK
S1.012	S13	13	55.600	0.752	0.000	0.17	6.8	SURCHARGED	
S1.013	S14	3	54.101	-0.516	0.000	0.02	9.3		OK
S1.014	S15	3	54.097	-0.453	0.000	0.02	10.6		OK
S7.000	S39	3	54.096	-0.484	0.000	0.01	7.1		OK
S1.015	S16	3	54.096	-0.418	0.000	0.02	10.2		OK
S8.000	S40	1	54.437	-0.122	0.000	0.43	15.4		OK
S1.016	S17	3	54.095	-0.389	0.000	0.04	18.8		OK
S1.017	S18	3	54.093	0.074	0.000	0.31	12.0	SURCHARGED	

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Summary Wizard of 30 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	2	Cv (Summer)	0.750
Region England and Wales		Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep		Fine Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080	Winter
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Sensitivity flows(s) (%) 0

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)		(l/s)	Flow (l/s)	
S1.000	S1	2	71.292	-0.133	0.000	0.35	19.4	OK	
S1.001	S2	2	70.637	-0.231	0.000	0.12	27.7	OK	
S1.002	S3	2	68.505	-0.300	0.000	0.09	44.4	OK	
S1.003	S4	2	63.802	-0.282	0.000	0.14	61.7	OK	
S2.000	S20	2	67.958	-0.167	0.000	0.15	13.6	OK	
S2.001	S21	2	66.037	-0.225	0.000	0.14	33.3	OK	
S2.002	S22	2	62.942	-0.270	0.000	0.18	44.7	OK	
S1.004	S5	2	62.315	-0.248	0.000	0.41	105.9	OK	
S1.005	S6	2	62.067	-0.291	0.000	0.27	125.4	OK	
S1.006	S7	2	60.806	-0.280	0.000	0.30	143.9	OK	
S1.007	S8	2	59.279	-0.305	0.000	0.23	165.8	OK	
S1.008	S9	2	57.085	-0.245	0.000	0.43	169.3	OK	
S3.000	S23	2	60.456	-0.119	0.000	0.44	24.4	OK	
S4.000	S32	2	61.231	-0.194	0.000	0.05	5.6	OK	
S3.001	S24	2	59.900	-0.186	0.000	0.31	33.4	OK	
S3.002	S25	2	59.571	-0.267	0.000	0.18	37.3	OK	
S3.003	S26	2	59.028	-0.283	0.000	0.14	54.4	OK	
S3.004	S27	2	57.469	-0.266	0.000	0.18	55.7	OK	
S5.000	S33	2	57.673	-0.137	0.000	0.32	16.0	OK	
S5.001	S34	2	57.481	-0.185	0.000	0.31	26.6	OK	
S5.002	S35	2	57.101	-0.251	0.000	0.23	33.4	OK	

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Summary Wizard of 30 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	
S3.005	S28	2	57.028	-0.113	0.000	0.83	89.1	OK
S3.006	S29	11	55.732	-1.354	0.000	0.02	105.9	OK
S3.007	S30	11	55.730	-1.203	0.000	0.04	77.8	OK
S3.008	S31	11	55.729	-1.181	0.000	0.02	79.9	OK
S1.009	S10	11	55.728	-1.106	0.000	0.05	249.5	OK
S6.000	S36	11	55.723	-1.243	0.000	0.00	22.4	OK
S6.001	S37	11	55.723	-0.994	0.000	0.00	6.5	OK
S6.002	S38	11	55.723	-0.974	0.000	0.00	4.9	OK
S1.010	S11	11	55.723	-0.905	0.000	0.02	79.8	OK
S1.011	S12	11	55.723	-0.790	0.000	0.01	25.6	OK
S1.012	S13	11	55.723	0.875	0.000	0.17	6.8	SURCHARGED
S1.013	S14	1	54.119	-0.498	0.000	0.02	8.6	OK
S1.014	S15	1	54.118	-0.432	0.000	0.02	9.9	OK
S7.000	S39	1	54.117	-0.463	0.000	0.01	5.2	OK
S1.015	S16	1	54.117	-0.397	0.000	0.02	10.0	OK
S8.000	S40	2	54.422	-0.137	0.000	0.32	11.5	OK
S1.016	S17	1	54.116	-0.368	0.000	0.03	15.7	OK
S1.017	S18	1	54.113	0.094	0.000	0.31	12.1	SURCHARGED

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Summary Wizard of 60 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	2	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080	Winter
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Sensitivity flows(s) (%) 0

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)		(l/s)	Flow (l/s)	
S1.000	S1	3	71.273	-0.152	0.000	0.23	12.7	OK	
S1.001	S2	3	70.624	-0.244	0.000	0.08	18.4	OK	
S1.002	S3	3	68.490	-0.315	0.000	0.06	30.1	OK	
S1.003	S4	3	63.787	-0.297	0.000	0.10	42.4	OK	
S2.000	S20	3	67.947	-0.178	0.000	0.10	9.0	OK	
S2.001	S21	3	66.025	-0.238	0.000	0.10	22.7	OK	
S2.002	S22	3	62.924	-0.288	0.000	0.12	30.7	OK	
S1.004	S5	3	62.277	-0.286	0.000	0.29	73.3	OK	
S1.005	S6	3	62.039	-0.319	0.000	0.19	86.9	OK	
S1.006	S7	3	60.776	-0.310	0.000	0.21	99.9	OK	
S1.007	S8	3	59.253	-0.331	0.000	0.16	115.5	OK	
S1.008	S9	3	57.047	-0.283	0.000	0.30	118.1	OK	
S3.000	S23	3	60.433	-0.142	0.000	0.29	16.2	OK	
S4.000	S32	3	61.226	-0.199	0.000	0.03	3.7	OK	
S3.001	S24	3	59.878	-0.208	0.000	0.20	22.1	OK	
S3.002	S25	3	59.550	-0.288	0.000	0.12	24.8	OK	
S3.003	S26	3	59.013	-0.298	0.000	0.09	37.0	OK	
S3.004	S27	3	57.448	-0.287	0.000	0.13	38.1	OK	
S5.000	S33	3	57.655	-0.155	0.000	0.21	10.5	OK	
S5.001	S34	3	57.460	-0.206	0.000	0.21	18.1	OK	
S5.002	S35	3	57.077	-0.275	0.000	0.16	23.1	OK	

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Summary Wizard of 60 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
			Level (m)	Depth (m)	Volume (m ³)				
S3.005	S28	3	56.969	-0.172	0.000	0.57		61.2	OK
S3.006	S29	10	55.847	-1.239	0.000	0.02		72.4	OK
S3.007	S30	10	55.847	-1.086	0.000	0.02		44.3	OK
S3.008	S31	10	55.847	-1.064	0.000	0.01		44.7	OK
S1.009	S10	10	55.846	-0.988	0.000	0.03		159.3	OK
S6.000	S36	10	55.845	-1.121	0.000	0.00		13.5	OK
S6.001	S37	10	55.845	-0.872	0.000	0.00		5.6	OK
S6.002	S38	10	55.845	-0.852	0.000	0.00		4.0	OK
S1.010	S11	10	55.845	-0.783	0.000	0.01		49.6	OK
S1.011	S12	10	55.844	-0.669	0.000	0.01		17.1	OK
S1.012	S13	10	55.844	0.996	0.000	0.17		6.8	SURCHARGED
S1.013	S14	2	54.117	-0.500	0.000	0.01		7.7	OK
S1.014	S15	2	54.115	-0.435	0.000	0.02		8.8	OK
S7.000	S39	2	54.115	-0.465	0.000	0.01		3.4	OK
S1.015	S16	2	54.115	-0.399	0.000	0.02		9.8	OK
S8.000	S40	3	54.404	-0.155	0.000	0.21		7.6	OK
S1.016	S17	2	54.114	-0.370	0.000	0.03		13.8	OK
S1.017	S18	2	54.111	0.092	0.000	0.31		12.1	SURCHARGED

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Summary Wizard of 120 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	2	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080	Winter
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Sensitivity flows(s) (%) 0

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)		(l/s)	Flow (l/s)	
S1.000	S1	4	71.256	-0.169	0.000	0.14	8.0	OK	
S1.001	S2	4	70.611	-0.257	0.000	0.05	11.7	OK	
S1.002	S3	4	68.478	-0.327	0.000	0.04	19.2	OK	
S1.003	S4	4	63.769	-0.315	0.000	0.06	27.1	OK	
S2.000	S20	4	67.936	-0.189	0.000	0.06	5.6	OK	
S2.001	S21	4	66.010	-0.252	0.000	0.06	14.5	OK	
S2.002	S22	4	62.906	-0.306	0.000	0.08	19.7	OK	
S1.004	S5	4	62.242	-0.321	0.000	0.18	46.8	OK	
S1.005	S6	4	62.011	-0.347	0.000	0.12	55.4	OK	
S1.006	S7	4	60.746	-0.341	0.000	0.13	63.6	OK	
S1.007	S8	4	59.229	-0.355	0.000	0.10	73.6	OK	
S1.008	S9	4	57.012	-0.318	0.000	0.19	75.3	OK	
S3.000	S23	4	60.415	-0.160	0.000	0.18	10.1	OK	
S4.000	S32	4	61.220	-0.205	0.000	0.02	2.3	OK	
S3.001	S24	4	59.857	-0.229	0.000	0.13	13.9	OK	
S3.002	S25	4	59.531	-0.307	0.000	0.08	15.7	OK	
S3.003	S26	4	58.995	-0.316	0.000	0.06	23.5	OK	
S3.004	S27	4	57.430	-0.305	0.000	0.08	24.1	OK	
S5.000	S33	4	57.639	-0.171	0.000	0.13	6.5	OK	
S5.001	S34	4	57.439	-0.227	0.000	0.14	11.5	OK	
S5.002	S35	4	57.056	-0.296	0.000	0.10	14.7	OK	

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Summary Wizard of 120 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	
S3.005	S28	4	56.922	-0.219	0.000	0.36	38.7	OK
S3.006	S29	9	55.965	-1.121	0.000	0.01	45.5	OK
S3.007	S30	9	55.965	-0.968	0.000	0.01	24.6	OK
S3.008	S31	9	55.965	-0.945	0.000	0.01	24.5	OK
S1.009	S10	9	55.965	-0.869	0.000	0.02	98.7	OK
S6.000	S36	9	55.964	-1.002	0.000	0.00	8.8	OK
S6.001	S37	9	55.964	-0.753	0.000	0.01	23.5	OK
S6.002	S38	9	55.975	-0.722	0.000	0.01	37.1	OK
S1.010	S11	9	55.964	-0.664	0.000	0.01	32.4	OK
S1.011	S12	9	55.964	-0.549	0.000	0.01	13.6	OK
S1.012	S13	9	55.964	1.116	0.000	0.17	6.8	SURCHARGED
S1.013	S14	4	54.087	-0.530	0.000	0.01	7.2	OK
S1.014	S15	4	54.080	-0.470	0.000	0.02	8.0	OK
S7.000	S39	4	54.080	-0.500	0.000	0.00	2.2	OK
S1.015	S16	4	54.080	-0.434	0.000	0.02	9.4	OK
S8.000	S40	4	54.388	-0.171	0.000	0.13	4.7	OK
S1.016	S17	4	54.079	-0.405	0.000	0.03	12.6	OK
S1.017	S18	4	54.077	0.058	0.000	0.30	11.9	SURCHARGED

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Summary Wizard of 180 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	2	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080	Winter
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Sensitivity flows(s) (%) 0

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow (l/s)	Flow (l/s)	
S1.000	S1	5	71.249	-0.176	0.000	0.11	6.1	OK
S1.001	S2	5	70.606	-0.262	0.000	0.04	8.9	OK
S1.002	S3	5	68.472	-0.333	0.000	0.03	14.6	OK
S1.003	S4	5	63.761	-0.323	0.000	0.05	20.5	OK
S2.000	S20	5	67.931	-0.194	0.000	0.05	4.3	OK
S2.001	S21	5	66.004	-0.258	0.000	0.05	11.0	OK
S2.002	S22	5	62.896	-0.316	0.000	0.06	14.9	OK
S1.004	S5	5	62.224	-0.339	0.000	0.14	35.4	OK
S1.005	S6	5	61.999	-0.359	0.000	0.09	42.0	OK
S1.006	S7	5	60.732	-0.354	0.000	0.10	48.3	OK
S1.007	S8	5	59.216	-0.368	0.000	0.08	56.0	OK
S1.008	S9	5	56.993	-0.337	0.000	0.14	57.3	OK
S3.000	S23	5	60.406	-0.169	0.000	0.14	7.7	OK
S4.000	S32	5	61.215	-0.210	0.000	0.01	1.8	OK
S3.001	S24	5	59.849	-0.237	0.000	0.10	10.5	OK
S3.002	S25	5	59.521	-0.317	0.000	0.06	11.9	OK
S3.003	S26	5	58.987	-0.324	0.000	0.04	17.8	OK
S3.004	S27	5	57.420	-0.315	0.000	0.06	18.3	OK
S5.000	S33	5	57.632	-0.178	0.000	0.10	5.0	OK
S5.001	S34	5	57.430	-0.236	0.000	0.10	8.7	OK
S5.002	S35	5	57.046	-0.306	0.000	0.08	11.1	OK

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Summary Wizard of 180 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)			Flow (l/s)	
S3.005	S28	5	56.899	-0.242	0.000	0.27		29.4	OK
S3.006	S29	8	56.035	-1.051	0.000	0.01		34.6	OK
S3.007	S30	8	56.035	-0.898	0.000	0.01		18.3	OK
S3.008	S31	8	56.035	-0.875	0.000	0.01		18.2	OK
S1.009	S10	8	56.035	-0.799	0.000	0.02		74.4	OK
S6.000	S36	2	56.189	-0.777	0.000	0.00		6.7	OK
S6.001	S37	1	56.250	-0.467	0.000	0.08		156.9	OK
S6.002	S38	1	56.275	-0.422	0.000	0.03		95.4	OK
S1.010	S11	8	56.035	-0.593	0.000	0.01		27.7	OK
S1.011	S12	8	56.034	-0.480	0.000	0.00		11.6	OK
S1.012	S13	8	56.033	1.185	0.000	0.17		6.8	SURCHARGED
S1.013	S14	5	54.068	-0.549	0.000	0.01		7.1	OK
S1.014	S15	5	54.047	-0.503	0.000	0.02		7.9	OK
S7.000	S39	5	54.046	-0.534	0.000	0.00		1.7	OK
S1.015	S16	5	54.046	-0.468	0.000	0.02		9.0	OK
S8.000	S40	5	54.381	-0.178	0.000	0.10		3.6	OK
S1.016	S17	5	54.045	-0.439	0.000	0.03		12.0	OK
S1.017	S18	5	54.044	0.025	0.000	0.30		11.7	SURCHARGED

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Summary Wizard of 240 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	2	Cv (Summer)	0.750
Region England and Wales		Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep		Fine Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080	Winter
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Sensitivity flows(s) (%) 0

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)		(l/s)	Flow (l/s)	
S1.000	S1	6	71.245	-0.180	0.000	0.09	4.9	OK	
S1.001	S2	6	70.602	-0.266	0.000	0.03	7.3	OK	
S1.002	S3	6	68.469	-0.336	0.000	0.02	11.9	OK	
S1.003	S4	6	63.756	-0.328	0.000	0.04	16.8	OK	
S2.000	S20	6	67.928	-0.197	0.000	0.04	3.5	OK	
S2.001	S21	6	66.000	-0.262	0.000	0.04	9.0	OK	
S2.002	S22	6	62.890	-0.322	0.000	0.05	12.2	OK	
S1.004	S5	6	62.214	-0.349	0.000	0.11	29.1	OK	
S1.005	S6	6	61.988	-0.370	0.000	0.07	34.5	OK	
S1.006	S7	6	60.723	-0.363	0.000	0.08	39.6	OK	
S1.007	S8	6	59.207	-0.377	0.000	0.06	45.9	OK	
S1.008	S9	6	56.982	-0.348	0.000	0.12	46.9	OK	
S3.000	S23	6	60.400	-0.175	0.000	0.11	6.3	OK	
S4.000	S32	6	61.213	-0.212	0.000	0.01	1.4	OK	
S3.001	S24	6	59.842	-0.244	0.000	0.08	8.6	OK	
S3.002	S25	6	59.515	-0.323	0.000	0.05	9.7	OK	
S3.003	S26	6	58.982	-0.329	0.000	0.04	14.6	OK	
S3.004	S27	6	57.413	-0.322	0.000	0.05	15.0	OK	
S5.000	S33	6	57.628	-0.182	0.000	0.08	4.1	OK	
S5.001	S34	6	57.424	-0.242	0.000	0.08	7.1	OK	
S5.002	S35	6	57.038	-0.314	0.000	0.06	9.1	OK	

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Summary Wizard of 240 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)			Flow (l/s)	
S3.005	S28	6	56.886	-0.255	0.000	0.22	24.1	OK	
S3.006	S29	7	56.076	-1.010	0.000	0.01	28.4	OK	
S3.007	S30	7	56.076	-0.857	0.000	0.01	14.8	OK	
S3.008	S31	7	56.075	-0.835	0.000	0.00	14.8	OK	
S1.009	S10	7	56.075	-0.759	0.000	0.01	61.0	OK	
S6.000	S36	8	56.074	-0.892	0.000	0.00	5.5	OK	
S6.001	S37	8	56.074	-0.643	0.000	0.01	24.2	OK	
S6.002	S38	8	56.085	-0.612	0.000	0.01	37.3	OK	
S1.010	S11	7	56.074	-0.554	0.000	0.01	21.5	OK	
S1.011	S12	7	56.074	-0.439	0.000	0.00	11.8	OK	
S1.012	S13	7	56.072	1.224	0.000	0.17	6.8	SURCHARGED	
S1.013	S14	6	54.058	-0.559	0.000	0.01	7.0	OK	
S1.014	S15	6	54.025	-0.525	0.000	0.02	7.7	OK	
S7.000	S39	6	54.023	-0.557	0.000	0.00	1.5	OK	
S1.015	S16	6	54.022	-0.492	0.000	0.02	8.8	OK	
S8.000	S40	6	54.377	-0.182	0.000	0.08	2.9	OK	
S1.016	S17	6	54.021	-0.463	0.000	0.02	11.5	OK	
S1.017	S18	6	54.020	0.001	0.000	0.29	11.4	SURCHARGED	

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Summary Wizard of 360 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	2	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080	Winter
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Sensitivity flows(s) (%) 0

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Flow (l/s)	
S1.000	S1	7	71.238	-0.187	0.000	0.07	3.7	OK	
S1.001	S2	7	70.599	-0.269	0.000	0.02	5.4	OK	
S1.002	S3	7	68.462	-0.343	0.000	0.02	8.9	OK	
S1.003	S4	7	63.751	-0.333	0.000	0.03	12.6	OK	
S2.000	S20	7	67.925	-0.200	0.000	0.03	2.6	OK	
S2.001	S21	7	65.996	-0.267	0.000	0.03	6.7	OK	
S2.002	S22	7	62.883	-0.329	0.000	0.04	9.1	OK	
S1.004	S5	7	62.201	-0.362	0.000	0.09	21.7	OK	
S1.005	S6	7	61.976	-0.382	0.000	0.06	25.8	OK	
S1.006	S7	7	60.709	-0.377	0.000	0.06	29.6	OK	
S1.007	S8	7	59.196	-0.388	0.000	0.05	34.3	OK	
S1.008	S9	7	56.970	-0.360	0.000	0.09	35.1	OK	
S3.000	S23	7	60.394	-0.181	0.000	0.08	4.7	OK	
S4.000	S32	7	61.209	-0.216	0.000	0.01	1.1	OK	
S3.001	S24	7	59.833	-0.253	0.000	0.06	6.4	OK	
S3.002	S25	7	59.509	-0.329	0.000	0.04	7.3	OK	
S3.003	S26	7	58.977	-0.334	0.000	0.03	10.9	OK	
S3.004	S27	7	57.406	-0.329	0.000	0.04	11.2	OK	
S5.000	S33	7	57.621	-0.189	0.000	0.06	3.0	OK	
S5.001	S34	7	57.415	-0.251	0.000	0.06	5.3	OK	
S5.002	S35	7	57.029	-0.323	0.000	0.05	6.8	OK	

