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DRAINAGE CALCULATIONS

AT

WILLOWGARTH SCHOOL, BRIERLEY ROAD
GRIMETHORPE

FOR

SAUL CONSTRUCTION

REF: E14/6015

REVISION A

DATE – OCTOBER 2017

PREPARED BY:

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

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STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for 6015 1 IN 30 STORM REV A.SWS

Pipe Sizes 6015 1 IN 30 STORM Manhole Sizes 6015 1 IN 30 STORM

FSR Rainfall Model - England and Wales

Return Period (years)	2	PIMP (%)	100
M5-60 (mm)	19.000	Add Flow / Climate Change (%)	0
Ratio R	0.372	Minimum Backdrop Height (m)	0.000
Maximum Rainfall (mm/hr)	75	Maximum Backdrop Height (m)	2.500
Maximum Time of Concentration (mins)	30	Min Design Depth for Optimisation (m)	1.200
Foul Sewage (l/s/ha)	0.000	Min Vel for Auto Design only (m/s)	0.75
Volumetric Runoff Coeff.	0.750	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Network Design Table for 6015 1 IN 30 STORM REV A.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	23.834	0.217	109.8	0.060	4.00	0.0	0.600	o	225	Pipe/Conduit	
S1.001	26.659	0.178	149.8	0.027	0.00	0.0	0.600	o	450	Pipe/Conduit	
S1.002	33.868	0.169	200.4	0.163	0.00	0.0	0.600	o	450	Pipe/Conduit	
S2.000	47.230	2.147	22.0	0.152	4.00	0.0	0.600	o	225	Pipe/Conduit	
S2.001	19.013	0.905	21.0	0.042	0.00	0.0	0.600	o	225	Pipe/Conduit	
S2.002	19.330	0.879	22.0	0.086	0.00	0.0	0.600	o	300	Pipe/Conduit	
S2.003	7.433	0.633	11.7	0.006	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.003	9.930	0.050	198.6	0.009	0.00	0.0	0.600	o	450	Pipe/Conduit	
S1.004	47.280	0.236	200.3	0.162	0.00	0.0	0.600	o	450	Pipe/Conduit	
S1.005	39.334	0.787	50.0	0.112	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	68.16	4.32	88.500	0.060	0.0	0.0	0.0	1.25	49.6	11.1
S1.001	66.58	4.59	88.058	0.087	0.0	0.0	0.0	1.66	263.9	15.7
S1.002	64.40	4.98	87.880	0.250	0.0	0.0	0.0	1.43	227.8	43.6
S2.000	68.39	4.28	92.500	0.152	0.0	0.0	0.0	2.80	111.4	28.2
S2.001	67.72	4.39	90.353	0.194	0.0	0.0	0.0	2.87	114.0	35.6
S2.002	67.16	4.49	89.373	0.280	0.0	0.0	0.0	3.37	238.0	50.9
S2.003	67.00	4.51	88.494	0.286	0.0	0.0	0.0	4.61	326.1	51.9
S1.003	63.79	5.10	87.711	0.545	0.0	0.0	0.0	1.44	228.9	94.2
S1.004	61.08	5.65	87.661	0.707	0.0	0.0	0.0	1.43	227.9	116.9
S1.005	60.03	5.87	87.425	0.819	0.0	0.0	0.0	2.88	458.2	133.1

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Network Design Table for 6015 1 IN 30 STORM REV A.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
S3.000	33.332	0.534	62.4	0.097	4.00	0.0	0.600	o	225	Pipe/Conduit	
S3.001	16.154	0.353	45.8	0.014	0.00	0.0	0.600	o	225	Pipe/Conduit	
S1.006	21.568	0.290	74.4	0.020	0.00	0.0	0.600	o	450	Pipe/Conduit	
S4.000	21.152	0.264	80.1	0.142	4.00	0.0	0.600	o	300	Pipe/Conduit	
S4.001	28.903	0.361	80.1	0.084	0.00	0.0	0.600	o	300	Pipe/Conduit	
S4.002	33.713	2.491	13.5	0.114	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.007	42.953	0.107	401.4	0.100	0.00	0.0	0.600	o	1800	Pipe/Conduit	
S1.008	22.750	0.057	399.1	0.047	0.00	0.0	0.600	o	1800	Pipe/Conduit	
S5.000	26.880	2.206	12.2	0.108	4.00	0.0	0.600	o	225	Pipe/Conduit	
S6.000	33.309	0.111	300.1	0.000	4.00	0.0	0.600	o	300	Pipe/Conduit	
S5.001	7.162	0.018	397.9	0.008	0.00	0.0	0.600	o	600	Pipe/Conduit	
S5.002	20.467	0.051	401.3	0.054	0.00	0.0	0.600	o	1800	Pipe/Conduit	
S5.003	52.046	0.130	400.4	0.166	0.00	0.0	0.600	o	1800	Pipe/Conduit	
S1.009	27.379	0.069	396.8	0.065	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)
S3.000	68.06	4.34	87.750	0.097	0.0	0.0	0.0	1.66	65.9	17.9
S3.001	67.23	4.47	87.216	0.111	0.0	0.0	0.0	1.94	77.1	20.2
S1.006	59.35	6.03	86.638	0.950	0.0	0.0	0.0	2.36	375.3	152.7
S4.000	68.89	4.20	87.200	0.142	0.0	0.0	0.0	1.76	124.3	26.5
S4.001	67.23	4.47	86.936	0.226	0.0	0.0	0.0	1.76	124.3	41.1
S4.002	66.47	4.61	86.575	0.340	0.0	0.0	0.0	4.30	303.7	61.2
S1.007	58.07	6.33	82.584	1.390	0.0	0.0	0.0	2.39	6073.2	218.6
S1.008	57.42	6.48	82.477	1.437	0.0	0.0	0.0	2.39	6090.9	223.4
S5.000	69.40	4.12	86.400	0.108	0.0	0.0	0.0	3.77	149.9	20.3
S6.000	66.41	4.62	84.350	0.000	0.0	0.0	0.0	0.90	63.8	0.0
S5.001	65.86	4.71	83.819	0.116	0.0	0.0	0.0	1.21	343.4	20.7
S5.002	65.07	4.86	82.601	0.170	0.0	0.0	0.0	2.39	6074.1	30.0
S5.003	63.16	5.22	82.550	0.336	0.0	0.0	0.0	2.39	6081.4	57.5
S1.009	56.66	6.67	82.420	1.838	0.0	0.0	0.0	2.40	6108.8	282.0

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Network Design Table for 6015 1 IN 30 STORM REV A.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
S7.000	30.734	2.927	10.5	0.135	4.00	0.0	0.600	o	300	Pipe/Conduit	
S7.001	10.051	0.944	10.6	0.029	0.00	0.0	0.600	o	300	Pipe/Conduit	
S7.002	16.475	0.042	392.3	0.014	0.00	0.0	0.600	o	1800	Pipe/Conduit	
S7.003	14.352	0.036	398.7	0.062	0.00	0.0	0.600	o	1800	Pipe/Conduit	
S1.010	6.044	0.040	151.1	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.011	31.433	0.210	149.7	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.012	34.617	0.474	73.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.013	31.236	0.347	90.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.014	51.801	0.942	55.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.015	43.796	4.380	10.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.016	50.676	0.780	65.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.017	34.416	3.442	10.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.018	16.691	1.669	10.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.019	29.249	1.600	18.3	0.000	0.00	0.0	0.600	o	300	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)
S7.000	69.49	4.10	87.800	0.135	0.0	0.0	0.0	4.88	344.9	25.4
S7.001	69.27	4.14	84.873	0.164	0.0	0.0	0.0	4.85	342.5	30.8
S7.002	68.56	4.25	82.429	0.178	0.0	0.0	0.0	2.41	6144.2	33.1
S7.003	67.95	4.35	82.387	0.240	0.0	0.0	0.0	2.39	6094.4	44.2
S1.010	69.66	4.08	82.301	0.000	42.0	0.0	0.0	1.28	90.2	42.0
S1.011	67.15	4.49	82.261	0.000	42.0	0.0	0.0	1.28	90.7	42.0
S1.012	65.37	4.80	82.051	0.000	42.0	0.0	0.0	1.84	130.2	42.0
S1.013	63.70	5.11	81.577	0.000	42.0	0.0	0.0	1.66	117.2	42.0
S1.014	61.67	5.52	81.230	0.000	42.0	0.0	0.0	2.12	150.2	42.0
S1.015	60.98	5.67	80.288	0.000	42.0	0.0	0.0	5.00	353.4	42.0
S1.016	59.03	6.10	75.908	0.000	42.0	0.0	0.0	1.95	138.1	42.0
S1.017	58.54	6.21	73.338	0.000	42.0	0.0	0.0	5.00	353.4	42.0
S1.018	58.30	6.27	69.896	0.000	42.0	0.0	0.0	5.00	353.4	42.0
S1.019	57.75	6.40	67.527	0.000	42.0	0.0	0.0	3.69	261.2	42.0