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Summary Wizard of 360 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)			Flow (l/s)	
S3.005	S28	7	56.869	-0.272	0.000	0.17		18.0	OK
S3.006	S29	5	56.125	-0.961	0.000	0.00		21.3	OK
S3.007	S30	5	56.125	-0.808	0.000	0.01		11.1	OK
S3.008	S31	5	56.125	-0.785	0.000	0.00		11.1	OK
S1.009	S10	5	56.125	-0.709	0.000	0.01		46.1	OK
S6.000	S36	6	56.124	-0.842	0.000	0.00		4.2	OK
S6.001	S37	6	56.124	-0.593	0.000	0.00		6.3	OK
S6.002	S38	6	56.124	-0.573	0.000	0.00		9.9	OK
S1.010	S11	5	56.125	-0.503	0.000	0.00		17.2	OK
S1.011	S12	5	56.125	-0.389	0.000	0.01		13.6	OK
S1.012	S13	5	56.123	1.275	0.000	0.17		6.8	SURCHARGED
S1.013	S14	7	54.053	-0.564	0.000	0.01		6.9	OK
S1.014	S15	7	54.011	-0.539	0.000	0.02		7.3	OK
S7.000	S39	7	54.005	-0.575	0.000	0.00		1.1	OK
S1.015	S16	7	54.002	-0.512	0.000	0.02		8.3	OK
S8.000	S40	7	54.370	-0.189	0.000	0.06		2.2	OK
S1.016	S17	7	54.000	-0.484	0.000	0.02		10.4	OK
S1.017	S18	7	53.998	-0.021	0.000	0.26		10.4	OK

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Summary Wizard of 480 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	2	Cv (Summer)	0.750
Region England and Wales		Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep		Fine Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080	Winter
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Sensitivity flows(s) (%) 0

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)		(l/s)	Flow (l/s)	
S1.000	S1	8	71.233	-0.192	0.000	0.05	3.0	OK	
S1.001	S2	8	70.595	-0.273	0.000	0.02	4.4	OK	
S1.002	S3	8	68.456	-0.349	0.000	0.01	7.2	OK	
S1.003	S4	8	63.748	-0.336	0.000	0.02	10.2	OK	
S2.000	S20	8	67.923	-0.202	0.000	0.02	2.1	OK	
S2.001	S21	8	65.993	-0.269	0.000	0.02	5.5	OK	
S2.002	S22	8	62.879	-0.333	0.000	0.03	7.4	OK	
S1.004	S5	8	62.190	-0.373	0.000	0.07	17.6	OK	
S1.005	S6	8	61.969	-0.389	0.000	0.04	20.9	OK	
S1.006	S7	8	60.701	-0.385	0.000	0.05	24.1	OK	
S1.007	S8	8	59.190	-0.394	0.000	0.04	27.9	OK	
S1.008	S9	8	56.959	-0.371	0.000	0.07	28.5	OK	
S3.000	S23	8	60.388	-0.187	0.000	0.07	3.8	OK	
S4.000	S32	8	61.208	-0.217	0.000	0.01	0.9	OK	
S3.001	S24	8	59.828	-0.258	0.000	0.05	5.2	OK	
S3.002	S25	8	59.505	-0.333	0.000	0.03	5.9	OK	
S3.003	S26	8	58.974	-0.337	0.000	0.02	8.8	OK	
S3.004	S27	8	57.402	-0.333	0.000	0.03	9.1	OK	
S5.000	S33	8	57.617	-0.193	0.000	0.05	2.5	OK	
S5.001	S34	8	57.409	-0.257	0.000	0.05	4.3	OK	
S5.002	S35	8	57.024	-0.328	0.000	0.04	5.5	OK	

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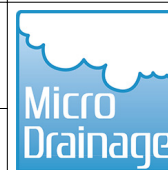
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Summary Wizard of 480 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)			Flow (l/s)	
S3.005	S28	8	56.858	-0.283	0.000	0.14		14.6	OK
S3.006	S29	3	56.141	-0.945	0.000	0.00		17.3	OK
S3.007	S30	3	56.141	-0.792	0.000	0.00		9.3	OK
S3.008	S31	3	56.141	-0.769	0.000	0.00		9.3	OK
S1.009	S10	3	56.141	-0.693	0.000	0.01		37.9	OK
S6.000	S36	4	56.140	-0.826	0.000	0.00		3.4	OK
S6.001	S37	4	56.140	-0.577	0.000	0.00		5.8	OK
S6.002	S38	3	56.140	-0.557	0.000	0.00		4.9	OK
S1.010	S11	3	56.140	-0.488	0.000	0.00		18.1	OK
S1.011	S12	2	56.139	-0.374	0.000	0.01		16.6	OK
S1.012	S13	2	56.139	1.291	0.000	0.17		6.8	SURCHARGED
S1.013	S14	8	54.051	-0.566	0.000	0.01		6.9	OK
S1.014	S15	8	54.005	-0.545	0.000	0.02		7.2	OK
S7.000	S39	8	53.996	-0.584	0.000	0.00		0.9	OK
S1.015	S16	8	53.992	-0.522	0.000	0.02		7.9	OK
S8.000	S40	8	54.366	-0.193	0.000	0.05		1.8	OK
S1.016	S17	8	53.989	-0.495	0.000	0.02		9.6	OK
S1.017	S18	8	53.987	-0.032	0.000	0.24		9.6	OK

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Summary Wizard of 600 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	
S3.005	S28	9	56.850	-0.291	0.000	0.12	12.4	OK
S3.006	S29	1	56.152	-0.934	0.000	0.00	14.7	OK
S3.007	S30	1	56.152	-0.781	0.000	0.00	8.1	OK
S3.008	S31	1	56.151	-0.759	0.000	0.00	8.1	OK
S1.009	S10	1	56.151	-0.683	0.000	0.01	32.4	OK
S6.000	S36	3	56.159	-0.807	0.000	0.00	2.9	OK
S6.001	S37	3	56.158	-0.559	0.000	0.00	3.6	OK
S6.002	S38	2	56.151	-0.546	0.000	0.00	4.6	OK
S1.010	S11	1	56.151	-0.477	0.000	0.00	13.4	OK
S1.011	S12	1	56.149	-0.364	0.000	0.00	9.0	OK
S1.012	S13	1	56.149	1.301	0.000	0.17	6.8	SURCHARGED
S1.013	S14	9	54.051	-0.566	0.000	0.01	6.9	OK
S1.014	S15	9	54.000	-0.550	0.000	0.02	7.1	OK
S7.000	S39	9	53.991	-0.589	0.000	0.00	0.8	OK
S1.015	S16	9	53.986	-0.528	0.000	0.02	7.6	OK
S8.000	S40	9	54.363	-0.196	0.000	0.04	1.5	OK
S1.016	S17	9	53.982	-0.502	0.000	0.02	9.1	OK
S1.017	S18	9	53.980	-0.039	0.000	0.23	9.1	OK

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Summary Wizard of 720 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	2	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080	Winter
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Sensitivity flows(s) (%) 0

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Flow (l/s)	
S1.000	S1	10	71.229	-0.196	0.000	0.04	2.2	OK	
S1.001	S2	10	70.588	-0.280	0.000	0.01	3.3	OK	
S1.002	S3	10	68.450	-0.355	0.000	0.01	5.4	OK	
S1.003	S4	10	63.739	-0.345	0.000	0.02	7.6	OK	
S2.000	S20	10	67.918	-0.207	0.000	0.02	1.6	OK	
S2.001	S21	10	65.987	-0.275	0.000	0.02	4.1	OK	
S2.002	S22	10	62.875	-0.337	0.000	0.02	5.5	OK	
S1.004	S5	10	62.178	-0.385	0.000	0.05	13.1	OK	
S1.005	S6	10	61.961	-0.397	0.000	0.03	15.6	OK	
S1.006	S7	10	60.693	-0.394	0.000	0.04	17.9	OK	
S1.007	S8	10	59.184	-0.400	0.000	0.03	20.8	OK	
S1.008	S9	10	56.947	-0.383	0.000	0.05	21.2	OK	
S3.000	S23	10	60.383	-0.192	0.000	0.05	2.8	OK	
S4.000	S32	10	61.206	-0.219	0.000	0.01	0.6	OK	
S3.001	S24	10	59.823	-0.263	0.000	0.04	3.9	OK	
S3.002	S25	10	59.501	-0.337	0.000	0.02	4.4	OK	
S3.003	S26	10	58.965	-0.346	0.000	0.02	6.6	OK	
S3.004	S27	10	57.398	-0.337	0.000	0.02	6.8	OK	
S5.000	S33	10	57.613	-0.197	0.000	0.04	1.8	OK	
S5.001	S34	10	57.403	-0.263	0.000	0.04	3.2	OK	
S5.002	S35	10	57.019	-0.333	0.000	0.03	4.1	OK	

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Summary Wizard of 720 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)			Flow (l/s)	
S3.005	S28	10	56.846	-0.295	0.000	0.10	10.9	10.9	OK
S3.006	S29	4	56.137	-0.949	0.000	0.00	12.9	12.9	OK
S3.007	S30	4	56.137	-0.796	0.000	0.00	7.3	7.3	OK
S3.008	S31	4	56.138	-0.772	0.000	0.00	7.3	7.3	OK
S1.009	S10	4	56.138	-0.696	0.000	0.01	28.6	28.6	OK
S6.000	S36	5	56.137	-0.829	0.000	0.00	2.5	2.5	OK
S6.001	S37	5	56.137	-0.580	0.000	0.00	3.8	3.8	OK
S6.002	S38	5	56.135	-0.562	0.000	0.00	6.0	6.0	OK
S1.010	S11	4	56.136	-0.492	0.000	0.00	12.4	12.4	OK
S1.011	S12	4	56.132	-0.381	0.000	0.00	10.0	10.0	OK
S1.012	S13	4	56.131	1.283	0.000	0.17	6.8	6.8	SURCHARGED
S1.013	S14	10	54.051	-0.566	0.000	0.01	6.9	6.9	OK
S1.014	S15	10	53.998	-0.552	0.000	0.02	7.1	7.1	OK
S7.000	S39	10	53.989	-0.591	0.000	0.00	0.7	0.7	OK
S1.015	S16	10	53.982	-0.532	0.000	0.02	7.5	7.5	OK
S8.000	S40	10	54.362	-0.197	0.000	0.04	1.3	1.3	OK
S1.016	S17	10	53.977	-0.507	0.000	0.02	8.7	8.7	OK
S1.017	S18	10	53.975	-0.044	0.000	0.22	8.7	8.7	OK

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Summary Wizard of 960 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	0.000
Hot Start Level (mm)	0	Inlet Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	2	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080	Winter
Sensitivity flows(s) (%)		0

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)		(l/s)	Flow (l/s)	
S1.000	S1	11	71.226	-0.199	0.000	0.03		1.8	OK
S1.001	S2	11	70.584	-0.284	0.000	0.01		2.7	OK
S1.002	S3	11	68.446	-0.359	0.000	0.01		4.4	OK
S1.003	S4	11	63.734	-0.350	0.000	0.01		6.2	OK
S2.000	S20	11	67.915	-0.210	0.000	0.01		1.3	OK
S2.001	S21	11	65.982	-0.280	0.000	0.01		3.3	OK
S2.002	S22	11	62.868	-0.344	0.000	0.02		4.5	OK
S1.004	S5	11	62.172	-0.391	0.000	0.04		10.6	OK
S1.005	S6	11	61.957	-0.401	0.000	0.03		12.6	OK
S1.006	S7	11	60.688	-0.399	0.000	0.03		14.5	OK
S1.007	S8	11	59.180	-0.404	0.000	0.02		16.8	OK
S1.008	S9	11	56.940	-0.390	0.000	0.04		17.2	OK
S3.000	S23	11	60.379	-0.196	0.000	0.04		2.3	OK
S4.000	S32	11	61.205	-0.220	0.000	0.00		0.5	OK
S3.001	S24	11	59.820	-0.266	0.000	0.03		3.2	OK
S3.002	S25	11	59.494	-0.344	0.000	0.02		3.6	OK
S3.003	S26	11	58.960	-0.351	0.000	0.01		5.3	OK
S3.004	S27	11	57.392	-0.343	0.000	0.02		5.5	OK
S5.000	S33	11	57.610	-0.200	0.000	0.03		1.5	OK
S5.001	S34	11	57.400	-0.266	0.000	0.03		2.6	OK
S5.002	S35	11	57.016	-0.336	0.000	0.02		3.3	OK

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Summary Wizard of 960 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)			Flow (l/s)	
S3.005	S28	11	56.838	-0.303	0.000	0.08	8.8		OK
S3.006	S29	2	56.144	-0.942	0.000	0.00	10.5		OK
S3.007	S30	2	56.144	-0.789	0.000	0.00	6.1		OK
S3.008	S31	2	56.144	-0.766	0.000	0.00	6.2		OK
S1.009	S10	2	56.145	-0.689	0.000	0.00	23.5		OK
S6.000	S36	1	56.243	-0.723	0.000	0.00	2.1		OK
S6.001	S37	2	56.242	-0.475	0.000	0.01	18.1		OK
S6.002	S38	4	56.140	-0.557	0.000	0.00	15.7		OK
S1.010	S11	2	56.142	-0.486	0.000	0.00	14.4		OK
S1.011	S12	3	56.134	-0.379	0.000	0.01	14.1		OK
S1.012	S13	3	56.135	1.287	0.000	0.17	6.8	SURCHARGED	
S1.013	S14	11	54.050	-0.567	0.000	0.01	6.9		OK
S1.014	S15	11	53.995	-0.555	0.000	0.02	7.1		OK
S7.000	S39	11	53.987	-0.593	0.000	0.00	0.5		OK
S1.015	S16	11	53.978	-0.536	0.000	0.02	7.3		OK
S8.000	S40	11	54.359	-0.200	0.000	0.03	1.1		OK
S1.016	S17	11	53.972	-0.512	0.000	0.02	8.2		OK
S1.017	S18	11	53.969	-0.050	0.000	0.21	8.2		OK

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Summary Wizard of 1440 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	2	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

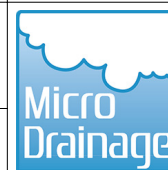
Profile(s)	Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080
Sensitivity flows(s) (%)	0

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow (l/s)	Flow (l/s)	
S1.000	S1	12	71.224	-0.201	0.000	0.02	1.3	OK
S1.001	S2	12	70.580	-0.288	0.000	0.01	2.0	OK
S1.002	S3	12	68.442	-0.363	0.000	0.01	3.3	OK
S1.003	S4	12	63.727	-0.357	0.000	0.01	4.6	OK
S2.000	S20	12	67.911	-0.214	0.000	0.01	0.9	OK
S2.001	S21	12	65.977	-0.285	0.000	0.01	2.5	OK
S2.002	S22	12	62.860	-0.352	0.000	0.01	3.3	OK
S1.004	S5	12	62.165	-0.398	0.000	0.03	7.9	OK
S1.005	S6	12	61.951	-0.407	0.000	0.02	9.4	OK
S1.006	S7	12	60.682	-0.404	0.000	0.02	10.8	OK
S1.007	S8	12	59.171	-0.413	0.000	0.02	12.5	OK
S1.008	S9	12	56.932	-0.398	0.000	0.03	12.8	OK
S3.000	S23	12	60.376	-0.199	0.000	0.03	1.7	OK
S4.000	S32	12	61.203	-0.222	0.000	0.00	0.4	OK
S3.001	S24	12	59.816	-0.270	0.000	0.02	2.3	OK
S3.002	S25	12	59.486	-0.352	0.000	0.01	2.7	OK
S3.003	S26	12	58.954	-0.357	0.000	0.01	4.0	OK
S3.004	S27	12	57.384	-0.351	0.000	0.01	4.1	OK
S5.000	S33	12	57.608	-0.202	0.000	0.02	1.1	OK
S5.001	S34	12	57.397	-0.269	0.000	0.02	1.9	OK
S5.002	S35	12	57.007	-0.345	0.000	0.02	2.5	OK

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Summary Wizard of 1440 minute 2 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Flow (l/s)	
S3.005	S28	12	56.826	-0.315	0.000	0.06		6.6	OK
S3.006	S29	6	56.092	-0.994	0.000	0.00		7.8	OK
S3.007	S30	6	56.092	-0.841	0.000	0.00		4.9	OK
S3.008	S31	6	56.092	-0.818	0.000	0.00		5.1	OK
S1.009	S10	6	56.093	-0.741	0.000	0.00		18.0	OK
S6.000	S36	7	56.091	-0.875	0.000	0.00		1.6	OK
S6.001	S37	7	56.091	-0.626	0.000	0.00		2.3	OK
S6.002	S38	7	56.091	-0.606	0.000	0.00		3.0	OK
S1.010	S11	6	56.093	-0.535	0.000	0.00		10.8	OK
S1.011	S12	6	56.088	-0.425	0.000	0.00		8.3	OK
S1.012	S13	6	56.082	1.234	0.000	0.17		6.8	SURCHARGED
S1.013	S14	12	54.050	-0.567	0.000	0.01		6.9	OK
S1.014	S15	12	53.994	-0.556	0.000	0.02		7.0	OK
S7.000	S39	12	53.984	-0.596	0.000	0.00		0.4	OK
S1.015	S16	12	53.975	-0.539	0.000	0.02		7.3	OK
S8.000	S40	12	54.357	-0.202	0.000	0.02		0.8	OK
S1.016	S17	12	53.966	-0.518	0.000	0.02		7.7	OK
S1.017	S18	12	53.963	-0.056	0.000	0.20		7.7	OK

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Summary Wizard of 15 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)			Flow (l/s)	
S3.005	S28	1	57.378	0.237	0.000	2.03	217.2		SURCHARGED
S3.006	S29	16	55.997	-1.089	0.000	0.06	254.4		OK
S3.007	S30	16	55.986	-0.947	0.000	0.07	152.6		OK
S3.008	S31	16	55.985	-0.925	0.000	0.04	151.8		OK
S1.009	S10	16	55.981	-0.853	0.000	0.12	588.8		OK
S6.000	S36	16	55.965	-1.001	0.000	0.01	58.9		OK
S6.001	S37	16	55.965	-0.752	0.000	0.01	15.6		OK
S6.002	S38	16	55.965	-0.732	0.000	0.00	6.7		OK
S1.010	S11	16	55.965	-0.663	0.000	0.04	181.6		OK
S1.011	S12	16	55.965	-0.549	0.000	0.02	51.5		OK
S1.012	S13	16	55.964	1.116	0.000	0.17	6.8		SURCHARGED
S1.013	S14	5	54.219	-0.398	0.000	0.02	12.3		OK
S1.014	S15	5	54.218	-0.332	0.000	0.03	13.9		OK
S7.000	S39	5	54.217	-0.363	0.000	0.02	12.7		OK
S1.015	S16	5	54.217	-0.297	0.000	0.03	12.0		OK
S8.000	S40	1	54.488	-0.071	0.000	0.81	29.2		OK
S1.016	S17	5	54.216	-0.268	0.000	0.05	22.6		OK
S1.017	S18	5	54.211	0.192	0.000	0.31	12.3		SURCHARGED

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Summary Wizard of 30 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient 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 1
 Number of Online Controls 2 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 0.375
 Return Period (years) 30 Cv (Summer) 0.750
 Region England and Wales Cv (Winter) 0.840
 M5-60 (mm) 19.000

Margin for Flood Risk Warning (mm) 300.0 DVD Status ON
 Analysis Timestep Fine Inertia Status ON
 DTS Status ON

Profile(s)

Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080
 Sensitivity flows(s) (%) 0

PN	US/MH Name	Storm Rank	Water		Surcharged		Flooded		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)		
S1.000	S1	2	71.335	-0.090	0.000	0.66		36.8	OK	
S1.001	S2	2	70.666	-0.202	0.000	0.23		54.0	OK	
S1.002	S3	2	68.538	-0.267	0.000	0.18		89.1	OK	
S1.003	S4	2	63.845	-0.239	0.000	0.28		125.3	OK	
S2.000	S20	2	67.982	-0.143	0.000	0.28		25.9	OK	
S2.001	S21	2	66.072	-0.190	0.000	0.29		67.1	OK	
S2.002	S22	2	62.993	-0.219	0.000	0.36		90.9	OK	
S1.004	S5	2	62.435	-0.128	0.000	0.85		217.3	OK	
S1.005	S6	2	62.148	-0.210	0.000	0.55		258.0	OK	
S1.006	S7	2	60.895	-0.191	0.000	0.63		295.2	OK	
S1.007	S8	2	59.350	-0.234	0.000	0.47		340.6	OK	
S1.008	S9	2	57.208	-0.122	0.000	0.87		347.2	OK	
S3.000	S23	2	60.511	-0.064	0.000	0.84		46.6	OK	
S4.000	S32	2	61.245	-0.180	0.000	0.09		10.7	OK	
S3.001	S24	2	59.954	-0.132	0.000	0.59		64.2	OK	
S3.002	S25	2	59.618	-0.220	0.000	0.36		72.7	OK	
S3.003	S26	2	59.069	-0.242	0.000	0.27		108.3	OK	
S3.004	S27	2	57.517	-0.218	0.000	0.37		111.3	OK	
S5.000	S33	2	57.713	-0.097	0.000	0.62		30.4	OK	
S5.001	S34	2	57.540	-0.126	0.000	0.63		53.2	OK	
S5.002	S35	2	57.386	0.034	0.000	0.44		63.2	SURCHARGED	

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Summary Wizard of 30 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)			Flow (l/s)	
S3.005	S28	2	57.262	0.121	0.000	1.61	172.3		SURCHARGED
S3.006	S29	13	56.228	-0.858	0.000	0.04	201.2		OK
S3.007	S30	13	56.223	-0.710	0.000	0.05	101.2		OK
S3.008	S31	13	56.222	-0.689	0.000	0.03	102.1		OK
S1.009	S10	13	56.219	-0.615	0.000	0.09	443.8		OK
S6.000	S36	13	56.194	-0.772	0.000	0.01	39.7		OK
S6.001	S37	13	56.194	-0.523	0.000	0.00	9.5		OK
S6.002	S38	13	56.194	-0.503	0.000	0.00	5.8		OK
S1.010	S11	13	56.194	-0.434	0.000	0.03	123.7		OK
S1.011	S12	13	56.193	-0.320	0.000	0.01	35.5		OK
S1.012	S13	13	56.192	1.344	0.000	0.17	6.8		SURCHARGED
S1.013	S14	2	54.267	-0.350	0.000	0.02	9.9		OK
S1.014	S15	2	54.265	-0.285	0.000	0.02	11.1		OK
S7.000	S39	2	54.264	-0.316	0.000	0.02	9.7		OK
S1.015	S16	2	54.264	-0.250	0.000	0.02	10.5		OK
S8.000	S40	2	54.462	-0.097	0.000	0.61	22.0		OK
S1.016	S17	2	54.262	-0.222	0.000	0.04	19.5		OK
S1.017	S18	2	54.258	0.239	0.000	0.31	12.3		SURCHARGED

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Summary Wizard of 60 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)			Flow (l/s)	
S3.005	S28	3	57.154	0.013	0.000	1.08	115.3		SURCHARGED
S3.006	S29	11	56.498	-0.588	0.000	0.03	134.3		OK
S3.007	S30	11	56.492	-0.441	0.000	0.03	58.1		OK
S3.008	S31	11	56.490	-0.420	0.000	0.02	56.4		OK
S1.009	S10	11	56.487	-0.347	0.000	0.06	280.6		OK
S6.000	S36	11	56.450	-0.516	0.000	0.01	27.1		OK
S6.001	S37	11	56.450	-0.267	0.000	0.00	5.7		OK
S6.002	S38	11	56.450	-0.247	0.000	0.00	4.1		OK
S1.010	S11	11	56.450	-0.178	0.000	0.02	81.1		OK
S1.011	S12	11	56.447	-0.066	0.000	0.01	24.5		OK
S1.012	S13	11	56.443	1.595	0.000	0.18	7.1		SURCHARGED
S1.013	S14	1	54.287	-0.330	0.000	0.01	8.5		OK
S1.014	S15	1	54.285	-0.265	0.000	0.02	9.1		OK
S7.000	S39	1	54.284	-0.296	0.000	0.01	6.5		OK
S1.015	S16	1	54.283	-0.231	0.000	0.02	10.7		OK
S8.000	S40	3	54.433	-0.126	0.000	0.40	14.5		OK
S1.016	S17	1	54.282	-0.202	0.000	0.04	16.5		OK
S1.017	S18	1	54.276	0.257	0.000	0.31	12.3		SURCHARGED

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Summary Wizard of 180 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s) Winter

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080
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Sensitivity flows(s) (%) 0

PN	US/MH Name	Storm Rank	Water		Surcharged		Flooded		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)		
S1.000	S1	5	71.269	-0.156	0.000	0.20		11.3	OK	
S1.001	S2	5	70.620	-0.248	0.000	0.07		16.6	OK	
S1.002	S3	5	68.487	-0.318	0.000	0.06		27.3	OK	
S1.003	S4	5	63.783	-0.301	0.000	0.09		38.5	OK	
S2.000	S20	5	67.944	-0.181	0.000	0.09		7.9	OK	
S2.001	S21	5	66.022	-0.240	0.000	0.09		20.6	OK	
S2.002	S22	5	62.920	-0.292	0.000	0.11		28.0	OK	
S1.004	S5	5	62.268	-0.295	0.000	0.26		66.4	OK	
S1.005	S6	5	62.032	-0.326	0.000	0.17		78.8	OK	
S1.006	S7	5	60.769	-0.317	0.000	0.19		90.6	OK	
S1.007	S8	5	59.247	-0.337	0.000	0.14		104.9	OK	
S1.008	S9	5	57.039	-0.291	0.000	0.27		107.2	OK	
S3.000	S23	5	60.428	-0.147	0.000	0.26		14.3	OK	
S4.000	S32	5	61.225	-0.200	0.000	0.03		3.3	OK	
S3.001	S24	5	59.872	-0.214	0.000	0.18		19.7	OK	
S3.002	S25	5	59.545	-0.293	0.000	0.11		22.3	OK	
S3.003	S26	5	59.008	-0.303	0.000	0.08		33.3	OK	
S3.004	S27	5	57.444	-0.291	0.000	0.11		34.2	OK	
S5.000	S33	5	57.651	-0.159	0.000	0.19		9.3	OK	
S5.001	S34	5	57.455	-0.211	0.000	0.19		16.3	OK	
S5.002	S35	5	57.071	-0.281	0.000	0.14		20.9	OK	

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Summary Wizard of 180 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	
S3.005	S28	5	56.957	-0.184	0.000	0.51	55.0	OK
S3.006	S29	8	56.878	-0.208	0.000	0.01	65.0	OK
S3.007	S30	8	56.865	-0.068	0.000	0.01	27.6	OK
S3.008	S31	8	56.857	-0.054	0.000	0.01	26.9	OK
S1.009	S10	8	56.834	0.000	0.000	0.03	131.8	OK
S6.000	S36	8	56.767	-0.199	0.000	0.00	12.8	OK
S6.001	S37	8	56.768	0.051	0.000	0.00	2.9	SURCHARGED
S6.002	S38	8	56.768	0.071	0.000	0.00	2.8	SURCHARGED
S1.010	S11	8	56.768	0.140	0.000	0.01	46.9	SURCHARGED
S1.011	S12	8	56.768	0.254	0.000	0.02	46.8	SURCHARGED
S1.012	S13	8	56.768	1.920	0.000	0.19	7.7	SURCHARGED
S1.013	S14	4	54.230	-0.387	0.000	0.01	8.0	OK
S1.014	S15	4	54.228	-0.322	0.000	0.02	9.0	OK
S7.000	S39	4	54.227	-0.353	0.000	0.01	3.1	OK
S1.015	S16	4	54.227	-0.287	0.000	0.02	10.8	OK
S8.000	S40	5	54.399	-0.160	0.000	0.19	6.7	OK
S1.016	S17	4	54.225	-0.259	0.000	0.03	13.7	OK
S1.017	S18	4	54.221	0.202	0.000	0.31	12.3	SURCHARGED

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Summary Wizard of 240 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient 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 1
 Number of Online Controls 2 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 0.375
 Return Period (years) 30 Cv (Summer) 0.750
 Region England and Wales Cv (Winter) 0.840
 M5-60 (mm) 19.000

Margin for Flood Risk Warning (mm) 300.0 DVD Status ON
 Analysis Timestep Fine Inertia Status ON
 DTS Status ON

Profile(s) Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 5760, 7200, 8640, 10080
 Sensitivity flows(s) (%) 0

PN	US/MH Name	Storm Rank	Water		Surcharged		Flooded		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)		
S1.000	S1	6	71.261	-0.164	0.000	0.16		9.1	OK	
S1.001	S2	6	70.614	-0.254	0.000	0.06		13.4	OK	
S1.002	S3	6	68.481	-0.324	0.000	0.05		22.1	OK	
S1.003	S4	6	63.774	-0.310	0.000	0.07		31.1	OK	
S2.000	S20	6	67.939	-0.186	0.000	0.07		6.4	OK	
S2.001	S21	6	66.014	-0.248	0.000	0.07		16.7	OK	
S2.002	S22	6	62.912	-0.300	0.000	0.09		22.6	OK	
S1.004	S5	6	62.252	-0.311	0.000	0.21		53.7	OK	
S1.005	S6	6	62.018	-0.340	0.000	0.14		63.8	OK	
S1.006	S7	6	60.754	-0.332	0.000	0.16		73.3	OK	
S1.007	S8	6	59.236	-0.348	0.000	0.12		84.9	OK	
S1.008	S9	6	57.022	-0.308	0.000	0.22		86.8	OK	
S3.000	S23	6	60.420	-0.155	0.000	0.21		11.6	OK	
S4.000	S32	6	61.223	-0.202	0.000	0.02		2.6	OK	
S3.001	S24	6	59.862	-0.224	0.000	0.15		15.9	OK	
S3.002	S25	6	59.538	-0.300	0.000	0.09		18.0	OK	
S3.003	S26	6	58.999	-0.312	0.000	0.07		26.9	OK	
S3.004	S27	6	57.436	-0.299	0.000	0.09		27.7	OK	
S5.000	S33	6	57.643	-0.167	0.000	0.15		7.5	OK	
S5.001	S34	6	57.444	-0.222	0.000	0.16		13.2	OK	
S5.002	S35	6	57.062	-0.290	0.000	0.12		16.9	OK	

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Summary Wizard of 240 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	
S3.005	S28	6	56.934	-0.207	0.000	0.42	44.5	OK
S3.006	S29	3	56.907	-0.179	0.000	0.01	52.6	OK
S3.007	S30	6	56.884	-0.049	0.000	0.01	21.9	OK
S3.008	S31	7	56.869	-0.042	0.000	0.01	21.8	OK
S1.009	S10	7	56.834	0.000	0.000	0.02	106.6	OK
S6.000	S36	7	56.804	-0.162	0.000	0.00	10.3	OK
S6.001	S37	7	56.804	0.087	0.000	0.00	6.4	SURCHARGED
S6.002	S38	7	56.805	0.108	0.000	0.00	6.6	SURCHARGED
S1.010	S11	7	56.805	0.177	0.000	0.01	59.9	SURCHARGED
S1.011	S12	7	56.804	0.290	0.000	0.02	59.5	SURCHARGED
S1.012	S13	7	56.804	1.956	0.000	0.19	7.7	SURCHARGED
S1.013	S14	6	54.195	-0.422	0.000	0.01	8.1	OK
S1.014	S15	6	54.194	-0.356	0.000	0.02	9.0	OK
S7.000	S39	6	54.192	-0.388	0.000	0.00	2.5	OK
S1.015	S16	6	54.192	-0.322	0.000	0.02	10.5	OK
S8.000	S40	6	54.392	-0.167	0.000	0.15	5.4	OK
S1.016	S17	6	54.191	-0.293	0.000	0.03	13.2	OK
S1.017	S18	6	54.187	0.168	0.000	0.31	12.3	SURCHARGED

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Summary Wizard of 360 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080	Winter
Sensitivity flows(s) (%)		0

PN	US/MH Name	Storm Rank	Water		Surcharged		Flooded		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)		
S1.000	S1	7	71.252	-0.173	0.000	0.12		6.7	OK	
S1.001	S2	7	70.607	-0.261	0.000	0.04		9.8	OK	
S1.002	S3	7	68.474	-0.331	0.000	0.03		16.2	OK	
S1.003	S4	7	63.763	-0.321	0.000	0.05		22.9	OK	
S2.000	S20	7	67.933	-0.192	0.000	0.05		4.7	OK	
S2.001	S21	7	66.006	-0.256	0.000	0.05		12.2	OK	
S2.002	S22	7	62.899	-0.313	0.000	0.07		16.6	OK	
S1.004	S5	7	62.230	-0.333	0.000	0.15		39.5	OK	
S1.005	S6	7	62.003	-0.355	0.000	0.10		46.9	OK	
S1.006	S7	7	60.737	-0.349	0.000	0.11		53.9	OK	
S1.007	S8	7	59.222	-0.362	0.000	0.09		62.4	OK	
S1.008	S9	7	57.000	-0.330	0.000	0.16		63.8	OK	
S3.000	S23	7	60.409	-0.166	0.000	0.15		8.5	OK	
S4.000	S32	7	61.217	-0.208	0.000	0.02		1.9	OK	
S3.001	S24	7	59.851	-0.235	0.000	0.11		11.7	OK	
S3.002	S25	7	59.525	-0.313	0.000	0.06		13.2	OK	
S3.003	S26	7	58.989	-0.322	0.000	0.05		19.8	OK	
S3.004	S27	7	57.423	-0.312	0.000	0.07		20.3	OK	
S5.000	S33	7	57.635	-0.175	0.000	0.11		5.5	OK	
S5.001	S34	7	57.433	-0.233	0.000	0.11		9.7	OK	
S5.002	S35	7	57.050	-0.302	0.000	0.09		12.4	OK	

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Summary Wizard of 360 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	
S3.005	S28	7	56.925	-0.216	0.000	0.31	32.7	OK
S3.006	S29	1	56.920	-0.166	0.000	0.01	38.7	OK
S3.007	S30	4	56.892	-0.041	0.000	0.01	18.8	OK
S3.008	S31	6	56.873	-0.037	0.000	0.01	20.2	OK
S1.009	S10	6	56.845	0.011	0.000	0.02	78.1	SURCHARGED
S6.000	S36	6	56.845	-0.121	0.000	0.00	7.6	OK
S6.001	S37	6	56.845	0.128	0.000	0.00	3.7	SURCHARGED
S6.002	S38	6	56.845	0.148	0.000	0.00	3.7	SURCHARGED
S1.010	S11	6	56.845	0.217	0.000	0.02	63.2	SURCHARGED
S1.011	S12	6	56.844	0.331	0.000	0.02	62.9	SURCHARGED
S1.012	S13	6	56.844	1.996	0.000	0.20	7.8	SURCHARGED
S1.013	S14	7	54.132	-0.485	0.000	0.01	8.1	OK
S1.014	S15	7	54.131	-0.419	0.000	0.02	8.9	OK
S7.000	S39	7	54.130	-0.450	0.000	0.00	1.9	OK
S1.015	S16	7	54.130	-0.384	0.000	0.02	10.3	OK
S8.000	S40	7	54.384	-0.175	0.000	0.11	4.0	OK
S1.016	S17	7	54.129	-0.355	0.000	0.03	12.5	OK
S1.017	S18	7	54.126	0.107	0.000	0.31	12.2	SURCHARGED

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Summary Wizard of 480 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080	Winter
Sensitivity flows(s) (%)		0

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow (l/s)	Flow (l/s)	
S1.000	S1	8	71.247	-0.178	0.000	0.10	5.4	OK
S1.001	S2	8	70.604	-0.264	0.000	0.03	7.9	OK
S1.002	S3	8	68.471	-0.334	0.000	0.03	13.0	OK
S1.003	S4	8	63.758	-0.326	0.000	0.04	18.4	OK
S2.000	S20	8	67.929	-0.196	0.000	0.04	3.8	OK
S2.001	S21	8	66.001	-0.261	0.000	0.04	9.8	OK
S2.002	S22	8	62.892	-0.320	0.000	0.05	13.3	OK
S1.004	S5	8	62.218	-0.345	0.000	0.12	31.7	OK
S1.005	S6	8	61.993	-0.365	0.000	0.08	37.7	OK
S1.006	S7	8	60.728	-0.359	0.000	0.09	43.3	OK
S1.007	S8	8	59.211	-0.373	0.000	0.07	50.1	OK
S1.008	S9	8	56.987	-0.343	0.000	0.13	51.3	OK
S3.000	S23	8	60.402	-0.173	0.000	0.12	6.8	OK
S4.000	S32	8	61.214	-0.211	0.000	0.01	1.6	OK
S3.001	S24	8	59.845	-0.241	0.000	0.09	9.4	OK
S3.002	S25	8	59.518	-0.320	0.000	0.05	10.6	OK
S3.003	S26	8	58.984	-0.327	0.000	0.04	15.9	OK
S3.004	S27	8	57.416	-0.319	0.000	0.05	16.3	OK
S5.000	S33	8	57.630	-0.180	0.000	0.09	4.4	OK
S5.001	S34	8	57.427	-0.239	0.000	0.09	7.8	OK
S5.002	S35	8	57.041	-0.311	0.000	0.07	10.0	OK

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Summary Wizard of 480 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	
S3.005	S28	8	56.917	-0.224	0.000	0.25	26.3	OK
S3.006	S29	2	56.912	-0.174	0.000	0.01	31.1	OK
S3.007	S30	5	56.888	-0.045	0.000	0.01	17.9	OK
S3.008	S31	4	56.886	-0.025	0.000	0.01	19.3	OK
S1.009	S10	5	56.867	0.033	0.000	0.01	62.7	SURCHARGED
S6.000	S36	5	56.867	-0.099	0.000	0.00	6.1	OK
S6.001	S37	5	56.867	0.150	0.000	0.00	3.3	SURCHARGED
S6.002	S38	5	56.867	0.170	0.000	0.00	3.3	SURCHARGED
S1.010	S11	5	56.867	0.239	0.000	0.01	58.5	SURCHARGED
S1.011	S12	5	56.867	0.354	0.000	0.02	58.4	SURCHARGED
S1.012	S13	5	56.867	2.019	0.000	0.20	7.8	SURCHARGED
S1.013	S14	8	54.091	-0.526	0.000	0.01	8.0	OK
S1.014	S15	8	54.083	-0.467	0.000	0.02	8.8	OK
S7.000	S39	8	54.082	-0.498	0.000	0.00	1.6	OK
S1.015	S16	8	54.082	-0.432	0.000	0.02	10.0	OK
S8.000	S40	8	54.379	-0.180	0.000	0.09	3.2	OK
S1.016	S17	8	54.082	-0.402	0.000	0.03	12.1	OK
S1.017	S18	8	54.079	0.060	0.000	0.30	12.0	SURCHARGED

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Summary Wizard of 600 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient 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 1
 Number of Online Controls 2 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 0.375
 Return Period (years) 30 Cv (Summer) 0.750
 Region England and Wales Cv (Winter) 0.840
 M5-60 (mm) 19.000

Margin for Flood Risk Warning (mm) 300.0 DVD Status ON
 Analysis Timestep Fine Inertia Status ON
 DTS Status ON

Profile(s) Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 5760, 7200, 8640, 10080
 Sensitivity flows(s) (%) 0

PN	US/MH Name	Storm Rank	Water		Surcharged		Flooded		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)		
S1.000	S1	9	71.243	-0.182	0.000	0.08		4.5	OK	
S1.001	S2	9	70.601	-0.267	0.000	0.03		6.7	OK	
S1.002	S3	9	68.468	-0.337	0.000	0.02		11.0	OK	
S1.003	S4	9	63.754	-0.330	0.000	0.03		15.5	OK	
S2.000	S20	9	67.927	-0.198	0.000	0.03		3.2	OK	
S2.001	S21	9	65.999	-0.264	0.000	0.04		8.3	OK	
S2.002	S22	9	62.888	-0.324	0.000	0.04		11.2	OK	
S1.004	S5	9	62.210	-0.353	0.000	0.10		26.8	OK	
S1.005	S6	9	61.984	-0.374	0.000	0.07		31.8	OK	
S1.006	S7	9	60.719	-0.367	0.000	0.08		36.5	OK	
S1.007	S8	9	59.204	-0.380	0.000	0.06		42.3	OK	
S1.008	S9	9	56.979	-0.351	0.000	0.11		43.3	OK	
S3.000	S23	9	60.398	-0.177	0.000	0.10		5.8	OK	
S4.000	S32	9	61.212	-0.213	0.000	0.01		1.3	OK	
S3.001	S24	9	59.839	-0.247	0.000	0.07		7.9	OK	
S3.002	S25	9	59.513	-0.325	0.000	0.04		9.0	OK	
S3.003	S26	9	58.980	-0.331	0.000	0.03		13.4	OK	
S3.004	S27	9	57.411	-0.324	0.000	0.05		13.8	OK	
S5.000	S33	9	57.626	-0.184	0.000	0.08		3.7	OK	
S5.001	S34	9	57.421	-0.245	0.000	0.08		6.6	OK	
S5.002	S35	9	57.035	-0.317	0.000	0.06		8.4	OK	