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Manhole Schedules for 6015 1 IN 30 STORM REV A.SWS

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
S1	90.011	1.511	Open Manhole	1200	S1.000	88.500	225				
S2	89.695	1.637	Open Manhole	1500	S1.001	88.058	450	S1.000	88.283	225	
S3	89.657	1.777	Open Manhole	1500	S1.002	87.880	450	S1.001	87.880	450	
S22	94.034	1.534	Open Manhole	1200	S2.000	92.500	225				
S23	91.807	1.454	Open Manhole	1200	S2.001	90.353	225	S2.000	90.353	225	
S24	90.881	1.508	Open Manhole	1200	S2.002	89.373	300	S2.001	89.448	225	
S25	90.171	1.677	Open Manhole	1200	S2.003	88.494	300	S2.002	88.494	300	
S4	90.017	2.306	Open Manhole	1500	S1.003	87.711	450	S1.002	87.711	450	
								S2.003	87.861	300	
S5	90.055	2.394	Open Manhole	1500	S1.004	87.661	450	S1.003	87.661	450	
S6	89.464	2.039	Open Manhole	1500	S1.005	87.425	450	S1.004	87.425	450	
S26	89.459	1.709	Open Manhole	1200	S3.000	87.750	225				
S27	88.850	1.634	Open Manhole	1200	S3.001	87.216	225	S3.000	87.216	225	
S7	88.608	1.970	Open Manhole	1500	S1.006	86.638	450	S1.005	86.638	450	
								S3.001	86.863	225	
S28	88.875	1.675	Open Manhole	1200	S4.000	87.200	300				
S29	88.929	1.993	Open Manhole	1200	S4.001	86.936	300	S4.000	86.936	300	
S30	88.275	1.700	Open Manhole	1200	S4.002	86.575	300	S4.001	86.575	300	
S8	88.024	5.440	Open Manhole	2700	S1.007	82.584	1800	S1.006	86.348	450	2414
								S4.002	84.084	300	
S9	86.602	4.125	Open Manhole	3000	S1.008	82.477	1800	S1.007	82.477	1800	
S31	88.012	1.612	Open Manhole	1500	S5.000	86.400	225				
S35	85.500	1.150	Open Manhole	1500	S6.000	84.350	300				
S32	86.983	3.164	Open Manhole	1800	S5.001	83.819	600	S5.000	84.194	225	
								S6.000	84.239	300	120
S33	86.810	4.209	Open Manhole	2400	S5.002	82.601	1800	S5.001	83.801	600	
S34	86.507	3.957	Open Manhole	3000	S5.003	82.550	1800	S5.002	82.550	1800	
S10	85.948	3.528	Open Manhole	3000	S1.009	82.420	1800	S1.008	82.420	1800	
								S5.003	82.420	1800	
S36	89.315	1.515	Open Manhole	1500	S7.000	87.800	300				
S37	87.766	2.893	Open Manhole	1200	S7.001	84.873	300	S7.000	84.873	300	
S38	87.228	4.799	Open Manhole	2700	S7.002	82.429	1800	S7.001	83.929	300	
S39	86.448	4.061	Open Manhole	3000	S7.003	82.387	1800	S7.002	82.387	1800	
S11	86.134	3.833	Open Manhole	3000	S1.010	82.301	300	S1.009	82.351	1800	1550
								S7.003	82.351	1800	1550
S12	86.200	3.939	Open Manhole	1200	S1.011	82.261	300	S1.010	82.261	300	
S13	84.088	2.037	Open Manhole	1200	S1.012	82.051	300	S1.011	82.051	300	
S14	83.918	2.341	Open Manhole	1200	S1.013	81.577	300	S1.012	81.577	300	

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Manhole Schedules for 6015 1 IN 30 STORM REV A.SWS

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
S15	82.934	1.704	Open Manhole	1200	S1.014	81.230	300	S1.013	81.230	300	
S16	82.543	2.255	Open Manhole	1200	S1.015	80.288	300	S1.014	80.288	300	
S17	77.739	1.831	Open Manhole	1200	S1.016	75.908	300	S1.015	75.908	300	
S18	77.227	3.889	Open Manhole	1200	S1.017	73.338	300	S1.016	75.128	300	1790
S19	71.426	1.530	Open Manhole	1200	S1.018	69.896	300	S1.017	69.896	300	
S20	69.430	1.903	Open Manhole	1200	S1.019	67.527	300	S1.018	68.227	300	700
S21	67.000	1.073	Open Manhole	0		OUTFALL		S1.019	65.927	300	

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PIPELINE SCHEDULES for 6015 1 IN 30 STORM REV A.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)
S1.000	o	225	S1	90.011	88.500	1.286	Open Manhole	1200
S1.001	o	450	S2	89.695	88.058	1.187	Open Manhole	1500
S1.002	o	450	S3	89.657	87.880	1.327	Open Manhole	1500
S2.000	o	225	S22	94.034	92.500	1.309	Open Manhole	1200
S2.001	o	225	S23	91.807	90.353	1.229	Open Manhole	1200
S2.002	o	300	S24	90.881	89.373	1.208	Open Manhole	1200
S2.003	o	300	S25	90.171	88.494	1.377	Open Manhole	1200
S1.003	o	450	S4	90.017	87.711	1.856	Open Manhole	1500
S1.004	o	450	S5	90.055	87.661	1.944	Open Manhole	1500
S1.005	o	450	S6	89.464	87.425	1.589	Open Manhole	1500
S3.000	o	225	S26	89.459	87.750	1.484	Open Manhole	1200
S3.001	o	225	S27	88.850	87.216	1.409	Open Manhole	1200
S1.006	o	450	S7	88.608	86.638	1.520	Open Manhole	1500
S4.000	o	300	S28	88.875	87.200	1.375	Open Manhole	1200
S4.001	o	300	S29	88.929	86.936	1.693	Open Manhole	1200
S4.002	o	300	S30	88.275	86.575	1.400	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)
S1.000	23.834	109.8	S2	89.695	88.283	1.187	Open Manhole	1500
S1.001	26.659	149.8	S3	89.657	87.880	1.327	Open Manhole	1500
S1.002	33.868	200.4	S4	90.017	87.711	1.856	Open Manhole	1500
S2.000	47.230	22.0	S23	91.807	90.353	1.229	Open Manhole	1200
S2.001	19.013	21.0	S24	90.881	89.448	1.208	Open Manhole	1200
S2.002	19.330	22.0	S25	90.171	88.494	1.377	Open Manhole	1200
S2.003	7.433	11.7	S4	90.017	87.861	1.856	Open Manhole	1500
S1.003	9.930	198.6	S5	90.055	87.661	1.944	Open Manhole	1500
S1.004	47.280	200.3	S6	89.464	87.425	1.589	Open Manhole	1500
S1.005	39.334	50.0	S7	88.608	86.638	1.520	Open Manhole	1500
S3.000	33.332	62.4	S27	88.850	87.216	1.409	Open Manhole	1200
S3.001	16.154	45.8	S7	88.608	86.863	1.520	Open Manhole	1500
S1.006	21.568	74.4	S8	88.024	86.348	1.226	Open Manhole	2700
S4.000	21.152	80.1	S29	88.929	86.936	1.693	Open Manhole	1200
S4.001	28.903	80.1	S30	88.275	86.575	1.400	Open Manhole	1200
S4.002	33.713	13.5	S8	88.024	84.084	3.640	Open Manhole	2700

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PIPELINE SCHEDULES for 6015 1 IN 30 STORM REV A.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)
S1.007	o	1800	S8	88.024	82.584	3.640	Open Manhole	2700
S1.008	o	1800	S9	86.602	82.477	2.325	Open Manhole	3000
S5.000	o	225	S31	88.012	86.400	1.387	Open Manhole	1500
S6.000	o	300	S35	85.500	84.350	0.850	Open Manhole	1500
S5.001	o	600	S32	86.983	83.819	2.564	Open Manhole	1800
S5.002	o	1800	S33	86.810	82.601	2.409	Open Manhole	2400
S5.003	o	1800	S34	86.507	82.550	2.157	Open Manhole	3000
S1.009	o	1800	S10	85.948	82.420	1.728	Open Manhole	3000
S7.000	o	300	S36	89.315	87.800	1.215	Open Manhole	1500
S7.001	o	300	S37	87.766	84.873	2.593	Open Manhole	1200
S7.002	o	1800	S38	87.228	82.429	2.999	Open Manhole	2700
S7.003	o	1800	S39	86.448	82.387	2.261	Open Manhole	3000
S1.010	o	300	S11	86.134	82.301	3.533	Open Manhole	3000
S1.011	o	300	S12	86.200	82.261	3.639	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)
S1.007	42.953	401.4	S9	86.602	82.477	2.325	Open Manhole	3000
S1.008	22.750	399.1	S10	85.948	82.420	1.728	Open Manhole	3000
S5.000	26.880	12.2	S32	86.983	84.194	2.564	Open Manhole	1800
S6.000	33.309	300.1	S32	86.983	84.239	2.444	Open Manhole	1800
S5.001	7.162	397.9	S33	86.810	83.801	2.409	Open Manhole	2400
S5.002	20.467	401.3	S34	86.507	82.550	2.157	Open Manhole	3000
S5.003	52.046	400.4	S10	85.948	82.420	1.728	Open Manhole	3000
S1.009	27.379	396.8	S11	86.134	82.351	1.983	Open Manhole	3000
S7.000	30.734	10.5	S37	87.766	84.873	2.593	Open Manhole	1200
S7.001	10.051	10.6	S38	87.228	83.929	2.999	Open Manhole	2700
S7.002	16.475	392.3	S39	86.448	82.387	2.261	Open Manhole	3000
S7.003	14.352	398.7	S11	86.134	82.351	1.983	Open Manhole	3000
S1.010	6.044	151.1	S12	86.200	82.261	3.639	Open Manhole	1200
S1.011	31.433	149.7	S13	84.088	82.051	1.737	Open Manhole	1200

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PIPELINE SCHEDULES for 6015 1 IN 30 STORM REV A.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)
S1.012	o	300	S13	84.088	82.051	1.737	Open Manhole	1200
S1.013	o	300	S14	83.918	81.577	2.041	Open Manhole	1200
S1.014	o	300	S15	82.934	81.230	1.404	Open Manhole	1200
S1.015	o	300	S16	82.543	80.288	1.955	Open Manhole	1200
S1.016	o	300	S17	77.739	75.908	1.531	Open Manhole	1200
S1.017	o	300	S18	77.227	73.338	3.589	Open Manhole	1200
S1.018	o	300	S19	71.426	69.896	1.230	Open Manhole	1200
S1.019	o	300	S20	69.430	67.527	1.603	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)
S1.012	34.617	73.0	S14	83.918	81.577	2.041	Open Manhole	1200
S1.013	31.236	90.0	S15	82.934	81.230	1.404	Open Manhole	1200
S1.014	51.801	55.0	S16	82.543	80.288	1.955	Open Manhole	1200
S1.015	43.796	10.0	S17	77.739	75.908	1.531	Open Manhole	1200
S1.016	50.676	65.0	S18	77.227	75.128	1.799	Open Manhole	1200
S1.017	34.416	10.0	S19	71.426	69.896	1.230	Open Manhole	1200
S1.018	16.691	10.0	S20	69.430	68.227	0.903	Open Manhole	1200
S1.019	29.249	18.3	S21	67.000	65.927	0.773	Open Manhole	0

Simulation Criteria for 6015 1 IN 30 STORM REV A.SWS

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

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

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	2	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Storm Duration (mins)	30
Ratio R	0.372		

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Online Controls for 6015 1 IN 30 STORM REV A.SWS

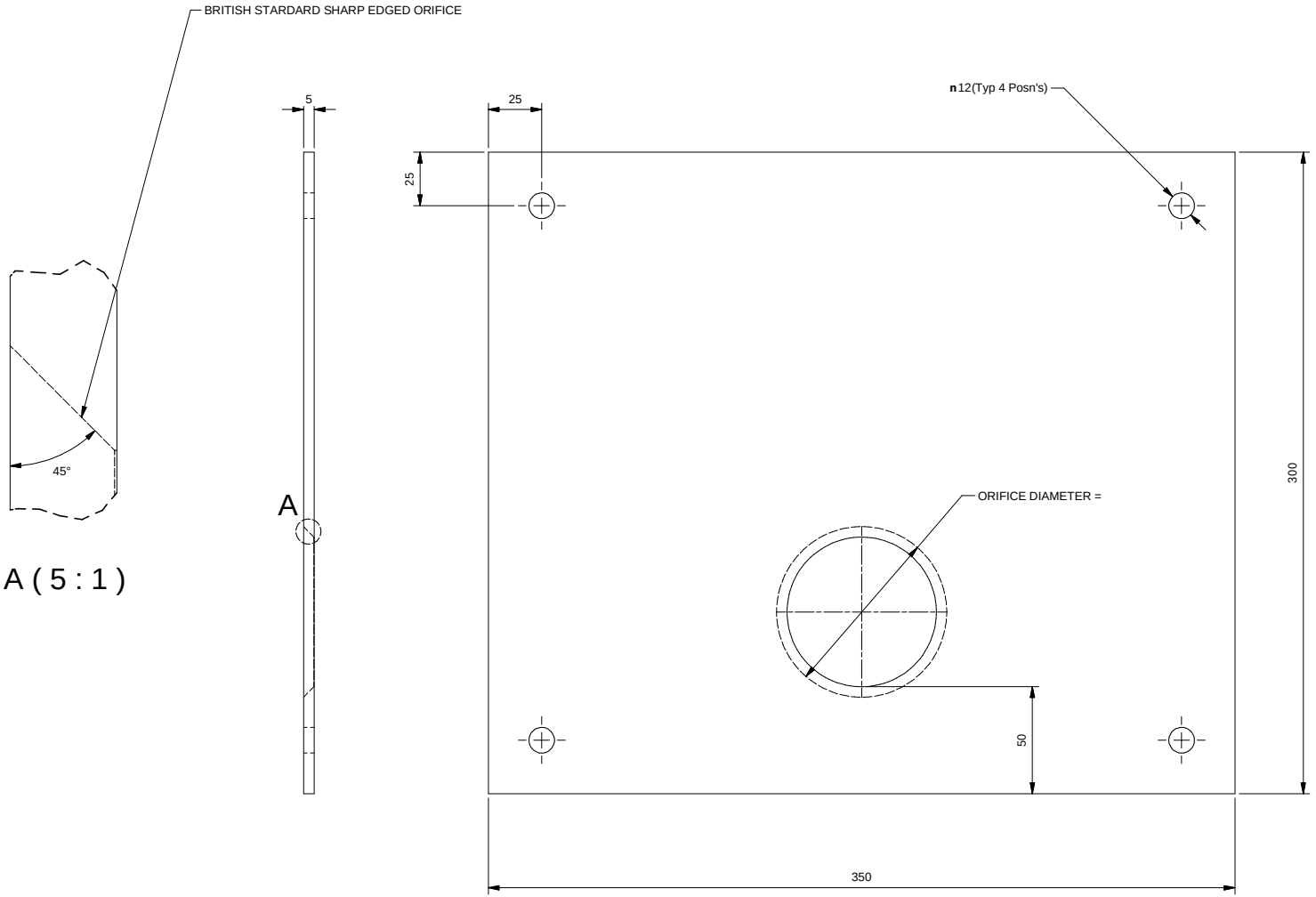
Orifice Manhole: S11, DS/PN: S1.010, Volume (m³): 118.0

Diameter (m) 0.104 Discharge Coefficient 0.600 Invert Level (m) 82.301

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DO NOT SCALE **IF IN DOUBT ASK**

PROJECTION



Notes

1. THIS DRAWING IS AN A3 SIZE ORIGINAL
2. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT GENERAL ARRANGEMENT & DETAIL DRAWINGS.
4. ALL COMPONENTS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE PRODUCTION SPECIFICATION HRD-FM09/15.
5. THE ITEMS SHOWN ON THIS DRAWING SHALL BE MANUFACTURED FROM 5MM TH'K STAINLESS STEEL GRADE 304

Rev	By	Date	Description

Date	Scale
09.06.08.	

Drawn By	Checked By	Approved By
WCJ		

Title

HYDRO ORIFICE PLATE

mm Diameter
to suit NB150 Outlet Pipe

DETAIL DRAWING

Hydro International

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Ref. No.			
Drawing No.	DO 150	Rev	A

Hydro International

106mm Type O Hydro-Brake® Flow Control

Project Information

Our Reference: FOR INTERNAL USE ONLY
Client:
Site:

Technical Specification Criteria

Primary Design Point (A)
Head = 3.450 m
Flow = 42.000 l/s

Control Points	Head (m)	Flow (l/s)
Kick-Flo® (C)	0.367	1.756

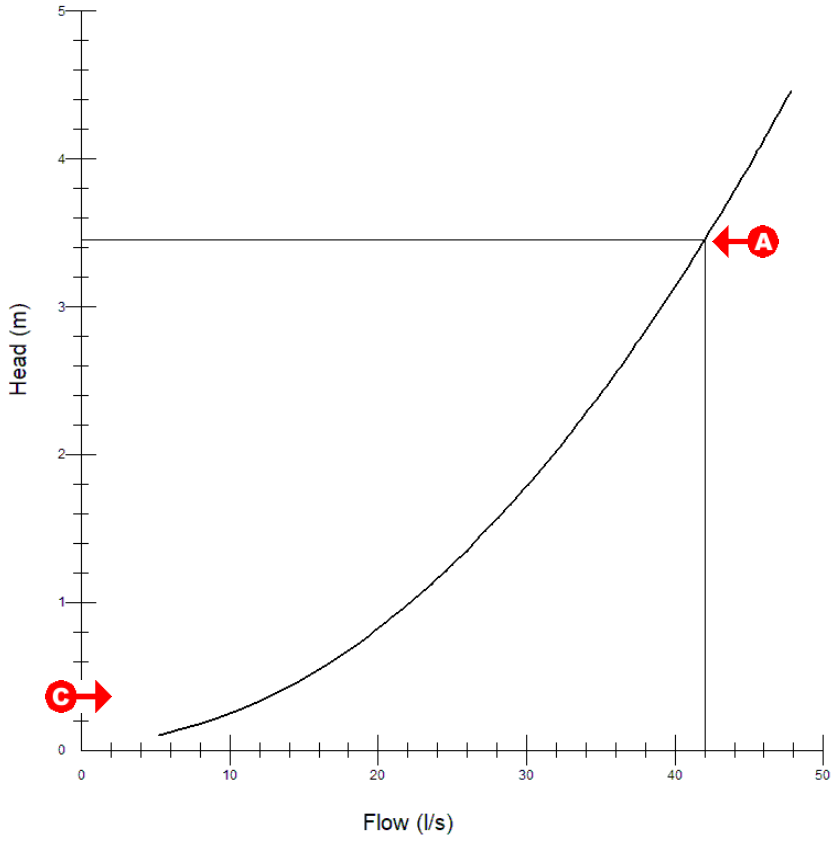
Head (m)	Flow (l/s)
0.225	0.000
0.450	1.902
0.675	2.276
0.900	2.624
1.125	2.945
1.350	3.240
1.575	3.508
1.800	3.751
2.025	3.978
2.250	4.193

Head (m)	Flow (l/s)
2.475	4.398
2.700	4.594
2.925	4.781
3.150	4.962
3.375	5.136
3.600	5.304
3.825	5.467
4.050	5.626
4.275	5.780
4.500	5.930

Design Advice

The head / flow characteristics of this 106mm Type O Hydro-Brake® Flow Control are unique, fully verifiable and proven by computational design, physical modelling and in-situ testing. The use of any other flow control will invalidate any design based on this data which may lead to adverse hydraulic effects including loss of upstream storage, under /over discharge and increased potential for flooding, any of which could cause non-compliance with the original hydraulic model.

Specific Head / Flow characteristic for 106mm Type O



Kick-Flo® (C)

The point at which the vortex has initiated and at which the curve begins to return back to follow the orifice curve and reach the same design point or desired head / flow condition.

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Hydro-Brake® Flow Control is the registered trademark for flow controls designed exclusively by Hydro International plc.

Storage Structures for 6015 1 IN 30 STORM REV A.SWS

Tank or Pond Manhole: S35, DS/PN: S6.000

Invert Level (m) 84.500

Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	228.0	1.000	722.0

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Summary Wizard of 15 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	1	88.574	-0.151	0.000	0.24		10.7	OK
S1.001	S2	1	88.133	-0.375	0.000	0.06		14.4	OK
S1.002	S3	1	88.019	-0.311	0.000	0.19		36.9	OK
S2.000	S22	1	92.577	-0.148	0.000	0.25		27.1	OK
S2.001	S23	1	90.441	-0.137	0.000	0.32		33.1	OK
S2.002	S24	1	89.468	-0.205	0.000	0.22		45.2	OK
S2.003	S25	1	88.592	-0.202	0.000	0.23		45.7	OK
S1.003	S4	1	87.941	-0.220	0.000	0.52		83.1	OK
S1.004	S5	1	87.890	-0.221	0.000	0.50		103.7	OK
S1.005	S6	1	87.591	-0.284	0.000	0.29		118.5	OK
S3.000	S26	1	87.831	-0.144	0.000	0.28		17.3	OK
S3.001	S27	1	87.297	-0.144	0.000	0.28		19.2	OK
S1.006	S7	1	86.851	-0.237	0.000	0.45		137.1	OK
S4.000	S28	1	87.298	-0.202	0.000	0.23		25.4	OK
S4.001	S29	1	87.055	-0.181	0.000	0.33		37.1	OK
S4.002	S30	1	86.664	-0.211	0.000	0.19		53.1	OK
S1.007	S8	10	83.155	-1.229	0.000	0.05		194.2	OK
S1.008	S9	10	83.147	-1.130	0.000	0.05		146.2	OK
S5.000	S31	1	86.455	-0.170	0.000	0.14		19.3	OK
S6.000	S35	9	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 15 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	1	83.951	-0.468	0.000	0.11		20.5	OK
S5.002	S33	10	83.144	-1.257	0.000	0.01		23.8	OK
S5.003	S34	10	83.144	-1.206	0.000	0.01		29.3	OK
S1.009	S10	10	83.144	-1.076	0.000	0.02		73.1	OK
S7.000	S36	1	87.855	-0.245	0.000	0.08		24.1	OK
S7.001	S37	1	84.941	-0.232	0.000	0.12		28.2	OK
S7.002	S38	10	83.141	-1.088	0.000	0.01		23.1	OK
S7.003	S39	10	83.141	-1.046	0.000	0.00		5.2	OK
S1.010	S11	10	83.141	0.540	0.000	0.29		17.6	SURCHARGED
S1.011	S12	10	82.354	-0.207	0.000	0.21		17.6	OK
S1.012	S13	10	82.127	-0.224	0.000	0.15		17.6	OK
S1.013	S14	10	81.658	-0.219	0.000	0.16		17.6	OK
S1.014	S15	10	81.300	-0.230	0.000	0.12		17.6	OK
S1.015	S16	10	80.332	-0.256	0.000	0.05		17.6	OK
S1.016	S17	10	75.981	-0.227	0.000	0.14		17.6	OK
S1.017	S18	10	73.383	-0.255	0.000	0.05		17.6	OK
S1.018	S19	10	69.943	-0.253	0.000	0.06		17.6	OK
S1.019	S20	10	67.581	-0.246	0.000	0.07		17.6	OK

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Summary Wizard of 30 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	2	88.564	-0.161	0.000	0.18		8.0	OK
S1.001	S2	2	88.123	-0.385	0.000	0.05		11.3	OK
S1.002	S3	2	88.002	-0.328	0.000	0.15		30.7	OK
S2.000	S22	2	92.567	-0.158	0.000	0.19		20.3	OK
S2.001	S23	2	90.429	-0.149	0.000	0.25		25.3	OK
S2.002	S24	2	89.456	-0.217	0.000	0.17		35.7	OK
S2.003	S25	2	88.580	-0.214	0.000	0.18		36.5	OK
S1.003	S4	2	87.916	-0.245	0.000	0.43		67.9	OK
S1.004	S5	2	87.865	-0.246	0.000	0.42		86.4	OK
S1.005	S6	2	87.576	-0.299	0.000	0.24		99.4	OK
S3.000	S26	2	87.820	-0.155	0.000	0.21		12.9	OK
S3.001	S27	2	87.286	-0.155	0.000	0.21		14.6	OK
S1.006	S7	2	86.830	-0.258	0.000	0.38		115.1	OK
S4.000	S28	2	87.284	-0.216	0.000	0.17		19.0	OK
S4.001	S29	2	87.039	-0.197	0.000	0.26		29.0	OK
S4.002	S30	2	86.653	-0.222	0.000	0.15		42.8	OK
S1.007	S8	7	83.266	-1.118	0.000	0.04		163.7	OK
S1.008	S9	7	83.259	-1.018	0.000	0.04		120.7	OK
S5.000	S31	2	86.448	-0.177	0.000	0.10		14.5	OK
S6.000	S35	8	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 30 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	2	83.934	-0.485	0.000	0.08		15.4	OK
S5.002	S33	7	83.257	-1.144	0.000	0.01		18.1	OK
S5.003	S34	7	83.257	-1.093	0.000	0.00		19.1	OK
S1.009	S10	7	83.257	-0.963	0.000	0.02		60.5	OK
S7.000	S36	2	87.846	-0.254	0.000	0.06		18.1	OK
S7.001	S37	2	84.933	-0.240	0.000	0.09		21.4	OK
S7.002	S38	7	83.253	-0.976	0.000	0.01		18.4	OK
S7.003	S39	7	83.253	-0.934	0.000	0.00		5.2	OK
S1.010	S11	7	83.253	0.652	0.000	0.31		19.2	SURCHARGED
S1.011	S12	7	82.358	-0.203	0.000	0.23		19.2	OK
S1.012	S13	7	82.131	-0.220	0.000	0.16		19.2	OK
S1.013	S14	7	81.662	-0.215	0.000	0.18		19.2	OK
S1.014	S15	7	81.303	-0.227	0.000	0.14		19.2	OK
S1.015	S16	7	80.334	-0.254	0.000	0.06		19.2	OK
S1.016	S17	7	75.984	-0.224	0.000	0.15		19.2	OK
S1.017	S18	7	73.385	-0.253	0.000	0.06		19.2	OK
S1.018	S19	7	69.945	-0.251	0.000	0.06		19.2	OK
S1.019	S20	7	67.584	-0.243	0.000	0.08		19.2	OK