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Summary Wizard of 600 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)			Flow (l/s)	
S3.005	S28	9	56.906	-0.235	0.000	0.21	22.2		OK
S3.006	S29	6	56.901	-0.185	0.000	0.01	26.2		OK
S3.007	S30	3	56.893	-0.040	0.000	0.01	16.6		OK
S3.008	S31	5	56.883	-0.027	0.000	0.00	17.9		OK
S1.009	S10	3	56.880	0.046	0.000	0.01	53.2		SURCHARGED
S6.000	S36	3	56.880	-0.086	0.000	0.00	5.2		OK
S6.001	S37	3	56.880	0.163	0.000	0.00	3.3		SURCHARGED
S6.002	S38	3	56.880	0.183	0.000	0.00	3.2		SURCHARGED
S1.010	S11	3	56.880	0.252	0.000	0.01	54.2		SURCHARGED
S1.011	S12	3	56.880	0.367	0.000	0.02	54.1		SURCHARGED
S1.012	S13	3	56.880	2.032	0.000	0.20	7.8		SURCHARGED
S1.013	S14	9	54.075	-0.542	0.000	0.01	8.0		OK
S1.014	S15	9	54.050	-0.500	0.000	0.02	8.7		OK
S7.000	S39	9	54.049	-0.531	0.000	0.00	1.3		OK
S1.015	S16	9	54.049	-0.465	0.000	0.02	9.8		OK
S8.000	S40	9	54.374	-0.185	0.000	0.07	2.7		OK
S1.016	S17	9	54.048	-0.436	0.000	0.02	11.7		OK
S1.017	S18	9	54.047	0.028	0.000	0.30	11.7		SURCHARGED

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<u>Summary Wizard of 720 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS</u>							
<u>Simulation Criteria</u>							
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 Coefficient		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		1	
Number of Online Controls		2		Number of Time/Area Diagrams		0	
Number of Offline Controls		0		Number of Real Time Controls		0	
<u>Synthetic Rainfall Details</u>							
Rainfall Model		FSR		Ratio R		0.375	
Return Period (years)		30		Cv (Summer)		0.750	
Region England and Wales		Cv (Winter)		0.840			
M5-60 (mm)		19.000					
Margin for Flood Risk Warning (mm)		300.0		DVD Status		ON	
Analysis Timestep		Fine		Inertia Status		ON	
DTS Status		ON					
Profile(s)				Winter			
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080					
Sensitivity flows(s) (%)		0					

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Summary Wizard of 720 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)			Flow (l/s)	
S3.005	S28	11	56.902	-0.239	0.000	0.18		19.3	OK
S3.006	S29	5	56.902	-0.184	0.000	0.01		22.8	OK
S3.007	S30	2	56.902	-0.031	0.000	0.01		15.4	OK
S3.008	S31	2	56.910	0.000	0.000	0.00		16.7	OK
S1.009	S10	2	56.888	0.054	0.000	0.01		46.5	SURCHARGED
S6.000	S36	2	56.889	-0.077	0.000	0.00		4.5	OK
S6.001	S37	2	56.889	0.172	0.000	0.00		3.4	SURCHARGED
S6.002	S38	2	56.888	0.191	0.000	0.00		3.8	SURCHARGED
S1.010	S11	2	56.888	0.260	0.000	0.01		49.1	SURCHARGED
S1.011	S12	2	56.888	0.375	0.000	0.02		49.1	SURCHARGED
S1.012	S13	2	56.888	2.040	0.000	0.20		7.9	SURCHARGED
S1.013	S14	10	54.064	-0.553	0.000	0.01		8.0	OK
S1.014	S15	10	54.028	-0.522	0.000	0.02		8.6	OK
S7.000	S39	10	54.024	-0.556	0.000	0.00		1.2	OK
S1.015	S16	10	54.023	-0.491	0.000	0.02		9.6	OK
S8.000	S40	10	54.371	-0.188	0.000	0.07		2.3	OK
S1.016	S17	10	54.022	-0.462	0.000	0.02		11.4	OK
S1.017	S18	10	54.021	0.002	0.000	0.29		11.4	SURCHARGED

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Summary Wizard of 960 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080	Winter
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Sensitivity flows(s) (%) 0

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow (l/s)	Flow (l/s)	
S1.000	S1	11	71.235	-0.190	0.000	0.06	3.2	OK
S1.001	S2	11	70.596	-0.272	0.000	0.02	4.7	OK
S1.002	S3	11	68.458	-0.347	0.000	0.02	7.7	OK
S1.003	S4	11	63.748	-0.336	0.000	0.02	10.8	OK
S2.000	S20	11	67.924	-0.201	0.000	0.02	2.2	OK
S2.001	S21	11	65.994	-0.268	0.000	0.02	5.8	OK
S2.002	S22	11	62.880	-0.332	0.000	0.03	7.8	OK
S1.004	S5	11	62.193	-0.370	0.000	0.07	18.7	OK
S1.005	S6	11	61.971	-0.387	0.000	0.05	22.2	OK
S1.006	S7	11	60.703	-0.383	0.000	0.05	25.5	OK
S1.007	S8	11	59.192	-0.392	0.000	0.04	29.5	OK
S1.008	S9	11	56.962	-0.368	0.000	0.08	30.2	OK
S3.000	S23	11	60.390	-0.185	0.000	0.07	4.0	OK
S4.000	S32	11	61.208	-0.217	0.000	0.01	0.9	OK
S3.001	S24	11	59.829	-0.257	0.000	0.05	5.5	OK
S3.002	S25	11	59.506	-0.332	0.000	0.03	6.3	OK
S3.003	S26	11	58.975	-0.336	0.000	0.02	9.4	OK
S3.004	S27	11	57.403	-0.332	0.000	0.03	9.6	OK
S5.000	S33	11	57.618	-0.192	0.000	0.05	2.6	OK
S5.001	S34	11	57.411	-0.255	0.000	0.05	4.6	OK
S5.002	S35	11	57.025	-0.327	0.000	0.04	5.9	OK

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Summary Wizard of 960 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

			Water	Surcharged	Flooded	Pipe			
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(l/s)	Status
S3.005	S28	10	56.904	-0.237	0.000	0.14		15.5	OK
S3.006	S29	4	56.903	-0.183	0.000	0.00		18.3	OK
S3.007	S30	1	56.903	-0.030	0.000	0.01		13.0	OK
S3.008	S31	1	56.910	0.000	0.000	0.00		14.0	OK
S1.009	S10	1	56.890	0.056	0.000	0.01		38.9	SURCHARGED
S6.000	S36	1	56.890	-0.076	0.000	0.00		3.6	OK
S6.001	S37	1	56.890	0.173	0.000	0.00		9.7	SURCHARGED
S6.002	S38	1	56.890	0.193	0.000	0.00		9.7	SURCHARGED
S1.010	S11	1	56.890	0.262	0.000	0.01		42.1	SURCHARGED
S1.011	S12	1	56.890	0.377	0.000	0.02		42.1	SURCHARGED
S1.012	S13	1	56.889	2.041	0.000	0.20		7.9	SURCHARGED
S1.013	S14	11	54.060	-0.557	0.000	0.01		7.9	OK
S1.014	S15	11	54.016	-0.534	0.000	0.02		8.4	OK
S7.000	S39	11	54.008	-0.572	0.000	0.00		1.0	OK
S1.015	S16	11	54.007	-0.507	0.000	0.02		9.2	OK
S8.000	S40	11	54.367	-0.192	0.000	0.05		1.9	OK
S1.016	S17	11	54.005	-0.479	0.000	0.02		10.7	OK
S1.017	S18	11	54.004	-0.015	0.000	0.27		10.7	OK

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Summary Wizard of 1440 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 5760, 7200, 8640, 10080	Winter
Sensitivity flows(s) (%)		0

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow (l/s)	Flow (l/s)	
S1.000	S1	12	71.229	-0.196	0.000	0.04	2.3	OK
S1.001	S2	12	70.589	-0.279	0.000	0.01	3.4	OK
S1.002	S3	12	68.450	-0.355	0.000	0.01	5.6	OK
S1.003	S4	12	63.741	-0.343	0.000	0.02	7.9	OK
S2.000	S20	12	67.919	-0.206	0.000	0.02	1.6	OK
S2.001	S21	12	65.988	-0.274	0.000	0.02	4.2	OK
S2.002	S22	12	62.875	-0.337	0.000	0.02	5.7	OK
S1.004	S5	12	62.180	-0.383	0.000	0.05	13.7	OK
S1.005	S6	12	61.962	-0.396	0.000	0.03	16.2	OK
S1.006	S7	12	60.694	-0.393	0.000	0.04	18.7	OK
S1.007	S8	12	59.185	-0.399	0.000	0.03	21.6	OK
S1.008	S9	12	56.948	-0.382	0.000	0.06	22.1	OK
S3.000	S23	12	60.383	-0.192	0.000	0.05	2.9	OK
S4.000	S32	12	61.206	-0.219	0.000	0.01	0.7	OK
S3.001	S24	12	59.823	-0.263	0.000	0.04	4.0	OK
S3.002	S25	12	59.501	-0.337	0.000	0.02	4.6	OK
S3.003	S26	12	58.966	-0.345	0.000	0.02	6.8	OK
S3.004	S27	12	57.399	-0.336	0.000	0.02	7.0	OK
S5.000	S33	12	57.613	-0.197	0.000	0.04	1.9	OK
S5.001	S34	12	57.404	-0.262	0.000	0.04	3.4	OK
S5.002	S35	12	57.019	-0.333	0.000	0.03	4.3	OK

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Summary Wizard of 1440 minute 30 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	
S3.005	S28	12	56.881	-0.260	0.000	0.11	11.3	OK
S3.006	S29	7	56.881	-0.205	0.000	0.00	13.5	OK
S3.007	S30	7	56.881	-0.052	0.000	0.00	9.0	OK
S3.008	S31	3	56.889	-0.021	0.000	0.00	9.8	OK
S1.009	S10	4	56.871	0.037	0.000	0.01	28.4	SURCHARGED
S6.000	S36	4	56.871	-0.095	0.000	0.00	2.7	OK
S6.001	S37	4	56.871	0.154	0.000	0.00	5.0	SURCHARGED
S6.002	S38	4	56.871	0.174	0.000	0.00	4.9	SURCHARGED
S1.010	S11	4	56.871	0.243	0.000	0.01	29.2	SURCHARGED
S1.011	S12	4	56.871	0.358	0.000	0.01	29.2	SURCHARGED
S1.012	S13	4	56.872	2.024	0.000	0.20	7.8	SURCHARGED
S1.013	S14	12	54.058	-0.559	0.000	0.01	7.9	OK
S1.014	S15	12	54.010	-0.540	0.000	0.02	8.2	OK
S7.000	S39	12	53.997	-0.583	0.000	0.00	0.7	OK
S1.015	S16	12	53.995	-0.519	0.000	0.02	8.7	OK
S8.000	S40	12	54.362	-0.197	0.000	0.04	1.4	OK
S1.016	S17	12	53.992	-0.492	0.000	0.02	9.8	OK
S1.017	S18	12	53.990	-0.029	0.000	0.25	9.8	OK

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Summary Wizard of 15 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	100	Cv (Summer)	0.750
Region England and Wales		Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s) Winter

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
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Sensitivity flows(s) (%) 0, +30

PN	US/MH Name	Storm Rank	Water			Surcharged		Flooded		Pipe Flow (l/s)	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)				
S1.000	S1	2	71.583	0.158	0.000	1.10	61.1	SURCHARGED			
S1.001	S2	2	70.699	-0.169	0.000	0.39	90.1	OK			
S1.002	S3	2	68.573	-0.232	0.000	0.31	149.8	OK			
S1.003	S4	2	63.893	-0.191	0.000	0.48	212.1	OK			
S2.000	S20	2	68.011	-0.114	0.000	0.49	44.6	OK			
S2.001	S21	2	66.111	-0.151	0.000	0.49	115.7	OK			
S2.002	S22	2	63.052	-0.160	0.000	0.62	156.6	OK			
S1.004	S5	2	62.771	0.208	0.000	1.42	363.1	SURCHARGED			
S1.005	S6	3	62.258	-0.100	0.000	0.92	428.9	OK			
S1.006	S7	3	61.145	0.059	0.000	1.02	483.3	SURCHARGED			
S1.007	S8	3	59.430	-0.154	0.000	0.76	551.9	OK			
S1.008	S9	3	57.836	0.506	0.000	1.42	564.3	SURCHARGED			
S3.000	S23	2	61.103	0.528	0.000	1.40	77.3	SURCHARGED			
S4.000	S32	2	61.258	-0.167	0.000	0.15	18.4	OK			
S3.001	S24	2	60.029	-0.057	0.000	0.98	105.8	OK			
S3.002	S25	2	59.672	-0.166	0.000	0.59	120.0	OK			
S3.003	S26	2	59.114	-0.197	0.000	0.44	175.7	OK			
S3.004	S27	4	57.851	0.116	0.000	0.59	177.5	SURCHARGED			
S5.000	S33	4	58.151	0.341	0.000	0.97	47.9	SURCHARGED			
S5.001	S34	4	58.000	0.334	0.000	0.98	83.0	SURCHARGED			

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Summary Wizard of 15 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	
S5.002	S35	4	57.712	0.360	0.000	0.71	102.5	SURCHARGED
S3.005	S28	3	57.587	0.446	0.000	2.58	276.0	SURCHARGED
S3.006	S29	38	56.231	-0.855	0.000	0.07	320.6	OK
S3.007	S30	38	56.219	-0.714	0.000	0.09	177.0	OK
S3.008	S31	38	56.217	-0.693	0.000	0.05	176.3	OK
S1.009	S10	38	56.211	-0.623	0.000	0.15	726.0	OK
S6.000	S36	38	56.186	-0.780	0.000	0.01	73.7	OK
S6.001	S37	38	56.186	-0.531	0.000	0.01	14.7	OK
S6.002	S38	38	56.186	-0.511	0.000	0.00	9.8	OK
S1.010	S11	38	56.186	-0.442	0.000	0.05	205.7	OK
S1.011	S12	38	56.185	-0.328	0.000	0.02	57.0	OK
S1.012	S13	38	56.184	1.336	0.000	0.17	6.8	SURCHARGED
S1.013	S14	16	54.290	-0.327	0.000	0.02	13.1	OK
S1.014	S15	16	54.288	-0.262	0.000	0.03	14.9	OK
S7.000	S39	16	54.287	-0.293	0.000	0.03	16.4	OK
S1.015	S16	16	54.287	-0.227	0.000	0.02	10.6	OK
S8.000	S40	7	54.561	0.002	0.000	1.05	37.8	SURCHARGED
S1.016	S17	16	54.285	-0.199	0.000	0.05	25.1	OK
S1.017	S18	16	54.280	0.261	0.000	0.31	12.3	SURCHARGED

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Summary Wizard of 30 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	
S5.002	S35	5	57.527	0.175	0.000	0.57	83.0	SURCHARGED
S3.005	S28	6	57.403	0.262	0.000	2.10	225.4	SURCHARGED
S3.006	S29	36	56.602	-0.484	0.000	0.06	263.4	OK
S3.007	S30	35	56.586	-0.347	0.000	0.05	113.6	OK
S3.008	S31	35	56.583	-0.327	0.000	0.03	116.6	OK
S1.009	S10	35	56.576	-0.258	0.000	0.11	551.7	OK
S6.000	S36	35	56.524	-0.442	0.000	0.01	53.0	OK
S6.001	S37	35	56.524	-0.193	0.000	0.01	11.5	OK
S6.002	S38	35	56.524	-0.173	0.000	0.00	8.1	OK
S1.010	S11	35	56.524	-0.104	0.000	0.04	148.9	OK
S1.011	S12	35	56.520	0.007	0.000	0.02	41.8	SURCHARGED
S1.012	S13	35	56.521	1.673	0.000	0.18	7.2	SURCHARGED
S1.013	S14	13	54.369	-0.248	0.000	0.02	10.9	OK
S1.014	S15	13	54.366	-0.184	0.000	0.02	11.2	OK
S7.000	S39	13	54.364	-0.216	0.000	0.02	12.7	OK
S1.015	S16	13	54.364	-0.150	0.000	0.02	10.6	OK
S8.000	S40	9	54.487	-0.072	0.000	0.80	28.7	OK
S1.016	S17	13	54.361	-0.123	0.000	0.05	21.5	OK
S1.017	S18	13	54.354	0.335	0.000	0.31	12.3	SURCHARGED

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Summary Wizard of 60 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Winter
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Sensitivity flows(s) (%) 0, +30

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	
S1.000	S1	6	71.323	-0.102	0.000	0.57	31.9	OK
S1.001	S2	6	70.659	-0.209	0.000	0.20	46.8	OK
S1.002	S3	6	68.529	-0.276	0.000	0.16	77.2	OK
S1.003	S4	6	63.835	-0.249	0.000	0.25	108.8	OK
S2.000	S20	6	67.975	-0.150	0.000	0.24	22.5	OK
S2.001	S21	6	66.064	-0.198	0.000	0.25	58.3	OK
S2.002	S22	6	62.981	-0.231	0.000	0.31	78.9	OK
S1.004	S5	6	62.403	-0.160	0.000	0.73	186.6	OK
S1.005	S6	6	62.129	-0.229	0.000	0.47	221.2	OK
S1.006	S7	6	60.874	-0.212	0.000	0.54	254.5	OK
S1.007	S8	6	59.334	-0.250	0.000	0.40	294.7	OK
S1.008	S9	18	57.177	-0.153	0.000	0.76	302.2	OK
S3.000	S23	6	60.495	-0.080	0.000	0.73	40.4	OK
S4.000	S32	6	61.241	-0.184	0.000	0.08	9.3	OK
S3.001	S24	6	59.939	-0.147	0.000	0.51	55.5	OK
S3.002	S25	6	59.606	-0.232	0.000	0.30	62.3	OK
S3.003	S26	6	59.060	-0.251	0.000	0.23	93.4	OK
S3.004	S27	7	57.506	-0.229	0.000	0.32	95.8	OK
S5.000	S33	7	57.702	-0.108	0.000	0.53	26.3	OK
S5.001	S34	7	57.525	-0.141	0.000	0.54	45.9	OK

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Summary Wizard of 60 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	
S5.002	S35	14	57.300	-0.052	0.000	0.40	58.0	OK
S3.005	S28	17	57.224	0.083	0.000	1.44	154.3	SURCHARGED
S3.006	S29	27	57.037	-0.049	0.000	0.04	181.6	OK
S3.007	S30	30	56.933	0.000	0.000	0.03	72.4	OK
S3.008	S31	30	56.910	0.000	0.000	0.02	70.6	OK
S1.009	S10	31	56.834	0.000	0.000	0.08	365.3	OK
S6.000	S36	33	56.771	-0.195	0.000	0.01	35.9	OK
S6.001	S37	33	56.771	0.054	0.000	0.00	9.5	SURCHARGED
S6.002	S38	33	56.771	0.074	0.000	0.00	8.7	SURCHARGED
S1.010	S11	33	56.771	0.143	0.000	0.03	112.3	SURCHARGED
S1.011	S12	33	56.771	0.258	0.000	0.04	111.1	SURCHARGED
S1.012	S13	33	56.772	1.924	0.000	0.19	7.7	SURCHARGED
S1.013	S14	9	54.433	-0.184	0.000	0.02	9.6	OK
S1.014	S15	9	54.429	-0.121	0.000	0.02	9.0	OK
S7.000	S39	9	54.426	-0.154	0.000	0.02	8.5	OK
S1.015	S16	9	54.426	-0.088	0.000	0.02	10.7	OK
S8.000	S40	11	54.451	-0.108	0.000	0.53	19.0	OK
S1.016	S17	9	54.421	-0.063	0.000	0.04	18.0	OK
S1.017	S18	9	54.410	0.391	0.000	0.31	12.3	SURCHARGED

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Summary Wizard of 120 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Winter
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Sensitivity flows(s) (%) 0, +30

PN	US/MH Name	Storm Rank	Water		Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)			
S1.000	S1	8	71.292	-0.133	0.000	0.36	19.7	OK			
S1.001	S2	8	70.638	-0.230	0.000	0.12	29.0	OK			
S1.002	S3	8	68.508	-0.297	0.000	0.10	47.8	OK			
S1.003	S4	8	63.806	-0.278	0.000	0.15	67.4	OK			
S2.000	S20	8	67.958	-0.167	0.000	0.15	13.9	OK			
S2.001	S21	8	66.040	-0.222	0.000	0.15	36.1	OK			
S2.002	S22	8	62.948	-0.264	0.000	0.19	48.9	OK			
S1.004	S5	8	62.326	-0.237	0.000	0.46	116.3	OK			
S1.005	S6	8	62.075	-0.283	0.000	0.30	138.1	OK			
S1.006	S7	8	60.816	-0.271	0.000	0.34	158.8	OK			
S1.007	S8	8	59.287	-0.297	0.000	0.25	183.9	OK			
S1.008	S9	25	57.098	-0.232	0.000	0.47	188.1	OK			
S3.000	S23	8	60.456	-0.119	0.000	0.45	25.1	OK			
S4.000	S32	8	61.231	-0.194	0.000	0.05	5.7	OK			
S3.001	S24	8	59.902	-0.184	0.000	0.32	34.5	OK			
S3.002	S25	8	59.573	-0.265	0.000	0.19	39.0	OK			
S3.003	S26	8	59.031	-0.280	0.000	0.15	58.3	OK			
S3.004	S27	9	57.473	-0.262	0.000	0.20	59.9	OK			
S5.000	S33	9	57.673	-0.137	0.000	0.33	16.2	OK			
S5.001	S34	9	57.486	-0.180	0.000	0.34	28.6	OK			

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Summary Wizard of 120 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Flow (l/s)	
S5.002	S35	21	57.200	-0.152	0.000	0.25		36.5	OK
S3.005	S28	21	57.180	0.039	0.000	0.90		96.4	SURCHARGED
S3.006	S29	25	57.086	0.000	0.000	0.03		113.6	OK
S3.007	S30	29	56.933	0.000	0.000	0.03		57.9	OK
S3.008	S31	29	56.910	0.000	0.000	0.02		61.8	OK
S1.009	S10	29	56.896	0.062	0.000	0.05		225.7	SURCHARGED
S6.000	S36	29	56.896	-0.070	0.000	0.00		22.1	OK
S6.001	S37	29	56.896	0.179	0.000	0.01		13.8	SURCHARGED
S6.002	S38	29	56.896	0.199	0.000	0.00		17.3	SURCHARGED
S1.010	S11	29	56.896	0.268	0.000	0.05		206.1	SURCHARGED
S1.011	S12	29	56.896	0.383	0.000	0.08		204.6	SURCHARGED
S1.012	S13	29	56.896	2.048	0.000	0.20		7.9	SURCHARGED
S1.013	S14	8	54.441	-0.176	0.000	0.02		8.9	OK
S1.014	S15	8	54.437	-0.113	0.000	0.02		9.1	OK
S7.000	S39	8	54.433	-0.147	0.000	0.01		5.3	OK
S1.015	S16	8	54.433	-0.081	0.000	0.03		10.9	OK
S8.000	S40	12	54.430	-0.129	0.000	0.33		11.7	OK
S1.016	S17	8	54.428	-0.056	0.000	0.03		15.4	OK
S1.017	S18	8	54.415	0.396	0.000	0.31		12.3	SURCHARGED

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<u>Summary Wizard of 180 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS</u>							
<u>Simulation Criteria</u>							
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 Coefficient		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		1	
Number of Online Controls		2		Number of Time/Area Diagrams		0	
Number of Offline Controls		0		Number of Real Time Controls		0	
<u>Synthetic Rainfall Details</u>							
Rainfall Model		FSR		Ratio R		0.375	
Return Period (years)		100		Cv (Summer)		0.750	
Region		England and Wales		Cv (Winter)		0.840	
M5-60 (mm)		19.000					
Margin for Flood Risk Warning (mm)		300.0		DVD Status		ON	
Analysis Timestep		Fine		Inertia Status		ON	
DTS Status		ON					
Profile(s)				Winter			
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080					
Sensitivity flows(s) (%)		0, +30					

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Summary Wizard of 180 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Flow (l/s)	
S5.002	S35	22	57.199	-0.153	0.000	0.19		27.3	OK
S3.005	S28	22	57.180	0.039	0.000	0.67		72.1	SURCHARGED
S3.006	S29	21	57.086	0.000	0.000	0.02		84.7	OK
S3.007	S30	27	56.961	0.028	0.000	0.03		61.9	SURCHARGED
S3.008	S31	27	56.962	0.051	0.000	0.02		67.0	SURCHARGED
S1.009	S10	27	56.962	0.128	0.000	0.04		182.0	SURCHARGED
S6.000	S36	28	56.965	-0.001	0.000	0.00		16.6	OK
S6.001	S37	27	56.962	0.245	0.000	0.01		11.4	SURCHARGED
S6.002	S38	27	56.962	0.265	0.000	0.00		12.7	SURCHARGED
S1.010	S11	27	56.962	0.334	0.000	0.05		195.7	SURCHARGED
S1.011	S12	26	56.962	0.449	0.000	0.07		196.5	SURCHARGED
S1.012	S13	26	56.962	2.114	0.000	0.20		8.0	SURCHARGED
S1.013	S14	11	54.395	-0.222	0.000	0.02		8.9	OK
S1.014	S15	11	54.392	-0.158	0.000	0.02		9.2	OK
S7.000	S39	11	54.389	-0.191	0.000	0.01		4.1	OK
S1.015	S16	11	54.389	-0.125	0.000	0.03		11.0	OK
S8.000	S40	13	54.409	-0.150	0.000	0.24		8.8	OK
S1.016	S17	11	54.386	-0.098	0.000	0.03		14.5	OK
S1.017	S18	11	54.377	0.358	0.000	0.31		12.3	SURCHARGED

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Summary Wizard of 240 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS									
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 Coefficient 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 1									
Number of Online Controls 2 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 0.375									
Return Period (years) 100 Cv (Summer) 0.750									
Region England and Wales Cv (Winter) 0.840									
M5-60 (mm) 19.000									
Margin for Flood Risk Warning (mm) 300.0 DVD Status ON									
Analysis Timestep Fine Inertia Status ON									
DTS Status ON									
Profile(s) Winter									
Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080									
Sensitivity flows(s) (%) 0, +30									
Water Surcharged Flooded Pipe									
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
S1.000	S1	12	71.270	-0.155	0.000	0.21		11.9	OK
S1.001	S2	12	70.622	-0.246	0.000	0.08		17.5	OK
S1.002	S3	12	68.488	-0.317	0.000	0.06		28.8	OK
S1.003	S4	12	63.785	-0.299	0.000	0.09		40.7	OK
S2.000	S20	12	67.946	-0.179	0.000	0.09		8.4	OK
S2.001	S21	12	66.023	-0.239	0.000	0.09		21.8	OK
S2.002	S22	12	62.922	-0.290	0.000	0.12		29.5	OK
S1.004	S5	12	62.273	-0.290	0.000	0.27		70.2	OK
S1.005	S6	12	62.035	-0.323	0.000	0.18		83.3	OK
S1.006	S7	12	60.773	-0.313	0.000	0.20		95.8	OK
S1.007	S8	12	59.250	-0.334	0.000	0.15		110.9	OK
S1.008	S9	30	57.043	-0.287	0.000	0.29		113.5	OK
S3.000	S23	12	60.430	-0.145	0.000	0.27		15.1	OK
S4.000	S32	12	61.225	-0.200	0.000	0.03		3.5	OK
S3.001	S24	12	59.875	-0.211	0.000	0.19		20.8	OK
S3.002	S25	12	59.547	-0.291	0.000	0.11		23.5	OK
S3.003	S26	12	59.011	-0.300	0.000	0.09		35.2	OK
S3.004	S27	13	57.446	-0.289	0.000	0.12		36.2	OK
S5.000	S33	13	57.653	-0.157	0.000	0.20		9.8	OK
S5.001	S34	13	57.457	-0.209	0.000	0.20		17.3	OK
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Summary Wizard of 240 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Flow (l/s)	
S5.002	S35	20	57.200	-0.152	0.000	0.15	22.0		OK
S3.005	S28	19	57.185	0.044	0.000	0.54	58.2		SURCHARGED
S3.006	S29	22	57.086	0.000	0.000	0.02	68.3		OK
S3.007	S30	24	57.003	0.070	0.000	0.03	56.1		SURCHARGED
S3.008	S31	25	57.003	0.093	0.000	0.02	60.4		SURCHARGED
S1.009	S10	24	57.003	0.169	0.000	0.03	164.4		SURCHARGED
S6.000	S36	25	57.003	0.037	0.000	0.00	13.4		SURCHARGED
S6.001	S37	25	57.003	0.286	0.000	0.01	12.5		SURCHARGED
S6.002	S38	25	57.003	0.306	0.000	0.00	11.6		SURCHARGED
S1.010	S11	25	57.003	0.375	0.000	0.04	176.7		SURCHARGED
S1.011	S12	24	57.003	0.490	0.000	0.07	176.5		SURCHARGED
S1.012	S13	24	57.003	2.155	0.000	0.20	8.0		SURCHARGED
S1.013	S14	14	54.354	-0.263	0.000	0.02	8.7		OK
S1.014	S15	14	54.351	-0.199	0.000	0.02	9.3		OK
S7.000	S39	14	54.349	-0.231	0.000	0.01	3.3		OK
S1.015	S16	14	54.349	-0.165	0.000	0.03	11.0		OK
S8.000	S40	15	54.401	-0.158	0.000	0.20	7.1		OK
S1.016	S17	14	54.346	-0.138	0.000	0.03	13.9		OK
S1.017	S18	14	54.339	0.320	0.000	0.31	12.3		SURCHARGED

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Summary Wizard of 360 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS									
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 Coefficient		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		1				
Number of Online Controls		2	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		0.375				
Return Period (years)		100	Cv (Summer)		0.750				
Region England and Wales		Cv (Winter)	0.840						
M5-60 (mm)		19.000							
Margin for Flood Risk Warning (mm)		300.0	DVD Status		ON				
Analysis Timestep		Fine	Inertia Status		ON				
DTS Status		ON							
Profile(s)		Winter							
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080							
Sensitivity flows(s) (%)		0, +30							
Water Surcharged Flooded									
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
S1.000	S1	15	71.259	-0.166	0.000	0.16		8.7	OK
S1.001	S2	15	70.613	-0.255	0.000	0.06		12.8	OK
S1.002	S3	15	68.480	-0.325	0.000	0.04		21.1	OK
S1.003	S4	15	63.772	-0.312	0.000	0.07		29.7	OK
S2.000	S20	15	67.938	-0.187	0.000	0.07		6.1	OK
S2.001	S21	15	66.013	-0.249	0.000	0.07		15.9	OK
S2.002	S22	15	62.910	-0.302	0.000	0.09		21.5	OK
S1.004	S5	15	62.249	-0.314	0.000	0.20		51.2	OK
S1.005	S6	15	62.015	-0.343	0.000	0.13		60.8	OK
S1.006	S7	15	60.751	-0.335	0.000	0.15		70.0	OK
S1.007	S8	15	59.233	-0.351	0.000	0.11		81.0	OK
S1.008	S9	29	57.053	-0.277	0.000	0.21		82.9	OK
S3.000	S23	15	60.418	-0.157	0.000	0.20		11.0	OK
S4.000	S32	15	61.222	-0.203	0.000	0.02		2.5	OK
S3.001	S24	15	59.860	-0.226	0.000	0.14		15.2	OK
S3.002	S25	15	59.535	-0.303	0.000	0.08		17.2	OK
S3.003	S26	15	58.998	-0.313	0.000	0.06		25.7	OK
S3.004	S27	16	57.434	-0.301	0.000	0.09		26.4	OK
S5.000	S33	16	57.642	-0.168	0.000	0.14		7.1	OK
S5.001	S34	16	57.443	-0.223	0.000	0.15		12.6	OK
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Summary Wizard of 360 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
			Level (m)	Depth (m)	Volume (m ³)				
S5.002	S35	24	57.189	-0.163	0.000	0.11		16.1	OK
S3.005	S28	23	57.180	0.039	0.000	0.40		42.5	SURCHARGED
S3.006	S29	24	57.086	0.000	0.000	0.01		49.5	OK
S3.007	S30	21	57.051	0.118	0.000	0.02		43.5	SURCHARGED
S3.008	S31	21	57.051	0.141	0.000	0.01		46.5	SURCHARGED
S1.009	S10	21	57.051	0.217	0.000	0.03		128.2	SURCHARGED
S6.000	S36	22	57.051	0.085	0.000	0.00		10.1	SURCHARGED
S6.001	S37	21	57.051	0.334	0.000	0.00		9.4	SURCHARGED
S6.002	S38	21	57.051	0.354	0.000	0.00		10.0	SURCHARGED
S1.010	S11	21	57.051	0.423	0.000	0.03		138.3	SURCHARGED
S1.011	S12	21	57.051	0.538	0.000	0.05		138.5	SURCHARGED
S1.012	S13	21	57.051	2.203	0.000	0.20		8.1	SURCHARGED
S1.013	S14	17	54.277	-0.340	0.000	0.01		8.5	OK
S1.014	S15	17	54.275	-0.275	0.000	0.02		9.3	OK
S7.000	S39	17	54.273	-0.307	0.000	0.00		2.4	OK
S1.015	S16	17	54.273	-0.241	0.000	0.03		10.9	OK
S8.000	S40	16	54.390	-0.169	0.000	0.14		5.2	OK
S1.016	S17	17	54.271	-0.213	0.000	0.03		13.3	OK
S1.017	S18	17	54.266	0.247	0.000	0.31		12.3	SURCHARGED

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Summary Wizard of 480 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Winter
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Sensitivity flows(s) (%) 0, +30

PN	US/MH Name	Storm Rank	Water		Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)			
S1.000	S1	17	71.253	-0.172	0.000	0.13	7.0	OK			
S1.001	S2	17	70.608	-0.260	0.000	0.04	10.2	OK			
S1.002	S3	17	68.475	-0.330	0.000	0.03	16.9	OK			
S1.003	S4	17	63.765	-0.319	0.000	0.05	23.8	OK			
S2.000	S20	17	67.933	-0.192	0.000	0.05	4.9	OK			
S2.001	S21	17	66.007	-0.255	0.000	0.05	12.7	OK			
S2.002	S22	17	62.901	-0.311	0.000	0.07	17.2	OK			
S1.004	S5	17	62.233	-0.330	0.000	0.16	41.0	OK			
S1.005	S6	17	62.005	-0.353	0.000	0.10	48.7	OK			
S1.006	S7	17	60.739	-0.348	0.000	0.12	56.0	OK			
S1.007	S8	17	59.224	-0.360	0.000	0.09	64.8	OK			
S1.008	S9	26	57.083	-0.247	0.000	0.17	66.3	OK			
S3.000	S23	17	60.410	-0.165	0.000	0.16	8.8	OK			
S4.000	S32	17	61.218	-0.207	0.000	0.02	2.0	OK			
S3.001	S24	17	59.853	-0.233	0.000	0.11	12.1	OK			
S3.002	S25	17	59.526	-0.312	0.000	0.07	13.7	OK			
S3.003	S26	17	58.990	-0.321	0.000	0.05	20.6	OK			
S3.004	S27	18	57.425	-0.310	0.000	0.07	21.1	OK			
S5.000	S33	18	57.636	-0.174	0.000	0.12	5.7	OK			
S5.001	S34	18	57.434	-0.232	0.000	0.12	10.1	OK			

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Summary Wizard of 480 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Flow (l/s)	
S5.002	S35	26	57.123	-0.229	0.000	0.09		12.9	OK
S3.005	S28	27	57.115	-0.026	0.000	0.32		34.0	OK
S3.006	S29	19	57.086	0.000	0.000	0.01		39.5	OK
S3.007	S30	19	57.081	0.148	0.000	0.02		36.2	SURCHARGED
S3.008	S31	19	57.081	0.171	0.000	0.01		39.1	SURCHARGED
S1.009	S10	19	57.081	0.247	0.000	0.02		108.8	SURCHARGED
S6.000	S36	20	57.081	0.115	0.000	0.00		8.5	SURCHARGED
S6.001	S37	19	57.081	0.364	0.000	0.00		7.9	SURCHARGED
S6.002	S38	19	57.081	0.384	0.000	0.00		7.8	SURCHARGED
S1.010	S11	19	57.081	0.453	0.000	0.03		117.7	SURCHARGED
S1.011	S12	19	57.081	0.568	0.000	0.04		117.8	SURCHARGED
S1.012	S13	19	57.081	2.233	0.000	0.20		8.2	SURCHARGED
S1.013	S14	19	54.216	-0.401	0.000	0.01		8.5	OK
S1.014	S15	19	54.214	-0.336	0.000	0.02		9.3	OK
S7.000	S39	19	54.212	-0.368	0.000	0.00		2.0	OK
S1.015	S16	19	54.212	-0.302	0.000	0.02		10.7	OK
S8.000	S40	17	54.384	-0.175	0.000	0.11		4.1	OK
S1.016	S17	19	54.211	-0.273	0.000	0.03		12.9	OK
S1.017	S18	19	54.207	0.188	0.000	0.31		12.3	SURCHARGED

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Summary Wizard of 600 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	100	Cv (Summer)	0.750
Region England and Wales		Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s) Winter

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
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Sensitivity flows(s) (%)	0, +30
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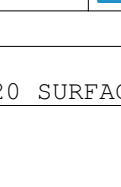
PN	US/MH Name	Storm Rank	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
S1.000	S1	19	71.249	-0.176	0.000	0.11		5.9	OK
S1.001	S2	19	70.605	-0.263	0.000	0.04		8.6	OK
S1.002	S3	19	68.472	-0.333	0.000	0.03		14.2	OK
S1.003	S4	19	63.760	-0.324	0.000	0.05		20.0	OK
S2.000	S20	19	67.930	-0.195	0.000	0.04		4.1	OK
S2.001	S21	19	66.003	-0.259	0.000	0.05		10.7	OK
S2.002	S22	19	62.895	-0.317	0.000	0.06		14.5	OK
S1.004	S5	19	62.222	-0.341	0.000	0.14		34.5	OK
S1.005	S6	19	61.998	-0.360	0.000	0.09		40.9	OK
S1.006	S7	19	60.731	-0.355	0.000	0.10		47.1	OK
S1.007	S8	19	59.215	-0.369	0.000	0.07		54.5	OK
S1.008	S9	24	57.104	-0.226	0.000	0.14		55.8	OK
S3.000	S23	19	60.405	-0.170	0.000	0.13		7.4	OK
S4.000	S32	19	61.215	-0.210	0.000	0.01		1.7	OK
S3.001	S24	19	59.848	-0.238	0.000	0.09		10.2	OK
S3.002	S25	19	59.520	-0.318	0.000	0.06		11.5	OK
S3.003	S26	19	58.986	-0.325	0.000	0.04		17.3	OK
S3.004	S27	20	57.419	-0.316	0.000	0.06		17.8	OK
S5.000	S33	20	57.632	-0.178	0.000	0.10		4.8	OK
S5.001	S34	20	57.429	-0.237	0.000	0.10		8.5	OK