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Summary Wizard of 60 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	3	88.551	-0.174	0.000	0.12		5.3	OK
S1.001	S2	3	88.112	-0.396	0.000	0.03		7.5	OK
S1.002	S3	3	87.978	-0.352	0.000	0.11		21.4	OK
S2.000	S22	3	92.553	-0.172	0.000	0.13		13.4	OK
S2.001	S23	3	90.414	-0.164	0.000	0.16		16.9	OK
S2.002	S24	3	89.441	-0.232	0.000	0.12		24.1	OK
S2.003	S25	3	88.564	-0.230	0.000	0.12		24.6	OK
S1.003	S4	3	87.877	-0.284	0.000	0.29		46.9	OK
S1.004	S5	3	87.827	-0.284	0.000	0.29		60.5	OK
S1.005	S6	3	87.550	-0.325	0.000	0.17		69.8	OK
S3.000	S26	3	87.805	-0.170	0.000	0.14		8.5	OK
S3.001	S27	3	87.272	-0.169	0.000	0.14		9.7	OK
S1.006	S7	3	86.796	-0.292	0.000	0.27		80.8	OK
S4.000	S28	3	87.268	-0.232	0.000	0.12		12.6	OK
S4.001	S29	3	87.020	-0.216	0.000	0.17		19.5	OK
S4.002	S30	3	86.640	-0.235	0.000	0.10		29.1	OK
S1.007	S8	4	83.349	-1.035	0.000	0.03		115.0	OK
S1.008	S9	4	83.346	-0.931	0.000	0.03		85.4	OK
S5.000	S31	3	86.439	-0.186	0.000	0.07		9.5	OK
S6.000	S35	7	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 60 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	3	83.909	-0.510	0.000	0.05		10.1	OK
S5.002	S33	4	83.343	-1.058	0.000	0.00		12.3	OK
S5.003	S34	4	83.343	-1.007	0.000	0.00		11.7	OK
S1.009	S10	4	83.343	-0.877	0.000	0.01		45.2	OK
S7.000	S36	3	87.838	-0.262	0.000	0.04		11.9	OK
S7.001	S37	3	84.920	-0.253	0.000	0.06		14.3	OK
S7.002	S38	4	83.340	-0.889	0.000	0.00		12.5	OK
S7.003	S39	4	83.340	-0.847	0.000	0.00		3.8	OK
S1.010	S11	4	83.340	0.739	0.000	0.33		20.3	SURCHARGED
S1.011	S12	4	82.361	-0.200	0.000	0.25		20.3	OK
S1.012	S13	4	82.133	-0.218	0.000	0.17		20.3	OK
S1.013	S14	4	81.665	-0.212	0.000	0.19		20.3	OK
S1.014	S15	4	81.305	-0.225	0.000	0.14		20.3	OK
S1.015	S16	4	80.336	-0.252	0.000	0.06		20.3	OK
S1.016	S17	4	75.987	-0.221	0.000	0.16		20.3	OK
S1.017	S18	4	73.386	-0.252	0.000	0.06		20.3	OK
S1.018	S19	4	69.947	-0.249	0.000	0.07		20.3	OK
S1.019	S20	4	67.586	-0.241	0.000	0.09		20.3	OK

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Summary Wizard of 120 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	4	88.540	-0.185	0.000	0.07		3.3	OK
S1.001	S2	4	88.103	-0.405	0.000	0.02		4.8	OK
S1.002	S3	4	87.957	-0.373	0.000	0.07		13.7	OK
S2.000	S22	4	92.542	-0.183	0.000	0.08		8.4	OK
S2.001	S23	4	90.401	-0.177	0.000	0.10		10.7	OK
S2.002	S24	4	89.427	-0.246	0.000	0.07		15.4	OK
S2.003	S25	4	88.550	-0.244	0.000	0.08		15.7	OK
S1.003	S4	4	87.842	-0.319	0.000	0.19		29.8	OK
S1.004	S5	4	87.793	-0.318	0.000	0.19		38.6	OK
S1.005	S6	4	87.524	-0.351	0.000	0.11		44.7	OK
S3.000	S26	4	87.794	-0.181	0.000	0.09		5.3	OK
S3.001	S27	4	87.261	-0.180	0.000	0.09		6.1	OK
S1.006	S7	4	86.763	-0.325	0.000	0.17		51.8	OK
S4.000	S28	4	87.252	-0.248	0.000	0.07		7.8	OK
S4.001	S29	4	87.002	-0.234	0.000	0.11		12.4	OK
S4.002	S30	4	86.625	-0.250	0.000	0.07		18.7	OK
S1.007	S8	2	83.387	-0.997	0.000	0.02		73.9	OK
S1.008	S9	2	83.384	-0.893	0.000	0.02		56.2	OK
S5.000	S31	4	86.430	-0.195	0.000	0.04		5.9	OK
S6.000	S35	12	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 120 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	4	83.891	-0.528	0.000	0.03		6.4	OK
S5.002	S33	2	83.382	-1.019	0.000	0.00		8.0	OK
S5.003	S34	2	83.382	-0.968	0.000	0.00		7.7	OK
S1.009	S10	2	83.382	-0.838	0.000	0.01		33.4	OK
S7.000	S36	4	87.831	-0.269	0.000	0.02		7.4	OK
S7.001	S37	4	84.910	-0.263	0.000	0.04		9.0	OK
S7.002	S38	2	83.379	-0.850	0.000	0.00		8.1	OK
S7.003	S39	2	83.379	-0.808	0.000	0.00		2.9	OK
S1.010	S11	2	83.379	0.778	0.000	0.34		20.8	SURCHARGED
S1.011	S12	2	82.363	-0.198	0.000	0.25		20.8	OK
S1.012	S13	2	82.135	-0.216	0.000	0.17		20.8	OK
S1.013	S14	2	81.666	-0.211	0.000	0.19		20.8	OK
S1.014	S15	2	81.306	-0.224	0.000	0.15		20.8	OK
S1.015	S16	2	80.337	-0.251	0.000	0.06		20.8	OK
S1.016	S17	2	75.988	-0.220	0.000	0.16		20.8	OK
S1.017	S18	2	73.387	-0.251	0.000	0.06		20.8	OK
S1.018	S19	2	69.947	-0.249	0.000	0.07		20.8	OK
S1.019	S20	2	67.587	-0.240	0.000	0.09		20.8	OK

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Summary Wizard of 180 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	5	88.534	-0.191	0.000	0.06		2.5	OK
S1.001	S2	5	88.093	-0.415	0.000	0.02		3.6	OK
S1.002	S3	5	87.946	-0.384	0.000	0.05		10.4	OK
S2.000	S22	5	92.535	-0.190	0.000	0.06		6.4	OK
S2.001	S23	5	90.395	-0.183	0.000	0.08		8.1	OK
S2.002	S24	5	89.419	-0.254	0.000	0.06		11.7	OK
S2.003	S25	5	88.541	-0.253	0.000	0.06		11.9	OK
S1.003	S4	5	87.824	-0.337	0.000	0.14		22.6	OK
S1.004	S5	5	87.774	-0.337	0.000	0.14		29.4	OK
S1.005	S6	5	87.512	-0.363	0.000	0.08		34.1	OK
S3.000	S26	5	87.787	-0.188	0.000	0.07		4.1	OK
S3.001	S27	5	87.254	-0.187	0.000	0.07		4.6	OK
S1.006	S7	5	86.745	-0.343	0.000	0.13		39.5	OK
S4.000	S28	5	87.245	-0.255	0.000	0.05		5.9	OK
S4.001	S29	5	86.994	-0.242	0.000	0.08		9.4	OK
S4.002	S30	5	86.618	-0.257	0.000	0.05		14.2	OK
S1.007	S8	1	83.390	-0.994	0.000	0.01		56.5	OK
S1.008	S9	1	83.387	-0.890	0.000	0.01		43.9	OK
S5.000	S31	5	86.426	-0.199	0.000	0.03		4.5	OK
S6.000	S35	11	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 180 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	5	83.883	-0.536	0.000	0.03		4.8	OK
S5.002	S33	1	83.385	-1.016	0.000	0.00		6.1	OK
S5.003	S34	1	83.385	-0.965	0.000	0.00		6.3	OK
S1.009	S10	1	83.385	-0.835	0.000	0.01		28.4	OK
S7.000	S36	5	87.826	-0.274	0.000	0.02		5.6	OK
S7.001	S37	5	84.906	-0.267	0.000	0.03		6.9	OK
S7.002	S38	1	83.381	-0.848	0.000	0.00		6.2	OK
S7.003	S39	1	83.381	-0.806	0.000	0.00		2.7	OK
S1.010	S11	1	83.382	0.781	0.000	0.34		20.8	SURCHARGED
S1.011	S12	1	82.363	-0.198	0.000	0.25		20.8	OK
S1.012	S13	1	82.135	-0.216	0.000	0.17		20.8	OK
S1.013	S14	1	81.666	-0.211	0.000	0.19		20.8	OK
S1.014	S15	1	81.306	-0.224	0.000	0.15		20.8	OK
S1.015	S16	1	80.337	-0.251	0.000	0.06		20.8	OK
S1.016	S17	1	75.988	-0.220	0.000	0.16		20.8	OK
S1.017	S18	1	73.387	-0.251	0.000	0.06		20.8	OK
S1.018	S19	1	69.947	-0.249	0.000	0.07		20.8	OK
S1.019	S20	1	67.587	-0.240	0.000	0.09		20.8	OK