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Summary Wizard of 600 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Pipe			Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)	
S5.002	S35	29	57.103	-0.249	0.000	0.07		10.8	OK
S3.005	S28	29	57.103	-0.038	0.000	0.27		28.6	OK
S3.006	S29	18	57.102	0.016	0.000	0.01		33.2	SURCHARGED
S3.007	S30	18	57.103	0.170	0.000	0.02		31.8	SURCHARGED
S3.008	S31	18	57.103	0.193	0.000	0.01		34.4	SURCHARGED
S1.009	S10	18	57.103	0.269	0.000	0.02		92.6	SURCHARGED
S6.000	S36	19	57.103	0.137	0.000	0.00		7.0	SURCHARGED
S6.001	S37	18	57.103	0.386	0.000	0.00		6.6	SURCHARGED
S6.002	S38	18	57.103	0.406	0.000	0.00		6.4	SURCHARGED
S1.010	S11	18	57.104	0.476	0.000	0.02		100.3	SURCHARGED
S1.011	S12	18	57.103	0.590	0.000	0.04		100.4	SURCHARGED
S1.012	S13	18	57.103	2.255	0.000	0.21		8.2	SURCHARGED
S1.013	S14	20	54.168	-0.449	0.000	0.01		8.4	OK
S1.014	S15	20	54.167	-0.383	0.000	0.02		9.2	OK
S7.000	S39	20	54.165	-0.415	0.000	0.00		1.7	OK
S1.015	S16	20	54.165	-0.349	0.000	0.02		10.5	OK
S8.000	S40	19	54.381	-0.178	0.000	0.10		3.5	OK
S1.016	S17	20	54.164	-0.320	0.000	0.03		12.6	OK
S1.017	S18	20	54.161	0.142	0.000	0.31		12.3	SURCHARGED

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Summary Wizard of 720 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s) Winter

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
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Sensitivity flows(s) (%)	0, +30
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PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Flow (l/s)	
S1.000	S1	21	71.246	-0.179	0.000	0.09	5.1	OK	
S1.001	S2	21	70.603	-0.265	0.000	0.03	7.5	OK	
S1.002	S3	21	68.470	-0.335	0.000	0.03	12.3	OK	
S1.003	S4	21	63.757	-0.327	0.000	0.04	17.3	OK	
S2.000	S20	21	67.928	-0.197	0.000	0.04	3.6	OK	
S2.001	S21	21	66.000	-0.262	0.000	0.04	9.3	OK	
S2.002	S22	21	62.890	-0.322	0.000	0.05	12.6	OK	
S1.004	S5	21	62.215	-0.348	0.000	0.12	29.9	OK	
S1.005	S6	21	61.990	-0.368	0.000	0.08	35.5	OK	
S1.006	S7	21	60.725	-0.361	0.000	0.09	40.8	OK	
S1.007	S8	21	59.208	-0.376	0.000	0.06	47.3	OK	
S1.008	S9	23	57.114	-0.216	0.000	0.12	48.4	OK	
S3.000	S23	21	60.401	-0.174	0.000	0.12	6.4	OK	
S4.000	S32	21	61.213	-0.212	0.000	0.01	1.5	OK	
S3.001	S24	21	59.843	-0.243	0.000	0.08	8.9	OK	
S3.002	S25	21	59.516	-0.322	0.000	0.05	10.0	OK	
S3.003	S26	21	58.983	-0.328	0.000	0.04	15.0	OK	
S3.004	S27	23	57.414	-0.321	0.000	0.05	15.4	OK	
S5.000	S33	22	57.629	-0.181	0.000	0.08	4.2	OK	
S5.001	S34	22	57.425	-0.241	0.000	0.09	7.4	OK	

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Summary Wizard of 720 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	
S5.002	S35	28	57.113	-0.239	0.000	0.06	9.4	OK
S3.005	S28	28	57.113	-0.028	0.000	0.23	24.8	OK
S3.006	S29	16	57.113	0.027	0.000	0.01	28.8	SURCHARGED
S3.007	S30	16	57.113	0.180	0.000	0.01	27.7	SURCHARGED
S3.008	S31	16	57.113	0.203	0.000	0.01	29.8	SURCHARGED
S1.009	S10	16	57.113	0.279	0.000	0.02	82.1	SURCHARGED
S6.000	S36	17	57.113	0.147	0.000	0.00	6.1	SURCHARGED
S6.001	S37	16	57.113	0.396	0.000	0.00	5.9	SURCHARGED
S6.002	S38	16	57.113	0.416	0.000	0.00	6.0	SURCHARGED
S1.010	S11	16	57.113	0.485	0.000	0.02	89.2	SURCHARGED
S1.011	S12	16	57.113	0.600	0.000	0.03	89.1	SURCHARGED
S1.012	S13	16	57.113	2.265	0.000	0.21	8.2	SURCHARGED
S1.013	S14	21	54.129	-0.488	0.000	0.01	8.4	OK
S1.014	S15	21	54.127	-0.423	0.000	0.02	9.2	OK
S7.000	S39	21	54.126	-0.454	0.000	0.00	1.5	OK
S1.015	S16	21	54.126	-0.388	0.000	0.02	10.4	OK
S8.000	S40	21	54.377	-0.182	0.000	0.08	3.0	OK
S1.016	S17	21	54.125	-0.359	0.000	0.03	12.3	OK
S1.017	S18	21	54.122	0.103	0.000	0.31	12.2	SURCHARGED

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Summary Wizard of 960 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Winter
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Sensitivity flows(s) (%) 0, +30

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Pipe			Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)	
S1.000	S1	22	71.240	-0.185	0.000	0.07		4.1	OK
S1.001	S2	22	70.600	-0.268	0.000	0.03		6.0	OK
S1.002	S3	22	68.465	-0.340	0.000	0.02		9.8	OK
S1.003	S4	22	63.752	-0.332	0.000	0.03		13.8	OK
S2.000	S20	22	67.926	-0.199	0.000	0.03		2.9	OK
S2.001	S21	22	65.997	-0.265	0.000	0.03		7.4	OK
S2.002	S22	22	62.885	-0.327	0.000	0.04		10.0	OK
S1.004	S5	22	62.205	-0.358	0.000	0.09		23.9	OK
S1.005	S6	22	61.980	-0.378	0.000	0.06		28.3	OK
S1.006	S7	22	60.713	-0.373	0.000	0.07		32.6	OK
S1.007	S8	22	59.199	-0.385	0.000	0.05		37.7	OK
S1.008	S9	21	57.127	-0.203	0.000	0.10		38.6	OK
S3.000	S23	22	60.396	-0.179	0.000	0.09		5.1	OK
S4.000	S32	22	61.210	-0.215	0.000	0.01		1.2	OK
S3.001	S24	22	59.836	-0.250	0.000	0.07		7.1	OK
S3.002	S25	22	59.511	-0.327	0.000	0.04		8.0	OK
S3.003	S26	22	58.978	-0.333	0.000	0.03		12.0	OK
S3.004	S27	24	57.408	-0.327	0.000	0.04		12.3	OK
S5.000	S33	23	57.623	-0.187	0.000	0.07		3.3	OK
S5.001	S34	24	57.417	-0.249	0.000	0.07		5.9	OK

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Summary Wizard of 960 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)			Flow (l/s)	
S5.002	S35	25	57.126	-0.226	0.000	0.05	7.5		OK
S3.005	S28	25	57.126	-0.015	0.000	0.18	19.7		OK
S3.006	S29	14	57.126	0.040	0.000	0.01	23.0		SURCHARGED
S3.007	S30	14	57.125	0.192	0.000	0.01	21.8		SURCHARGED
S3.008	S31	14	57.125	0.215	0.000	0.01	23.5		SURCHARGED
S1.009	S10	14	57.126	0.292	0.000	0.01	65.5		SURCHARGED
S6.000	S36	15	57.125	0.159	0.000	0.00	5.1		SURCHARGED
S6.001	S37	14	57.126	0.409	0.000	0.00	4.9		SURCHARGED
S6.002	S38	14	57.126	0.429	0.000	0.00	5.1		SURCHARGED
S1.010	S11	14	57.126	0.498	0.000	0.02	71.5		SURCHARGED
S1.011	S12	14	57.126	0.613	0.000	0.03	71.6		SURCHARGED
S1.012	S13	14	57.126	2.278	0.000	0.21	8.2		SURCHARGED
S1.013	S14	23	54.084	-0.533	0.000	0.01	8.4		OK
S1.014	S15	23	54.069	-0.481	0.000	0.02	9.0		OK
S7.000	S39	23	54.068	-0.512	0.000	0.00	1.2		OK
S1.015	S16	23	54.068	-0.446	0.000	0.02	10.0		OK
S8.000	S40	22	54.372	-0.187	0.000	0.07	2.4		OK
S1.016	S17	23	54.068	-0.416	0.000	0.03	11.9		OK
S1.017	S18	23	54.066	0.047	0.000	0.30	11.9		SURCHARGED

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Summary Wizard of 1440 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Winter
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Sensitivity flows(s) (%) 0, +30

PN	US/MH Name	Storm Rank	Water		Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)			
S1.000	S1	24	71.233	-0.192	0.000	0.05		2.9	OK		
S1.001	S2	24	70.594	-0.274	0.000	0.02		4.3	OK		
S1.002	S3	24	68.456	-0.349	0.000	0.01		7.1	OK		
S1.003	S4	24	63.747	-0.337	0.000	0.02		10.1	OK		
S2.000	S20	24	67.923	-0.202	0.000	0.02		2.1	OK		
S2.001	S21	24	65.993	-0.269	0.000	0.02		5.4	OK		
S2.002	S22	24	62.879	-0.333	0.000	0.03		7.3	OK		
S1.004	S5	24	62.189	-0.374	0.000	0.07		17.3	OK		
S1.005	S6	24	61.968	-0.390	0.000	0.04		20.6	OK		
S1.006	S7	24	60.701	-0.386	0.000	0.05		23.7	OK		
S1.007	S8	24	59.190	-0.394	0.000	0.04		27.4	OK		
S1.008	S9	22	57.117	-0.213	0.000	0.07		28.0	OK		
S3.000	S23	24	60.388	-0.187	0.000	0.07		3.7	OK		
S4.000	S32	24	61.208	-0.217	0.000	0.01		0.9	OK		
S3.001	S24	24	59.828	-0.258	0.000	0.05		5.1	OK		
S3.002	S25	24	59.505	-0.333	0.000	0.03		5.8	OK		
S3.003	S26	24	58.974	-0.337	0.000	0.02		8.7	OK		
S3.004	S27	25	57.402	-0.333	0.000	0.03		8.9	OK		
S5.000	S33	25	57.617	-0.193	0.000	0.05		2.4	OK		
S5.001	S34	25	57.409	-0.257	0.000	0.05		4.3	OK		

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Summary Wizard of 1440 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	
S5.002	S35	27	57.116	-0.236	0.000	0.04	5.4	OK
S3.005	S28	26	57.116	-0.025	0.000	0.13	14.3	OK
S3.006	S29	15	57.115	0.029	0.000	0.00	16.9	SURCHARGED
S3.007	S30	15	57.115	0.182	0.000	0.01	16.8	SURCHARGED
S3.008	S31	15	57.115	0.205	0.000	0.00	18.1	SURCHARGED
S1.009	S10	15	57.115	0.281	0.000	0.01	49.0	SURCHARGED
S6.000	S36	16	57.115	0.149	0.000	0.00	3.7	SURCHARGED
S6.001	S37	15	57.115	0.398	0.000	0.00	3.6	SURCHARGED
S6.002	S38	15	57.115	0.418	0.000	0.00	3.8	SURCHARGED
S1.010	S11	15	57.116	0.488	0.000	0.01	53.4	SURCHARGED
S1.011	S12	15	57.116	0.603	0.000	0.02	53.5	SURCHARGED
S1.012	S13	15	57.116	2.268	0.000	0.21	8.2	SURCHARGED
S1.013	S14	25	54.062	-0.555	0.000	0.01	8.3	OK
S1.014	S15	25	54.021	-0.529	0.000	0.02	8.7	OK
S7.000	S39	25	54.014	-0.566	0.000	0.00	0.9	OK
S1.015	S16	25	54.014	-0.500	0.000	0.02	9.5	OK
S8.000	S40	24	54.366	-0.193	0.000	0.05	1.7	OK
S1.016	S17	25	54.012	-0.472	0.000	0.02	11.1	OK
S1.017	S18	25	54.011	-0.008	0.000	0.28	11.1	OK

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Summary Wizard of 2160 minute 100 year Winter Q+0% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)			Flow (l/s)	
S5.002	S35	30	57.077	-0.275	0.000	0.03	4.0		OK
S3.005	S28	30	57.077	-0.064	0.000	0.10	10.5		OK
S3.006	S29	26	57.077	-0.009	0.000	0.00	12.3		OK
S3.007	S30	20	57.071	0.138	0.000	0.01	12.2		SURCHARGED
S3.008	S31	20	57.071	0.161	0.000	0.00	13.2		SURCHARGED
S1.009	S10	20	57.071	0.237	0.000	0.01	35.7		SURCHARGED
S6.000	S36	21	57.071	0.105	0.000	0.00	2.7		SURCHARGED
S6.001	S37	20	57.071	0.354	0.000	0.00	7.4		SURCHARGED
S6.002	S38	20	57.071	0.374	0.000	0.00	6.6		SURCHARGED
S1.010	S11	20	57.071	0.443	0.000	0.01	39.0		SURCHARGED
S1.011	S12	20	57.071	0.558	0.000	0.01	39.1		SURCHARGED
S1.012	S13	20	57.071	2.223	0.000	0.20	8.2		SURCHARGED
S1.013	S14	28	54.059	-0.558	0.000	0.01	8.2		OK
S1.014	S15	27	54.012	-0.538	0.000	0.02	8.5		OK
S7.000	S39	27	54.001	-0.579	0.000	0.00	0.6		OK
S1.015	S16	27	54.000	-0.514	0.000	0.02	9.0		OK
S8.000	S40	27	54.361	-0.198	0.000	0.04	1.3		OK
S1.016	S17	27	53.997	-0.487	0.000	0.02	10.2		OK
S1.017	S18	27	53.995	-0.024	0.000	0.26	10.2		OK

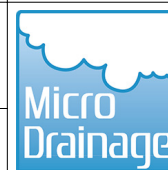
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Summary Wizard of 15 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Flow (l/s)	
S5.002	S35	2	58.087	0.735	0.000	0.91	131.9		SURCHARGED
S3.005	S28	1	57.910	0.769	0.000	3.31	354.5		SURCHARGED
S3.006	S29	35	56.607	-0.479	0.000	0.09	409.7		OK
S3.007	S30	36	56.573	-0.360	0.000	0.11	218.9		OK
S3.008	S31	36	56.570	-0.340	0.000	0.06	220.8		OK
S1.009	S10	36	56.553	-0.281	0.000	0.17	841.3		OK
S6.000	S36	37	56.504	-0.462	0.000	0.02	94.2		OK
S6.001	S37	37	56.504	-0.213	0.000	0.01	18.6		OK
S6.002	S38	36	56.504	-0.193	0.000	0.00	12.2		OK
S1.010	S11	36	56.504	-0.124	0.000	0.06	234.9		OK
S1.011	S12	36	56.499	-0.014	0.000	0.02	63.4		OK
S1.012	S13	36	56.488	1.640	0.000	0.18	7.2		SURCHARGED
S1.013	S14	12	54.392	-0.225	0.000	0.03	14.5		OK
S1.014	S15	12	54.389	-0.161	0.000	0.03	14.6		OK
S7.000	S39	12	54.387	-0.193	0.000	0.04	21.5		OK
S1.015	S16	12	54.387	-0.127	0.000	0.03	11.5		OK
S8.000	S40	6	54.615	0.056	0.000	1.37	49.3		SURCHARGED
S1.016	S17	12	54.384	-0.100	0.000	0.06	28.8		OK
S1.017	S18	12	54.375	0.356	0.000	0.31	12.2		SURCHARGED

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Summary Wizard of 30 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS									
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 Coefficient		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		1				
Number of Online Controls		2	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		0.375				
Return Period (years)		100	Cv (Summer)		0.750				
Region England and Wales		Cv (Winter)	0.840						
M5-60 (mm)		19.000							
Margin for Flood Risk Warning (mm)		300.0	DVD Status		ON				
Analysis Timestep		Fine	Inertia Status		ON				
DTS Status		ON							
Profile(s)		Winter							
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080							
Sensitivity flows(s) (%)		0, +30							
Water Surcharged Flooded Pipe									
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap. (l/s)	Overflow (l/s)	Pipe Flow (l/s)	Status
S1.000	S1	3	71.575	0.150	0.000	1.12		62.3	SURCHARGED
S1.001	S2	3	70.699	-0.169	0.000	0.39		91.2	OK
S1.002	S3	3	68.572	-0.233	0.000	0.31		150.1	OK
S1.003	S4	3	63.893	-0.191	0.000	0.48		211.8	OK
S2.000	S20	3	68.011	-0.114	0.000	0.48		44.0	OK
S2.001	S21	3	66.111	-0.151	0.000	0.49		114.3	OK
S2.002	S22	3	63.051	-0.161	0.000	0.61		154.7	OK
S1.004	S5	3	62.766	0.203	0.000	1.44		368.3	SURCHARGED
S1.005	S6	2	62.286	-0.072	0.000	0.93		433.5	OK
S1.006	S7	2	61.196	0.110	0.000	1.04		491.2	SURCHARGED
S1.007	S8	2	59.434	-0.150	0.000	0.77		563.2	OK
S1.008	S9	2	57.859	0.529	0.000	1.45		575.5	SURCHARGED
S3.000	S23	3	61.092	0.517	0.000	1.43		78.8	SURCHARGED
S4.000	S32	3	61.258	-0.167	0.000	0.15		18.3	OK
S3.001	S24	3	60.028	-0.058	0.000	1.00		108.1	OK
S3.002	S25	3	59.672	-0.166	0.000	0.59		121.3	OK
S3.003	S26	3	59.114	-0.197	0.000	0.45		181.5	OK
S3.004	S27	3	57.900	0.165	0.000	0.61		183.9	SURCHARGED
S5.000	S33	3	58.240	0.430	0.000	0.99		49.2	SURCHARGED
S5.001	S34	3	58.094	0.428	0.000	1.01		85.9	SURCHARGED
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Summary Wizard of 30 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Flow (l/s)	
S5.002	S35	3	57.762	0.410	0.000	0.75		109.2	SURCHARGED
S3.005	S28	2	57.636	0.495	0.000	2.74		293.9	SURCHARGED
S3.006	S29	23	57.086	0.000	0.000	0.08		341.9	OK
S3.007	S30	31	56.933	0.000	0.000	0.06		132.3	OK
S3.008	S31	31	56.910	0.000	0.000	0.04		127.0	OK
S1.009	S10	32	56.834	0.000	0.000	0.14		680.5	OK
S6.000	S36	31	56.795	-0.171	0.000	0.01		70.7	OK
S6.001	S37	31	56.795	0.078	0.000	0.01		22.7	SURCHARGED
S6.002	S38	31	56.795	0.098	0.000	0.01		22.1	SURCHARGED
S1.010	S11	31	56.796	0.168	0.000	0.07		296.0	SURCHARGED
S1.011	S12	31	56.795	0.282	0.000	0.11		294.1	SURCHARGED
S1.012	S13	31	56.795	1.947	0.000	0.19		7.7	SURCHARGED
S1.013	S14	6	54.534	-0.083	0.000	0.02		12.5	OK
S1.014	S15	6	54.526	-0.024	0.000	0.02		11.2	OK
S7.000	S39	6	54.514	-0.066	0.000	0.03		16.6	OK
S1.015	S16	6	54.514	0.000	0.000	0.02		10.4	OK
S8.000	S40	8	54.559	0.000	0.000	1.03		37.1	OK
S1.016	S17	6	54.502	0.018	0.000	0.05		24.3	SURCHARGED
S1.017	S18	6	54.501	0.482	0.000	0.31		12.3	SURCHARGED