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Summary Wizard of 240 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	6	88.530	-0.195	0.000	0.04		2.0	OK
S1.001	S2	6	88.086	-0.422	0.000	0.01		3.0	OK
S1.002	S3	6	87.940	-0.390	0.000	0.04		8.5	OK
S2.000	S22	6	92.532	-0.193	0.000	0.05		5.2	OK
S2.001	S23	6	90.390	-0.188	0.000	0.06		6.6	OK
S2.002	S24	6	89.414	-0.259	0.000	0.05		9.6	OK
S2.003	S25	6	88.536	-0.258	0.000	0.05		9.8	OK
S1.003	S4	6	87.813	-0.348	0.000	0.12		18.6	OK
S1.004	S5	6	87.763	-0.348	0.000	0.12		24.1	OK
S1.005	S6	6	87.502	-0.373	0.000	0.07		27.9	OK
S3.000	S26	6	87.783	-0.192	0.000	0.05		3.3	OK
S3.001	S27	6	87.250	-0.191	0.000	0.06		3.8	OK
S1.006	S7	6	86.736	-0.352	0.000	0.11		32.4	OK
S4.000	S28	6	87.240	-0.260	0.000	0.04		4.8	OK
S4.001	S29	6	86.987	-0.249	0.000	0.07		7.7	OK
S4.002	S30	6	86.614	-0.261	0.000	0.04		11.6	OK
S1.007	S8	3	83.379	-1.005	0.000	0.01		46.3	OK
S1.008	S9	3	83.377	-0.900	0.000	0.01		36.7	OK
S5.000	S31	6	86.424	-0.201	0.000	0.03		3.7	OK
S6.000	S35	10	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 240 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	6	83.879	-0.540	0.000	0.02		4.0	OK
S5.002	S33	3	83.375	-1.026	0.000	0.00		5.1	OK
S5.003	S34	3	83.375	-0.975	0.000	0.00		5.4	OK
S1.009	S10	3	83.375	-0.845	0.000	0.01		25.5	OK
S7.000	S36	6	87.821	-0.279	0.000	0.01		4.6	OK
S7.001	S37	6	84.904	-0.269	0.000	0.02		5.6	OK
S7.002	S38	3	83.371	-0.858	0.000	0.00		5.1	OK
S7.003	S39	3	83.371	-0.816	0.000	0.00		2.6	OK
S1.010	S11	3	83.371	0.770	0.000	0.34		20.7	SURCHARGED
S1.011	S12	3	82.362	-0.199	0.000	0.25		20.7	OK
S1.012	S13	3	82.134	-0.217	0.000	0.17		20.7	OK
S1.013	S14	3	81.666	-0.211	0.000	0.19		20.7	OK
S1.014	S15	3	81.306	-0.224	0.000	0.15		20.7	OK
S1.015	S16	3	80.336	-0.252	0.000	0.06		20.7	OK
S1.016	S17	3	75.987	-0.221	0.000	0.16		20.7	OK
S1.017	S18	3	73.387	-0.251	0.000	0.06		20.7	OK
S1.018	S19	3	69.947	-0.249	0.000	0.07		20.7	OK
S1.019	S20	3	67.587	-0.240	0.000	0.09		20.7	OK

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Summary Wizard of 360 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	7	88.527	-0.198	0.000	0.03		1.5	OK
S1.001	S2	7	88.079	-0.429	0.000	0.01		2.2	OK
S1.002	S3	7	87.932	-0.398	0.000	0.03		6.4	OK
S2.000	S22	7	92.528	-0.197	0.000	0.04		3.9	OK
S2.001	S23	7	90.385	-0.193	0.000	0.05		5.0	OK
S2.002	S24	7	89.409	-0.264	0.000	0.03		7.2	OK
S2.003	S25	7	88.531	-0.263	0.000	0.04		7.3	OK
S1.003	S4	7	87.800	-0.361	0.000	0.09		13.9	OK
S1.004	S5	7	87.750	-0.361	0.000	0.09		18.0	OK
S1.005	S6	7	87.490	-0.385	0.000	0.05		20.9	OK
S3.000	S26	7	87.779	-0.196	0.000	0.04		2.5	OK
S3.001	S27	7	87.245	-0.196	0.000	0.04		2.8	OK
S1.006	S7	7	86.722	-0.366	0.000	0.08		24.2	OK
S4.000	S28	7	87.235	-0.265	0.000	0.03		3.6	OK
S4.001	S29	7	86.979	-0.257	0.000	0.05		5.8	OK
S4.002	S30	7	86.609	-0.266	0.000	0.03		8.7	OK
S1.007	S8	5	83.335	-1.049	0.000	0.01		34.8	OK
S1.008	S9	5	83.333	-0.944	0.000	0.01		28.4	OK
S5.000	S31	7	86.421	-0.204	0.000	0.02		2.8	OK
S6.000	S35	3	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 360 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	7	83.864	-0.555	0.000	0.02		3.0	OK
S5.002	S33	5	83.331	-1.070	0.000	0.00		3.8	OK
S5.003	S34	5	83.331	-1.019	0.000	0.00		4.5	OK
S1.009	S10	5	83.331	-0.889	0.000	0.01		22.1	OK
S7.000	S36	7	87.816	-0.284	0.000	0.01		3.4	OK
S7.001	S37	7	84.897	-0.276	0.000	0.02		4.2	OK
S7.002	S38	5	83.327	-0.902	0.000	0.00		3.9	OK
S7.003	S39	5	83.327	-0.860	0.000	0.00		2.4	OK
S1.010	S11	5	83.327	0.726	0.000	0.33		20.1	SURCHARGED
S1.011	S12	5	82.361	-0.200	0.000	0.24		20.1	OK
S1.012	S13	5	82.133	-0.218	0.000	0.17		20.1	OK
S1.013	S14	5	81.665	-0.212	0.000	0.19		20.1	OK
S1.014	S15	5	81.305	-0.225	0.000	0.14		20.1	OK
S1.015	S16	5	80.336	-0.252	0.000	0.06		20.1	OK
S1.016	S17	5	75.986	-0.222	0.000	0.15		20.1	OK
S1.017	S18	5	73.386	-0.252	0.000	0.06		20.1	OK
S1.018	S19	5	69.946	-0.250	0.000	0.07		20.1	OK
S1.019	S20	5	67.585	-0.242	0.000	0.09		20.1	OK

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Summary Wizard of 480 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	8	88.525	-0.200	0.000	0.03		1.2	OK
S1.001	S2	8	88.075	-0.433	0.000	0.01		1.8	OK
S1.002	S3	8	87.928	-0.402	0.000	0.03		5.2	OK
S2.000	S22	8	92.525	-0.200	0.000	0.03		3.2	OK
S2.001	S23	8	90.382	-0.196	0.000	0.04		4.0	OK
S2.002	S24	8	89.406	-0.267	0.000	0.03		5.8	OK
S2.003	S25	8	88.528	-0.266	0.000	0.03		5.9	OK
S1.003	S4	8	87.789	-0.372	0.000	0.07		11.3	OK
S1.004	S5	8	87.739	-0.372	0.000	0.07		14.7	OK
S1.005	S6	8	87.484	-0.391	0.000	0.04		17.0	OK
S3.000	S26	8	87.776	-0.199	0.000	0.03		2.0	OK
S3.001	S27	8	87.243	-0.198	0.000	0.03		2.3	OK
S1.006	S7	8	86.712	-0.376	0.000	0.06		19.7	OK
S4.000	S28	8	87.233	-0.267	0.000	0.03		2.9	OK
S4.001	S29	8	86.975	-0.261	0.000	0.04		4.7	OK
S4.002	S30	8	86.607	-0.268	0.000	0.03		7.1	OK
S1.007	S8	6	83.286	-1.098	0.000	0.01		28.3	OK
S1.008	S9	6	83.284	-0.993	0.000	0.01		23.8	OK
S5.000	S31	8	86.417	-0.208	0.000	0.02		2.2	OK
S6.000	S35	2	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 480 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	8	83.855	-0.564	0.000	0.01		2.4	OK
S5.002	S33	6	83.282	-1.119	0.000	0.00		3.1	OK
S5.003	S34	6	83.283	-1.067	0.000	0.00		4.0	OK
S1.009	S10	6	83.283	-0.937	0.000	0.01		20.0	OK
S7.000	S36	8	87.813	-0.287	0.000	0.01		2.8	OK
S7.001	S37	8	84.893	-0.280	0.000	0.01		3.4	OK
S7.002	S38	6	83.279	-0.950	0.000	0.00		3.2	OK
S7.003	S39	6	83.279	-0.908	0.000	0.00		2.3	OK
S1.010	S11	6	83.280	0.679	0.000	0.32		19.5	SURCHARGED
S1.011	S12	6	82.359	-0.202	0.000	0.24		19.5	OK
S1.012	S13	6	82.132	-0.219	0.000	0.16		19.5	OK
S1.013	S14	6	81.663	-0.214	0.000	0.18		19.5	OK
S1.014	S15	6	81.304	-0.226	0.000	0.14		19.5	OK
S1.015	S16	6	80.335	-0.253	0.000	0.06		19.5	OK
S1.016	S17	6	75.985	-0.223	0.000	0.15		19.5	OK
S1.017	S18	6	73.385	-0.253	0.000	0.06		19.5	OK
S1.018	S19	6	69.946	-0.250	0.000	0.06		19.5	OK
S1.019	S20	6	67.584	-0.243	0.000	0.08		19.5	OK

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Summary Wizard of 600 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	9	88.523	-0.202	0.000	0.02		1.1	OK
S1.001	S2	9	88.073	-0.435	0.000	0.01		1.5	OK
S1.002	S3	9	87.926	-0.404	0.000	0.02		4.4	OK
S2.000	S22	9	92.524	-0.201	0.000	0.03		2.7	OK
S2.001	S23	9	90.380	-0.198	0.000	0.03		3.4	OK
S2.002	S24	9	89.404	-0.269	0.000	0.02		4.9	OK
S2.003	S25	9	88.526	-0.268	0.000	0.03		5.0	OK
S1.003	S4	9	87.782	-0.379	0.000	0.06		9.6	OK
S1.004	S5	9	87.732	-0.379	0.000	0.06		12.5	OK
S1.005	S6	9	87.480	-0.395	0.000	0.04		14.4	OK
S3.000	S26	9	87.775	-0.200	0.000	0.03		1.7	OK
S3.001	S27	9	87.241	-0.200	0.000	0.03		2.0	OK
S1.006	S7	9	86.706	-0.382	0.000	0.06		16.8	OK
S4.000	S28	9	87.231	-0.269	0.000	0.02		2.5	OK
S4.001	S29	9	86.972	-0.264	0.000	0.04		4.0	OK
S4.002	S30	9	86.605	-0.270	0.000	0.02		6.0	OK
S1.007	S8	8	83.243	-1.141	0.000	0.01		24.2	OK
S1.008	S9	8	83.241	-1.036	0.000	0.01		20.8	OK
S5.000	S31	9	86.415	-0.210	0.000	0.01		1.9	OK
S6.000	S35	1	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 600 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	9	83.850	-0.569	0.000	0.01		2.0	OK
S5.002	S33	8	83.240	-1.161	0.000	0.00		2.7	OK
S5.003	S34	8	83.240	-1.110	0.000	0.00		3.7	OK
S1.009	S10	8	83.240	-0.980	0.000	0.01		18.7	OK
S7.000	S36	9	87.811	-0.289	0.000	0.01		2.4	OK
S7.001	S37	9	84.890	-0.283	0.000	0.01		2.9	OK
S7.002	S38	8	83.237	-0.992	0.000	0.00		2.8	OK
S7.003	S39	8	83.237	-0.950	0.000	0.00		2.2	OK
S1.010	S11	8	83.237	0.636	0.000	0.31		18.9	SURCHARGED
S1.011	S12	8	82.358	-0.203	0.000	0.23		19.0	OK
S1.012	S13	8	82.130	-0.221	0.000	0.16		19.0	OK
S1.013	S14	8	81.662	-0.215	0.000	0.18		19.0	OK
S1.014	S15	8	81.303	-0.227	0.000	0.13		19.0	OK
S1.015	S16	8	80.334	-0.254	0.000	0.06		18.9	OK
S1.016	S17	8	75.984	-0.224	0.000	0.15		18.9	OK
S1.017	S18	8	73.385	-0.253	0.000	0.06		19.0	OK
S1.018	S19	8	69.945	-0.251	0.000	0.06		19.0	OK
S1.019	S20	8	67.583	-0.244	0.000	0.08		19.0	OK

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Summary Wizard of 720 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	10	88.522	-0.203	0.000	0.02		0.9	OK
S1.001	S2	10	88.071	-0.437	0.000	0.01		1.3	OK
S1.002	S3	10	87.921	-0.409	0.000	0.02		3.9	OK
S2.000	S22	10	92.523	-0.202	0.000	0.02		2.3	OK
S2.001	S23	10	90.378	-0.200	0.000	0.03		3.0	OK
S2.002	S24	10	89.403	-0.270	0.000	0.02		4.3	OK
S2.003	S25	10	88.524	-0.270	0.000	0.02		4.4	OK
S1.003	S4	10	87.777	-0.384	0.000	0.05		8.4	OK
S1.004	S5	10	87.727	-0.384	0.000	0.05		10.9	OK
S1.005	S6	10	87.477	-0.398	0.000	0.03		12.7	OK
S3.000	S26	10	87.774	-0.201	0.000	0.02		1.5	OK
S3.001	S27	10	87.240	-0.201	0.000	0.03		1.7	OK
S1.006	S7	10	86.701	-0.387	0.000	0.05		14.7	OK
S4.000	S28	10	87.229	-0.271	0.000	0.02		2.2	OK
S4.001	S29	10	86.970	-0.266	0.000	0.03		3.5	OK
S4.002	S30	10	86.602	-0.273	0.000	0.02		5.3	OK
S1.007	S8	9	83.199	-1.185	0.000	0.01		21.2	OK
S1.008	S9	9	83.197	-1.080	0.000	0.01		18.6	OK
S5.000	S31	10	86.413	-0.212	0.000	0.01		1.7	OK
S6.000	S35	6	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 720 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

PN	US/MH Name	Storm Rank	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
S5.001	S32	10	83.846	-0.573	0.000	0.01		1.8	OK
S5.002	S33	9	83.196	-1.205	0.000	0.00		2.4	OK
S5.003	S34	9	83.196	-1.154	0.000	0.00		3.4	OK
S1.009	S10	9	83.196	-1.024	0.000	0.01		17.7	OK
S7.000	S36	10	87.809	-0.291	0.000	0.01		2.1	OK
S7.001	S37	10	84.888	-0.285	0.000	0.01		2.5	OK
S7.002	S38	9	83.193	-1.036	0.000	0.00		2.5	OK
S7.003	S39	9	83.194	-0.993	0.000	0.00		2.2	OK
S1.010	S11	9	83.194	0.593	0.000	0.30		18.4	SURCHARGED
S1.011	S12	9	82.356	-0.205	0.000	0.22		18.4	OK
S1.012	S13	9	82.129	-0.222	0.000	0.15		18.4	OK
S1.013	S14	9	81.660	-0.217	0.000	0.17		18.4	OK
S1.014	S15	9	81.301	-0.229	0.000	0.13		18.4	OK
S1.015	S16	9	80.333	-0.255	0.000	0.06		18.4	OK
S1.016	S17	9	75.983	-0.225	0.000	0.14		18.4	OK
S1.017	S18	9	73.384	-0.254	0.000	0.06		18.4	OK
S1.018	S19	9	69.944	-0.252	0.000	0.06		18.4	OK
S1.019	S20	9	67.582	-0.245	0.000	0.08		18.4	OK