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Summary Wizard of 60 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)			Flow (l/s)	
S5.002	S35	6	57.454	0.102	0.000	0.52	75.2	SURCHARGED	
S3.005	S28	12	57.331	0.190	0.000	1.87	200.4	SURCHARGED	
S3.006	S29	20	57.086	0.000	0.000	0.05	234.5	OK	
S3.007	S30	28	56.955	0.022	0.000	0.09	180.9	SURCHARGED	
S3.008	S31	28	56.955	0.045	0.000	0.05	192.6	SURCHARGED	
S1.009	S10	28	56.955	0.121	0.000	0.10	484.9	SURCHARGED	
S6.000	S36	27	56.966	0.000	0.000	0.01	46.8	OK	
S6.001	S37	28	56.955	0.238	0.000	0.02	39.6	SURCHARGED	
S6.002	S38	28	56.955	0.258	0.000	0.01	40.6	SURCHARGED	
S1.010	S11	28	56.955	0.327	0.000	0.12	491.9	SURCHARGED	
S1.011	S12	27	56.955	0.442	0.000	0.19	498.8	SURCHARGED	
S1.012	S13	27	56.955	2.107	0.000	0.20	8.0	SURCHARGED	
S1.013	S14	4	54.761	0.144	0.000	0.02	10.9	SURCHARGED	
S1.014	S15	4	54.760	0.210	0.000	0.02	10.2	SURCHARGED	
S7.000	S39	4	54.759	0.179	0.000	0.02	11.1	SURCHARGED	
S1.015	S16	4	54.759	0.245	0.000	0.03	11.6	SURCHARGED	
S8.000	S40	4	54.762	0.203	0.000	0.69	24.8	SURCHARGED	
S1.016	S17	4	54.758	0.274	0.000	0.04	19.5	SURCHARGED	
S1.017	S18	4	54.757	0.738	0.000	0.31	12.3	SURCHARGED	

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Summary Wizard of 120 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Flow (l/s)	
S5.002	S35	18	57.241	-0.111	0.000	0.33		47.6	OK
S3.005	S28	20	57.181	0.040	0.000	1.17		125.7	SURCHARGED
S3.006	S29	17	57.104	0.018	0.000	0.03		143.8	SURCHARGED
S3.007	S30	17	57.105	0.172	0.000	0.06		132.1	SURCHARGED
S3.008	S31	17	57.105	0.194	0.000	0.04		143.4	SURCHARGED
S1.009	S10	17	57.105	0.271	0.000	0.08		393.5	SURCHARGED
S6.000	S36	18	57.104	0.138	0.000	0.01		28.5	SURCHARGED
S6.001	S37	17	57.105	0.388	0.000	0.01		23.9	SURCHARGED
S6.002	S38	17	57.105	0.408	0.000	0.01		24.3	SURCHARGED
S1.010	S11	17	57.105	0.477	0.000	0.10		427.9	SURCHARGED
S1.011	S12	17	57.105	0.592	0.000	0.16		429.1	SURCHARGED
S1.012	S13	17	57.105	2.257	0.000	0.21		8.2	SURCHARGED
S1.013	S14	1	54.902	0.285	0.000	0.02		10.0	SURCHARGED
S1.014	S15	1	54.901	0.351	0.000	0.02		9.9	SURCHARGED
S7.000	S39	1	54.900	0.320	0.000	0.01		6.9	SURCHARGED
S1.015	S16	1	54.900	0.386	0.000	0.03		11.1	SURCHARGED
S8.000	S40	1	54.903	0.344	0.000	0.42		15.3	SURCHARGED
S1.016	S17	1	54.900	0.416	0.000	0.03		16.4	SURCHARGED
S1.017	S18	1	54.899	0.880	0.000	0.31		12.3	SURCHARGED

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Summary Wizard of 180 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Winter
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Sensitivity flows(s) (%) 0, +30

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow (l/s)	Flow (l/s)	
S1.000	S1	9	71.291	-0.134	0.000	0.35	19.3	OK
S1.001	S2	9	70.637	-0.231	0.000	0.12	28.4	OK
S1.002	S3	9	68.507	-0.298	0.000	0.10	46.7	OK
S1.003	S4	9	63.805	-0.279	0.000	0.15	65.9	OK
S2.000	S20	9	67.957	-0.168	0.000	0.15	13.6	OK
S2.001	S21	9	66.039	-0.223	0.000	0.15	35.3	OK
S2.002	S22	9	62.947	-0.265	0.000	0.19	47.8	OK
S1.004	S5	9	62.323	-0.240	0.000	0.44	113.5	OK
S1.005	S6	9	62.073	-0.285	0.000	0.29	134.7	OK
S1.006	S7	9	60.813	-0.273	0.000	0.33	154.9	OK
S1.007	S8	9	59.285	-0.299	0.000	0.25	179.2	OK
S1.008	S9	17	57.190	-0.140	0.000	0.46	183.1	OK
S3.000	S23	9	60.455	-0.120	0.000	0.44	24.5	OK
S4.000	S32	9	61.231	-0.194	0.000	0.05	5.6	OK
S3.001	S24	9	59.900	-0.186	0.000	0.31	33.7	OK
S3.002	S25	9	59.572	-0.266	0.000	0.19	38.0	OK
S3.003	S26	9	59.030	-0.281	0.000	0.14	56.9	OK
S3.004	S27	10	57.472	-0.263	0.000	0.19	58.5	OK
S5.000	S33	10	57.672	-0.138	0.000	0.32	15.9	OK
S5.001	S34	10	57.484	-0.182	0.000	0.33	27.9	OK

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Summary Wizard of 180 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	
S5.002	S35	17	57.241	-0.111	0.000	0.25	35.6	OK
S3.005	S28	18	57.186	0.045	0.000	0.88	93.9	SURCHARGED
S3.006	S29	12	57.182	0.096	0.000	0.02	109.8	SURCHARGED
S3.007	S30	12	57.182	0.249	0.000	0.05	108.5	SURCHARGED
S3.008	S31	12	57.182	0.272	0.000	0.03	117.7	SURCHARGED
S1.009	S10	12	57.182	0.348	0.000	0.07	319.1	SURCHARGED
S6.000	S36	14	57.182	0.216	0.000	0.00	23.6	SURCHARGED
S6.001	S37	13	57.182	0.465	0.000	0.01	23.8	SURCHARGED
S6.002	S38	13	57.182	0.485	0.000	0.01	24.2	SURCHARGED
S1.010	S11	13	57.182	0.554	0.000	0.08	344.9	SURCHARGED
S1.011	S12	12	57.182	0.669	0.000	0.13	345.8	SURCHARGED
S1.012	S13	12	57.182	2.334	0.000	0.21	8.3	SURCHARGED
S1.013	S14	2	54.870	0.253	0.000	0.02	9.6	SURCHARGED
S1.014	S15	2	54.869	0.319	0.000	0.02	10.3	SURCHARGED
S7.000	S39	2	54.868	0.288	0.000	0.01	5.2	SURCHARGED
S1.015	S16	2	54.868	0.354	0.000	0.03	11.5	SURCHARGED
S8.000	S40	2	54.870	0.311	0.000	0.32	11.5	SURCHARGED
S1.016	S17	2	54.868	0.384	0.000	0.03	15.2	SURCHARGED
S1.017	S18	2	54.867	0.848	0.000	0.31	12.3	SURCHARGED

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Summary Wizard of 240 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS

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 Coefficient	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	1
Number of Online Controls	2	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	0.375
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000		

Margin for Flood Risk Warning (mm)	300.0	DVD Status	ON
Analysis Timestep	Fine	Inertia Status	ON
DTS Status	ON		

Profile(s)	Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Sensitivity flows(s) (%)	0, +30

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow (l/s)	Flow (l/s)	
S1.000	S1	10	71.281	-0.144	0.000	0.28	15.5	OK
S1.001	S2	10	70.631	-0.237	0.000	0.10	22.8	OK
S1.002	S3	10	68.498	-0.307	0.000	0.08	37.6	OK
S1.003	S4	10	63.795	-0.289	0.000	0.12	53.0	OK
S2.000	S20	10	67.951	-0.174	0.000	0.12	10.9	OK
S2.001	S21	10	66.031	-0.231	0.000	0.12	28.4	OK
S2.002	S22	10	62.934	-0.278	0.000	0.15	38.4	OK
S1.004	S5	10	62.299	-0.264	0.000	0.36	91.4	OK
S1.005	S6	10	62.054	-0.304	0.000	0.23	108.6	OK
S1.006	S7	10	60.793	-0.294	0.000	0.26	124.9	OK
S1.007	S8	10	59.269	-0.315	0.000	0.20	144.6	OK
S1.008	S9	15	57.240	-0.090	0.000	0.37	147.9	OK
S3.000	S23	10	60.443	-0.132	0.000	0.36	19.7	OK
S4.000	S32	10	61.228	-0.197	0.000	0.04	4.5	OK
S3.001	S24	10	59.887	-0.199	0.000	0.25	27.1	OK
S3.002	S25	10	59.559	-0.279	0.000	0.15	30.6	OK
S3.003	S26	10	59.020	-0.291	0.000	0.11	45.8	OK
S3.004	S27	11	57.458	-0.277	0.000	0.16	47.1	OK
S5.000	S33	11	57.662	-0.148	0.000	0.26	12.7	OK
S5.001	S34	11	57.470	-0.196	0.000	0.26	22.5	OK

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Summary Wizard of 240 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	
S5.002	S35	19	57.234	-0.118	0.000	0.20	28.6	OK
S3.005	S28	16	57.232	0.091	0.000	0.70	75.1	SURCHARGED
S3.006	S29	11	57.232	0.146	0.000	0.02	92.8	SURCHARGED
S3.007	S30	11	57.232	0.299	0.000	0.04	92.7	SURCHARGED
S3.008	S31	11	57.232	0.322	0.000	0.03	100.0	SURCHARGED
S1.009	S10	10	57.232	0.398	0.000	0.06	268.9	SURCHARGED
S6.000	S36	13	57.232	0.266	0.000	0.00	19.2	SURCHARGED
S6.001	S37	12	57.232	0.515	0.000	0.01	22.1	SURCHARGED
S6.002	S38	12	57.232	0.535	0.000	0.01	22.4	SURCHARGED
S1.010	S11	11	57.232	0.604	0.000	0.07	288.3	SURCHARGED
S1.011	S12	10	57.232	0.719	0.000	0.11	287.9	SURCHARGED
S1.012	S13	10	57.232	2.384	0.000	0.21	8.4	SURCHARGED
S1.013	S14	3	54.802	0.185	0.000	0.02	9.3	SURCHARGED
S1.014	S15	3	54.801	0.251	0.000	0.02	10.0	SURCHARGED
S7.000	S39	3	54.800	0.220	0.000	0.01	4.2	SURCHARGED
S1.015	S16	3	54.800	0.286	0.000	0.03	11.1	SURCHARGED
S8.000	S40	3	54.801	0.242	0.000	0.26	9.2	SURCHARGED
S1.016	S17	3	54.799	0.315	0.000	0.03	14.6	SURCHARGED
S1.017	S18	3	54.797	0.778	0.000	0.31	12.3	SURCHARGED

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Summary Wizard of 360 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	
S5.002	S35	15	57.295	-0.057	0.000	0.15	21.1	OK
S3.005	S28	14	57.293	0.152	0.000	0.52	55.8	SURCHARGED
S3.006	S29	9	57.293	0.207	0.000	0.02	68.6	SURCHARGED
S3.007	S30	9	57.293	0.360	0.000	0.03	68.7	SURCHARGED
S3.008	S31	9	57.293	0.383	0.000	0.02	73.2	SURCHARGED
S1.009	S10	8	57.293	0.459	0.000	0.04	198.2	SURCHARGED
S6.000	S36	10	57.293	0.327	0.000	0.00	14.4	SURCHARGED
S6.001	S37	9	57.293	0.576	0.000	0.01	18.0	SURCHARGED
S6.002	S38	9	57.293	0.596	0.000	0.01	18.5	SURCHARGED
S1.010	S11	8	57.293	0.665	0.000	0.05	214.2	SURCHARGED
S1.011	S12	8	57.293	0.780	0.000	0.08	214.8	SURCHARGED
S1.012	S13	8	57.293	2.445	0.000	0.21	8.5	SURCHARGED
S1.013	S14	5	54.715	0.098	0.000	0.02	9.2	SURCHARGED
S1.014	S15	5	54.711	0.161	0.000	0.02	10.7	SURCHARGED
S7.000	S39	5	54.711	0.131	0.000	0.01	3.1	SURCHARGED
S1.015	S16	5	54.711	0.197	0.000	0.03	11.7	SURCHARGED
S8.000	S40	5	54.717	0.158	0.000	0.19	6.7	SURCHARGED
S1.016	S17	5	54.712	0.228	0.000	0.03	13.9	SURCHARGED
S1.017	S18	5	54.713	0.694	0.000	0.31	12.3	SURCHARGED

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Summary Wizard of 480 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Flow (l/s)	
S5.002	S35	13	57.335	-0.017	0.000	0.12	16.8		OK
S3.005	S28	11	57.334	0.193	0.000	0.41	44.3		SURCHARGED
S3.006	S29	8	57.334	0.248	0.000	0.01	54.8		SURCHARGED
S3.007	S30	7	57.334	0.401	0.000	0.03	54.8		SURCHARGED
S3.008	S31	7	57.334	0.424	0.000	0.02	59.3		SURCHARGED
S1.009	S10	7	57.334	0.500	0.000	0.03	160.6		SURCHARGED
S6.000	S36	9	57.334	0.368	0.000	0.00	11.7		SURCHARGED
S6.001	S37	8	57.334	0.617	0.000	0.01	15.2		SURCHARGED
S6.002	S38	8	57.334	0.637	0.000	0.00	15.5		SURCHARGED
S1.010	S11	7	57.334	0.706	0.000	0.04	174.4		SURCHARGED
S1.011	S12	7	57.334	0.821	0.000	0.07	174.3		SURCHARGED
S1.012	S13	7	57.334	2.486	0.000	0.21	8.6		SURCHARGED
S1.013	S14	7	54.516	-0.101	0.000	0.02	8.9		OK
S1.014	S15	7	54.509	-0.041	0.000	0.02	9.6		OK
S7.000	S39	7	54.499	-0.081	0.000	0.00	2.5		OK
S1.015	S16	7	54.499	-0.015	0.000	0.03	11.1		OK
S8.000	S40	10	54.485	-0.074	0.000	0.15	5.4		OK
S1.016	S17	7	54.484	0.000	0.000	0.03	13.4		OK
S1.017	S18	7	54.455	0.436	0.000	0.31	12.3		SURCHARGED

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Summary Wizard of 600 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Flow (l/s)	
S5.002	S35	11	57.363	0.011	0.000	0.10		14.1	SURCHARGED
S3.005	S28	9	57.362	0.221	0.000	0.35		37.2	SURCHARGED
S3.006	S29	6	57.361	0.275	0.000	0.01		46.0	SURCHARGED
S3.007	S30	5	57.361	0.428	0.000	0.02		46.0	SURCHARGED
S3.008	S31	5	57.361	0.451	0.000	0.01		49.8	SURCHARGED
S1.009	S10	5	57.361	0.527	0.000	0.03		133.1	SURCHARGED
S6.000	S36	8	57.361	0.395	0.000	0.00		9.7	SURCHARGED
S6.001	S37	7	57.361	0.644	0.000	0.01		12.9	SURCHARGED
S6.002	S38	6	57.361	0.664	0.000	0.00		13.1	SURCHARGED
S1.010	S11	5	57.361	0.733	0.000	0.04		146.9	SURCHARGED
S1.011	S12	5	57.361	0.848	0.000	0.06		147.0	SURCHARGED
S1.012	S13	5	57.361	2.513	0.000	0.22		8.6	SURCHARGED
S1.013	S14	10	54.416	-0.201	0.000	0.02		8.9	OK
S1.014	S15	10	54.412	-0.138	0.000	0.02		9.7	OK
S7.000	S39	10	54.408	-0.172	0.000	0.00		2.1	OK
S1.015	S16	10	54.408	-0.106	0.000	0.03		11.2	OK
S8.000	S40	14	54.406	-0.153	0.000	0.13		4.5	OK
S1.016	S17	10	54.404	-0.080	0.000	0.03		13.1	OK
S1.017	S18	10	54.394	0.375	0.000	0.31		12.3	SURCHARGED

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Summary Wizard of 720 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m ³)			Flow (l/s)	
S5.002	S35	10	57.382	0.030	0.000	0.08		12.2	SURCHARGED
S3.005	S28	8	57.381	0.240	0.000	0.30		32.3	SURCHARGED
S3.006	S29	5	57.381	0.295	0.000	0.01		39.9	SURCHARGED
S3.007	S30	4	57.381	0.448	0.000	0.02		39.9	SURCHARGED
S3.008	S31	4	57.381	0.471	0.000	0.01		43.1	SURCHARGED
S1.009	S10	4	57.381	0.547	0.000	0.02		114.6	SURCHARGED
S6.000	S36	7	57.381	0.415	0.000	0.00		8.5	SURCHARGED
S6.001	S37	6	57.381	0.664	0.000	0.01		11.8	SURCHARGED
S6.002	S38	5	57.381	0.684	0.000	0.00		12.0	SURCHARGED
S1.010	S11	4	57.381	0.753	0.000	0.03		127.7	SURCHARGED
S1.011	S12	4	57.381	0.868	0.000	0.05		127.8	SURCHARGED
S1.012	S13	4	57.381	2.533	0.000	0.22		8.6	SURCHARGED
S1.013	S14	15	54.335	-0.282	0.000	0.02		8.9	OK
S1.014	S15	15	54.332	-0.218	0.000	0.02		9.7	OK
S7.000	S39	15	54.330	-0.250	0.000	0.00		1.9	OK
S1.015	S16	15	54.330	-0.184	0.000	0.03		10.9	OK
S8.000	S40	18	54.383	-0.176	0.000	0.11		3.9	OK
S1.016	S17	15	54.327	-0.157	0.000	0.03		12.9	OK
S1.017	S18	15	54.321	0.302	0.000	0.31		12.3	SURCHARGED

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Summary Wizard of 960 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water		Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow (l/s)				
S5.002	S35	8	57.405	0.053	0.000	0.07		9.8	SURCHARGED	
S3.005	S28	5	57.404	0.263	0.000	0.24		25.8	SURCHARGED	
S3.006	S29	3	57.403	0.317	0.000	0.01		31.9	SURCHARGED	
S3.007	S30	2	57.404	0.471	0.000	0.02		31.9	SURCHARGED	
S3.008	S31	2	57.404	0.494	0.000	0.01		34.5	SURCHARGED	
S1.009	S10	2	57.404	0.570	0.000	0.02		92.3	SURCHARGED	
S6.000	S36	4	57.404	0.438	0.000	0.00		6.8	SURCHARGED	
S6.001	S37	4	57.405	0.688	0.000	0.00		9.4	SURCHARGED	
S6.002	S38	3	57.405	0.708	0.000	0.00		9.6	SURCHARGED	
S1.010	S11	2	57.405	0.777	0.000	0.02		102.5	SURCHARGED	
S1.011	S12	2	57.405	0.892	0.000	0.04		102.6	SURCHARGED	
S1.012	S13	2	57.405	2.557	0.000	0.22		8.7	SURCHARGED	
S1.013	S14	18	54.228	-0.389	0.000	0.02		8.8	OK	
S1.014	S15	18	54.226	-0.324	0.000	0.02		9.6	OK	
S7.000	S39	18	54.224	-0.356	0.000	0.00		1.5	OK	
S1.015	S16	18	54.225	-0.289	0.000	0.02		10.8	OK	
S8.000	S40	20	54.379	-0.180	0.000	0.09		3.1	OK	
S1.016	S17	18	54.223	-0.261	0.000	0.03		12.6	OK	
S1.017	S18	18	54.219	0.200	0.000	0.31		12.3	SURCHARGED	

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Summary Wizard of 1440 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS									
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 Coefficient 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 1									
Number of Online Controls 2 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 0.375									
Return Period (years) 100 Cv (Summer) 0.750									
Region England and Wales Cv (Winter) 0.840									
M5-60 (mm) 19.000									
Margin for Flood Risk Warning (mm) 300.0 DVD Status ON									
Analysis Timestep Fine Inertia Status ON									
DTS Status ON									
Profile(s) Winter									
Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080									
Sensitivity flows(s) (%) 0, +30									
Water Surcharged Flooded Pipe									
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)	Status
S1.000	S1	23	71.239	-0.186	0.000	0.07		3.8	OK
S1.001	S2	23	70.599	-0.269	0.000	0.02		5.6	OK
S1.002	S3	23	68.464	-0.341	0.000	0.02		9.3	OK
S1.003	S4	23	63.751	-0.333	0.000	0.03		13.1	OK
S2.000	S20	23	67.925	-0.200	0.000	0.03		2.7	OK
S2.001	S21	23	65.996	-0.266	0.000	0.03		7.0	OK
S2.002	S22	23	62.884	-0.328	0.000	0.04		9.5	OK
S1.004	S5	23	62.203	-0.360	0.000	0.09		22.6	OK
S1.005	S6	23	61.977	-0.381	0.000	0.06		26.8	OK
S1.006	S7	23	60.711	-0.375	0.000	0.07		30.9	OK
S1.007	S8	23	59.198	-0.386	0.000	0.05		35.7	OK
S1.008	S9	5	57.419	0.089	0.000	0.09		36.5	SURCHARGED
S3.000	S23	23	60.395	-0.180	0.000	0.09		4.9	OK
S4.000	S32	23	61.210	-0.215	0.000	0.01		1.1	OK
S3.001	S24	23	59.834	-0.252	0.000	0.06		6.7	OK
S3.002	S25	23	59.509	-0.329	0.000	0.04		7.6	OK
S3.003	S26	23	58.978	-0.333	0.000	0.03		11.3	OK
S3.004	S27	21	57.418	-0.317	0.000	0.04		11.6	OK
S5.000	S33	24	57.622	-0.188	0.000	0.06		3.1	OK
S5.001	S34	23	57.418	-0.248	0.000	0.07		5.6	OK
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Summary Wizard of 1440 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
			Level (m)	Depth (m)	Volume (m³)				
S5.002	S35	7	57.417	0.065	0.000	0.05		7.1	SURCHARGED
S3.005	S28	4	57.418	0.277	0.000	0.17		18.7	SURCHARGED
S3.006	S29	2	57.417	0.331	0.000	0.01		23.2	SURCHARGED
S3.007	S30	1	57.417	0.484	0.000	0.01		23.2	SURCHARGED
S3.008	S31	1	57.418	0.508	0.000	0.01		24.9	SURCHARGED
S1.009	S10	1	57.418	0.584	0.000	0.01		66.3	SURCHARGED
S6.000	S36	3	57.417	0.451	0.000	0.00		4.9	SURCHARGED
S6.001	S37	3	57.417	0.700	0.000	0.00		6.9	SURCHARGED
S6.002	S38	2	57.418	0.721	0.000	0.00		7.0	SURCHARGED
S1.010	S11	1	57.418	0.790	0.000	0.02		75.1	SURCHARGED
S1.011	S12	1	57.418	0.905	0.000	0.03		75.3	SURCHARGED
S1.012	S13	1	57.418	2.570	0.000	0.22		8.7	SURCHARGED
S1.013	S14	22	54.107	-0.510	0.000	0.02		8.8	OK
S1.014	S15	22	54.103	-0.447	0.000	0.02		9.4	OK
S7.000	S39	22	54.102	-0.478	0.000	0.00		1.1	OK
S1.015	S16	22	54.102	-0.412	0.000	0.02		10.4	OK
S8.000	S40	23	54.371	-0.188	0.000	0.06		2.3	OK
S1.016	S17	22	54.101	-0.383	0.000	0.03		12.1	OK
S1.017	S18	22	54.098	0.079	0.000	0.31		12.1	SURCHARGED

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Summary Wizard of 2160 minute 100 year Winter Q+30% for 6120 SURFACE3.SWS

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
			Level (m)	Depth (m)	Volume (m ³)				
S5.002	S35	9	57.393	0.041	0.000	0.04		5.2	SURCHARGED
S3.005	S28	7	57.393	0.252	0.000	0.13		13.5	SURCHARGED
S3.006	S29	4	57.392	0.306	0.000	0.00		16.6	SURCHARGED
S3.007	S30	3	57.392	0.459	0.000	0.01		16.3	SURCHARGED
S3.008	S31	3	57.392	0.482	0.000	0.00		17.6	SURCHARGED
S1.009	S10	3	57.393	0.559	0.000	0.01		48.2	SURCHARGED
S6.000	S36	6	57.393	0.427	0.000	0.00		3.6	SURCHARGED
S6.001	S37	5	57.393	0.676	0.000	0.00		5.2	SURCHARGED
S6.002	S38	4	57.393	0.696	0.000	0.00		5.3	SURCHARGED
S1.010	S11	3	57.393	0.765	0.000	0.01		54.2	SURCHARGED
S1.011	S12	3	57.393	0.880	0.000	0.02		54.4	SURCHARGED
S1.012	S13	3	57.393	2.545	0.000	0.22		8.7	SURCHARGED
S1.013	S14	24	54.065	-0.552	0.000	0.02		8.7	OK
S1.014	S15	24	54.024	-0.526	0.000	0.02		9.1	OK
S7.000	S39	24	54.019	-0.561	0.000	0.00		0.8	OK
S1.015	S16	24	54.019	-0.495	0.000	0.02		9.8	OK
S8.000	S40	25	54.365	-0.194	0.000	0.05		1.7	OK
S1.016	S17	24	54.017	-0.467	0.000	0.02		11.3	OK
S1.017	S18	24	54.016	-0.003	0.000	0.29		11.3	OK

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FOUL SEWERAGE DESIGN

Design Criteria for 6120 FOUL3.FWS

Pipe Sizes 6120 FOUL2 Manhole Sizes 6120 FOUL2

Industrial Flow (l/s/ha)	0.00	Add Flow / Climate Change (%)	0
Industrial Peak Flow Factor	0.00	Minimum Backdrop Height (m)	0.200
Flow Per Person (l/per/day)	225.00	Maximum Backdrop Height (m)	0.000
Persons per House	3.00	Min Design Depth for Optimisation (m)	1.200
Domestic (l/s/ha)	0.00	Min Vel for Auto Design only (m/s)	0.75
Domestic Peak Flow Factor	6.00	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Network Design Table for 6120 FOUL3.FWS

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
F1.000	31.165	2.078	15.0	0.000	4	0.0	1.500	o	150	Pipe/Conduit	
F1.001	21.807	1.622	13.4	0.000	10	0.0	1.500	o	150	Pipe/Conduit	
F2.000	37.881	1.263	30.0	0.000	9	0.0	1.500	o	150	Pipe/Conduit	
F2.001	60.350	3.329	18.1	0.000	10	0.0	1.500	o	150	Pipe/Conduit	
F2.002	30.375	0.608	50.0	0.000	7	0.0	1.500	o	150	Pipe/Conduit	
F1.002	10.508	0.263	40.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F1.003	51.144	1.279	40.0	0.000	9	0.0	1.500	o	150	Pipe/Conduit	
F1.004	56.935	1.423	40.0	0.000	5	0.0	1.500	o	150	Pipe/Conduit	
F1.005	36.236	2.516	14.4	0.000	16	0.0	1.500	o	150	Pipe/Conduit	
F1.006	16.883	0.422	40.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F3.000	38.896	0.486	80.0	0.000	13	0.0	1.500	o	150	Pipe/Conduit	

Network Results Table

PN	US/IL (m)	E Area (ha)	E Base Flow (l/s)	E Hse	Add Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
F1.000	65.400	0.000	0.0	4	0.0	8	0.54	2.27	40.1	0.2
F1.001	63.322	0.000	0.0	14	0.0	13	0.85	2.40	42.4	0.7
F2.000	66.900	0.000	0.0	9	0.0	13	0.56	1.60	28.3	0.4
F2.001	65.637	0.000	0.0	19	0.0	16	0.85	2.06	36.5	0.9
F2.002	62.308	0.000	0.0	26	0.0	24	0.66	1.24	21.9	1.2
F1.002	61.700	0.000	0.0	40	0.0	28	0.81	1.39	24.5	1.9
F1.003	61.437	0.000	0.0	49	0.0	31	0.86	1.39	24.5	2.3
F1.004	60.158	0.000	0.0	54	0.0	33	0.89	1.39	24.5	2.5
F1.005	58.735	0.000	0.0	70	0.0	29	1.38	2.32	40.9	3.3
F1.006	56.219	0.000	0.0	70	0.0	37	0.96	1.39	24.5	3.3
F3.000	59.000	0.000	0.0	13	0.0	20	0.45	0.98	17.3	0.6

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Network Design Table for 6120 FOUL3.FWS

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
F3.001	33.831	0.423	80.0	0.000	13	0.0	1.500	o	150	Pipe/Conduit	
F3.002	10.783	0.530	20.3	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F4.000	25.107	0.193	130.0	0.000	9	0.0	1.500	o	150	Pipe/Conduit	
F4.001	31.853	0.246	129.5	0.000	12	0.0	1.500	o	150	Pipe/Conduit	
F3.003	8.104	0.063	128.6	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F3.004	47.070	0.941	50.0	0.000	9	0.0	1.500	o	150	Pipe/Conduit	
F3.005	6.161	0.123	50.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F3.006	32.175	0.636	50.6	0.000	5	0.0	1.500	o	150	Pipe/Conduit	
F1.007	71.913	1.447	49.7	0.000	13	0.0	1.500	o	150	Pipe/Conduit	
F5.000	48.509	0.970	50.0	0.000	14	0.0	1.500	o	150	Pipe/Conduit	
F5.001	37.875	0.758	50.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F5.002	5.908	0.118	50.0	0.000	8	0.0	1.500	o	150	Pipe/Conduit	
F5.003	29.369	0.294	99.9	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F1.008	40.500	0.270	150.0	0.000	9	0.0	1.500	o	150	Pipe/Conduit	
F1.009	15.642	0.105	149.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F1.010	34.937	0.233	149.9	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F1.011	26.187	0.175	150.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse	Add Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
F3.001	58.514	0.000	0.0	26	0.0	27	0.56	0.98	17.3	1.2
F3.002	58.091	0.000	0.0	26	0.0	20	0.90	1.95	34.4	1.2
F4.000	58.000	0.000	0.0	9	0.0	18	0.34	0.77	13.6	0.4
F4.001	57.807	0.000	0.0	21	0.0	28	0.44	0.77	13.6	1.0
F3.003	57.561	0.000	0.0	47	0.0	41	0.56	0.77	13.6	2.2
F3.004	57.498	0.000	0.0	56	0.0	35	0.83	1.24	21.9	2.6
F3.005	56.556	0.000	0.0	56	0.0	35	0.83	1.24	21.9	2.6
F3.006	56.433	0.000	0.0	61	0.0	37	0.85	1.23	21.8	2.9
F1.007	55.797	0.000	0.0	144	0.0	57	1.09	1.24	22.0	6.8
F5.000	56.490	0.000	0.0	14	0.0	18	0.54	1.24	21.9	0.7
F5.001	55.520	0.000	0.0	14	0.0	18	0.54	1.24	21.9	0.7
F5.002	54.763	0.000	0.0	22	0.0	22	0.62	1.24	21.9	1.0
F5.003	54.644	0.000	0.0	22	0.0	26	0.49	0.88	15.5	1.0
F1.008	54.350	0.000	0.0	175	0.0	88	0.76	0.71	12.6	8.2
F1.009	54.080	0.000	0.0	175	0.0	88	0.76	0.72	12.7	8.2
F1.010	53.975	0.000	0.0	175	0.0	88	0.76	0.71	12.6	8.2
F1.011	53.742	0.000	0.0	175	0.0	88	0.76	0.71	12.6	8.2

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Network Design Table for 6120 FOUL3.FWS

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Houses	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
F1.012	29.367	0.196	150.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F1.013	7.786	0.052	150.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Hse	Add Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
F1.012	53.567	0.000	0.0	175	0.0	88	0.76	0.71	12.6	8.2
F1.013	53.372	0.000	0.0	175	0.0	88	0.76	0.71	12.6	8.2

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Manhole Schedules for 6120 FOUL3.FWS											
MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam., L*W (mm)	PN	Pipe Out Invert Level (m)	Diameter (mm)	PN	Pipes In Invert Level (m)	Diameter (mm)	Backdrop (mm)
F1	67.871	2.471	Open Manhole	1200	F1.000	65.400	150				
F2	65.937	2.615	Open Manhole	1200	F1.001	63.322	150	F1.000	63.322	150	
F16	68.848	1.948	Open Manhole	1200	F2.000	66.900	150				
F17	67.569	1.932	Open Manhole	1200	F2.001	65.637	150	F2.000	65.637	150	
F18	65.109	2.801	Open Manhole	1200	F2.002	62.308	150	F2.001	62.308	150	
F3	64.462	2.762	Open Manhole	1200	F1.002	61.700	150	F1.001	61.700	150	
								F2.002	61.700	150	
F4	63.927	2.490	Open Manhole	1200	F1.003	61.437	150	F1.002	61.437	150	
F5	62.863	2.704	Open Manhole	1200	F1.004	60.158	150	F1.003	60.158	150	
F6	62.176	3.441	Open Manhole	1500	F1.005	58.735	150	F1.004	58.735	150	
F7	61.422	5.203	Open Manhole	1200	F1.006	56.219	150	F1.005	56.219	150	
F19	61.996	2.996	Open Manhole	1200	F3.000	59.000	150				
F20	61.263	2.749	Open Manhole	1200	F3.001	58.514	150	F3.000	58.514	150	
F21	60.386	2.295	Open Manhole	1200	F3.002	58.091	150	F3.001	58.091	150	
F26	60.159	2.159	Open Manhole	1200	F4.000	58.000	150				
F27	60.173	2.366	Open Manhole	1200	F4.001	57.807	150	F4.000	57.807	150	
F22	60.098	2.537	Open Manhole	1200	F3.003	57.561	150	F3.002	57.561	150	
								F4.001	57.561	150	
F23	59.913	2.415	Open Manhole	1200	F3.004	57.498	150	F3.003	57.498	150	
F24	60.542	3.986	Open Manhole	1200	F3.005	56.556	150	F3.004	56.556	150	
F25	60.688	4.255	Open Manhole	1500	F3.006	56.433	150	F3.005	56.433	150	
F8	61.443	5.646	Open Manhole	1500	F1.007	55.797	150	F1.006	55.797	150	
								F3.006	55.797	150	
F28	58.406	1.916	Open Manhole	1200	F5.000	56.490	150				
F29	57.896	2.376	Open Manhole	1200	F5.001	55.520	150	F5.000	55.520	150	
F30	58.480	3.717	Open Manhole	1200	F5.002	54.763	150	F5.001	54.763	150	
F31	58.588	3.944	Open Manhole	1200	F5.003	54.644	150	F5.002	54.644	150	
F9	58.935	4.585	Open Manhole	1500	F1.008	54.350	150	F1.007	54.350	150	
								F5.003	54.350	150	
F10	58.068	3.988	Open Manhole	1200	F1.009	54.080	150	F1.008	54.080	150	
F11	57.864	3.889	Open Manhole	1200	F1.010	53.975	150	F1.009	53.975	150	
F12	57.432	3.690	Open Manhole	1200	F1.011	53.742	150	F1.010	53.742	150	
F13	56.926	3.358	Open Manhole	1200	F1.012	53.567	150	F1.011	53.567	150	
F14	55.804	2.432	Open Manhole	1200	F1.013	53.372	150	F1.012	53.372	150	
F15	55.307	1.987	Open Manhole	1500		OUTFALL		F1.013	53.320	150	
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PIPELINE SCHEDULES for 6120 FOUL3.FWS

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)
F1.000	o	150	F1	67.871	65.400	2.321	Open Manhole	1200
F1.001	o	150	F2	65.937	63.322	2.465	Open Manhole	1200
F2.000	o	150	F16	68.848	66.900	1.798	Open Manhole	1200
F2.001	o	150	F17	67.569	65.637	1.782	Open Manhole	1200
F2.002	o	150	F18	65.109	62.308	2.651	Open Manhole	1200
F1.002	o	150	F3	64.462	61.700	2.612	Open Manhole	1200
F1.003	o	150	F4	63.927	61.437	2.340	Open Manhole	1200
F1.004	o	150	F5	62.863	60.158	2.554	Open Manhole	1200
F1.005	o	150	F6	62.176	58.735	3.291	Open Manhole	1500
F1.006	o	150	F7	61.422	56.219	5.053	Open Manhole	1200
F3.000	o	150	F19	61.996	59.000	2.846	Open Manhole	1200
F3.001	o	150	F20	61.263	58.514	2.599	Open Manhole	1200
F3.002	o	150	F21	60.386	58.091	2.145	Open Manhole	1200
F4.000	o	150	F26	60.159	58.000	2.009	Open Manhole	1200
F4.001	o	150	F27	60.173	57.807	2.216	Open Manhole	1200
F3.003	o	150	F22	60.098	57.561	2.387	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., L*W (mm)
F1.000	31.165	15.0	F2	65.937	63.322	2.465	Open Manhole	1200
F1.001	21.807	13.4	F3	64.462	61.700	2.612	Open Manhole	1200
F2.000	37.881	30.0	F17	67.569	65.637	1.782	Open Manhole	1200
F2.001	60.350	18.1	F18	65.109	62.308	2.651	Open Manhole	1200
F2.002	30.375	50.0	F3	64.462	61.700	2.612	Open Manhole	1200
F1.002	10.508	40.0	F4	63.927	61.437	2.340	Open Manhole	1200
F1.003	51.144	40.0	F5	62.863	60.158	2.554	Open Manhole	1200
F1.004	56.935	40.0	F6	62.176	58.735	3.291	Open Manhole	1500
F1.005	36.236	14.4	F7	61.422	56.219	5.053	Open Manhole	1200
F1.006	16.883	40.0	F8	61.443	55.797	5.496	Open Manhole	1500
F3.000	38.896	80.0	F20	61.263	58.514	2.599	Open Manhole	1200
F3.001	33.831	80.0	F21	60.386	58.091	2.145	Open Manhole	1200
F3.002	10.783	20.3	F22	60.098	57.561	2.387	Open Manhole	1200
F4.000	25.107	130.0	F27	60.173	57.807	2.216	Open Manhole	1200
F4.001	31.853	129.5	F22	60.098	57.561	2.387	Open Manhole	1200
F3.003	8.104	128.6	F23	59.913	57.498	2.265	Open Manhole	1200

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PIPELINE SCHEDULES for 6120 FOUL3.FWS

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)
F3.004	o	150	F23	59.913	57.498	2.265	Open Manhole	1200
F3.005	o	150	F24	60.542	56.556	3.836	Open Manhole	1200
F3.006	o	150	F25	60.688	56.433	4.105	Open Manhole	1500
F1.007	o	150	F8	61.443	55.797	5.496	Open Manhole	1500
F5.000	o	150	F28	58.406	56.490	1.766	Open Manhole	1200
F5.001	o	150	F29	57.896	55.520	2.226	Open Manhole	1200
F5.002	o	150	F30	58.480	54.763	3.567	Open Manhole	1200
F5.003	o	150	F31	58.588	54.644	3.794	Open Manhole	1200
F1.008	o	150	F9	58.935	54.350	4.435	Open Manhole	1500
F1.009	o	150	F10	58.068	54.080	3.838	Open Manhole	1200
F1.010	o	150	F11	57.864	53.975	3.739	Open Manhole	1200
F1.011	o	150	F12	57.432	53.742	3.540	Open Manhole	1200
F1.012	o	150	F13	56.926	53.567	3.208	Open Manhole	1200
F1.013	o	150	F14	55.804	53.372	2.282	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., L*W (mm)
F3.004	47.070	50.0	F24	60.542	56.556	3.836	Open Manhole	1200
F3.005	6.161	50.0	F25	60.688	56.433	4.105	Open Manhole	1500
F3.006	32.175	50.6	F8	61.443	55.797	5.496	Open Manhole	1500
F1.007	71.913	49.7	F9	58.935	54.350	4.435	Open Manhole	1500
F5.000	48.509	50.0	F29	57.896	55.520	2.226	Open Manhole	1200
F5.001	37.875	50.0	F30	58.480	54.763	3.567	Open Manhole	1200
F5.002	5.908	50.0	F31	58.588	54.644	3.794	Open Manhole	1200
F5.003	29.369	99.9	F9	58.935	54.350	4.435	Open Manhole	1500
F1.008	40.500	150.0	F10	58.068	54.080	3.838	Open Manhole	1200
F1.009	15.642	149.0	F11	57.864	53.975	3.739	Open Manhole	1200
F1.010	34.937	149.9	F12	57.432	53.742	3.540	Open Manhole	1200
F1.011	26.187	150.0	F13	56.926	53.567	3.208	Open Manhole	1200
F1.012	29.367	150.0	F14	55.804	53.372	2.282	Open Manhole	1200
F1.013	7.786	150.0	F15	55.307	53.320	1.837	Open Manhole	1500

Free Flowing Outfall Details for 6120 FOUL3.FWS

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D, L (mm)	W (mm)
F1.013	F15	55.307	53.320	0.000	1500	0