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Summary Wizard of 960 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	11	88.518	-0.207	0.000	0.02		0.8	OK
S1.001	S2	11	88.068	-0.440	0.000	0.00		1.1	OK
S1.002	S3	11	87.914	-0.416	0.000	0.02		3.1	OK
S2.000	S22	11	92.519	-0.206	0.000	0.02		1.9	OK
S2.001	S23	11	90.376	-0.202	0.000	0.02		2.4	OK
S2.002	S24	11	89.397	-0.276	0.000	0.02		3.5	OK
S2.003	S25	11	88.520	-0.274	0.000	0.02		3.6	OK
S1.003	S4	11	87.771	-0.390	0.000	0.04		6.8	OK
S1.004	S5	11	87.721	-0.390	0.000	0.04		8.9	OK
S1.005	S6	11	87.473	-0.402	0.000	0.03		10.3	OK
S3.000	S26	11	87.771	-0.204	0.000	0.02		1.2	OK
S3.001	S27	11	87.238	-0.203	0.000	0.02		1.4	OK
S1.006	S7	11	86.695	-0.393	0.000	0.04		11.9	OK
S4.000	S28	11	87.223	-0.277	0.000	0.02		1.8	OK
S4.001	S29	11	86.968	-0.268	0.000	0.03		2.8	OK
S4.002	S30	11	86.597	-0.278	0.000	0.02		4.3	OK
S1.007	S8	11	83.118	-1.266	0.000	0.00		17.2	OK
S1.008	S9	11	83.117	-1.160	0.000	0.00		15.6	OK
S5.000	S31	11	86.410	-0.215	0.000	0.01		1.4	OK
S6.000	S35	5	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 960 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	11	83.841	-0.578	0.000	0.01		1.5	OK
S5.002	S33	11	83.116	-1.285	0.000	0.00		2.0	OK
S5.003	S34	11	83.116	-1.234	0.000	0.00		3.1	OK
S1.009	S10	11	83.116	-1.104	0.000	0.00		16.0	OK
S7.000	S36	11	87.808	-0.292	0.000	0.01		1.7	OK
S7.001	S37	11	84.885	-0.288	0.000	0.01		2.1	OK
S7.002	S38	11	83.113	-1.116	0.000	0.00		2.0	OK
S7.003	S39	11	83.113	-1.074	0.000	0.00		2.0	OK
S1.010	S11	11	83.114	0.513	0.000	0.28		17.2	SURCHARGED
S1.011	S12	11	82.353	-0.208	0.000	0.21		17.2	OK
S1.012	S13	11	82.126	-0.225	0.000	0.14		17.2	OK
S1.013	S14	11	81.657	-0.220	0.000	0.16		17.2	OK
S1.014	S15	11	81.299	-0.231	0.000	0.12		17.2	OK
S1.015	S16	11	80.332	-0.256	0.000	0.05		17.2	OK
S1.016	S17	11	75.980	-0.228	0.000	0.13		17.2	OK
S1.017	S18	11	73.382	-0.256	0.000	0.05		17.2	OK
S1.018	S19	11	69.942	-0.254	0.000	0.06		17.2	OK
S1.019	S20	11	67.580	-0.247	0.000	0.07		17.2	OK

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Summary Wizard of 1440 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	12		88.513	-0.212	0.000	0.01		0.6	OK
S1.001	S2	12		88.066	-0.442	0.000	0.00		0.8	OK
S1.002	S3	12		87.905	-0.425	0.000	0.01		2.3	OK
S2.000	S22	12		92.514	-0.211	0.000	0.01		1.4	OK
S2.001	S23	12		90.372	-0.206	0.000	0.02		1.8	OK
S2.002	S24	12		89.391	-0.282	0.000	0.01		2.6	OK
S2.003	S25	12		88.513	-0.281	0.000	0.01		2.7	OK
S1.003	S4	12		87.763	-0.398	0.000	0.03		5.1	OK
S1.004	S5	12		87.713	-0.398	0.000	0.03		6.6	OK
S1.005	S6	12		87.465	-0.410	0.000	0.02		7.7	OK
S3.000	S26	12		87.766	-0.209	0.000	0.01		0.9	OK
S3.001	S27	12		87.232	-0.209	0.000	0.02		1.0	OK
S1.006	S7	12		86.688	-0.400	0.000	0.03		8.9	OK
S4.000	S28	12		87.217	-0.283	0.000	0.01		1.3	OK
S4.001	S29	12		86.963	-0.273	0.000	0.02		2.1	OK
S4.002	S30	12		86.591	-0.284	0.000	0.01		3.2	OK
S1.007	S8	12		82.991	-1.393	0.000	0.00		12.9	OK
S1.008	S9	12		82.989	-1.288	0.000	0.00		12.2	OK
S5.000	S31	12		86.408	-0.217	0.000	0.01		1.0	OK
S6.000	S35	4		84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 1440 minute 2 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	12	83.835	-0.584	0.000	0.01		1.1	OK
S5.002	S33	12	82.989	-1.412	0.000	0.00		1.5	OK
S5.003	S34	12	82.989	-1.361	0.000	0.00		2.6	OK
S1.009	S10	12	82.989	-1.231	0.000	0.00		13.8	OK
S7.000	S36	12	87.806	-0.294	0.000	0.00		1.3	OK
S7.001	S37	12	84.882	-0.291	0.000	0.01		1.5	OK
S7.002	S38	12	82.987	-1.242	0.000	0.00		1.6	OK
S7.003	S39	12	82.987	-1.200	0.000	0.00		1.7	OK
S1.010	S11	12	82.987	0.386	0.000	0.25		15.2	SURCHARGED
S1.011	S12	12	82.347	-0.214	0.000	0.18		15.2	OK
S1.012	S13	12	82.122	-0.229	0.000	0.13		15.2	OK
S1.013	S14	12	81.652	-0.225	0.000	0.14		15.2	OK
S1.014	S15	12	81.295	-0.235	0.000	0.11		15.2	OK
S1.015	S16	12	80.329	-0.259	0.000	0.05		15.2	OK
S1.016	S17	12	75.976	-0.232	0.000	0.12		15.2	OK
S1.017	S18	12	73.379	-0.259	0.000	0.05		15.2	OK
S1.018	S19	12	69.939	-0.257	0.000	0.05		15.2	OK
S1.019	S20	12	67.576	-0.251	0.000	0.06		15.2	OK

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Summary Wizard of 15 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	1	88.605	-0.120	0.000	0.45		20.3	OK
S1.001	S2	1	88.264	-0.244	0.000	0.13		28.7	OK
S1.002	S3	1	88.249	-0.081	0.000	0.37		72.9	OK
S2.000	S22	1	92.610	-0.115	0.000	0.48		51.4	OK
S2.001	S23	1	90.484	-0.094	0.000	0.64		65.5	OK
S2.002	S24	1	89.515	-0.158	0.000	0.46		94.5	OK
S2.003	S25	1	88.641	-0.153	0.000	0.48		96.4	OK
S1.003	S4	1	88.177	0.016	0.000	0.99		156.9	SURCHARGED
S1.004	S5	1	88.090	-0.021	0.000	0.99		204.3	OK
S1.005	S6	1	87.674	-0.201	0.000	0.58		237.7	OK
S3.000	S26	1	87.866	-0.109	0.000	0.53		32.7	OK
S3.001	S27	1	87.335	-0.106	0.000	0.55		37.4	OK
S1.006	S7	1	86.979	-0.109	0.000	0.92		279.9	OK
S4.000	S28	1	87.339	-0.161	0.000	0.44		48.0	OK
S4.001	S29	1	87.118	-0.118	0.000	0.68		76.3	OK
S4.002	S30	1	86.709	-0.166	0.000	0.41		114.7	OK
S1.007	S8	11	83.568	-0.816	0.000	0.10		407.0	OK
S1.008	S9	11	83.550	-0.727	0.000	0.09		293.1	OK
S5.000	S31	1	86.478	-0.147	0.000	0.26		36.5	OK
S6.000	S35	9	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 15 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

PN	US/MH Name	Storm Rank	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
S5.001	S32	5	84.005	-0.414	0.000	0.21		39.3	OK
S5.002	S33	11	83.542	-0.859	0.000	0.02		48.8	OK
S5.003	S34	11	83.542	-0.808	0.000	0.01		55.2	OK
S1.009	S10	11	83.542	-0.678	0.000	0.04		130.7	OK
S7.000	S36	1	87.876	-0.224	0.000	0.15		45.7	OK
S7.001	S37	1	84.970	-0.203	0.000	0.23		55.5	OK
S7.002	S38	11	83.534	-0.695	0.000	0.02		49.2	OK
S7.003	S39	11	83.534	-0.653	0.000	0.01		18.3	OK
S1.010	S11	11	83.534	0.933	0.000	0.37		22.6	SURCHARGED
S1.011	S12	11	82.367	-0.194	0.000	0.27		22.6	OK
S1.012	S13	11	82.139	-0.212	0.000	0.19		22.6	OK
S1.013	S14	11	81.670	-0.207	0.000	0.21		22.6	OK
S1.014	S15	11	81.310	-0.220	0.000	0.16		22.6	OK
S1.015	S16	11	80.339	-0.249	0.000	0.07		22.6	OK
S1.016	S17	11	75.992	-0.216	0.000	0.17		22.6	OK
S1.017	S18	11	73.390	-0.248	0.000	0.07		22.6	OK
S1.018	S19	11	69.950	-0.246	0.000	0.08		22.6	OK
S1.019	S20	11	67.589	-0.238	0.000	0.10		22.6	OK

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Summary Wizard of 30 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	2	88.590	-0.135	0.000	0.33		15.2	OK
S1.001	S2	2	88.157	-0.351	0.000	0.10		22.1	OK
S1.002	S3	2	88.085	-0.245	0.000	0.31		62.4	OK
S2.000	S22	2	92.594	-0.131	0.000	0.36		38.7	OK
S2.001	S23	2	90.464	-0.114	0.000	0.48		49.2	OK
S2.002	S24	2	89.495	-0.178	0.000	0.34		70.9	OK
S2.003	S25	2	88.620	-0.174	0.000	0.36		72.6	OK
S1.003	S4	2	88.033	-0.128	0.000	0.86		136.3	OK
S1.004	S5	2	87.984	-0.127	0.000	0.85		174.9	OK
S1.005	S6	2	87.650	-0.225	0.000	0.50		201.4	OK
S3.000	S26	2	87.849	-0.126	0.000	0.40		24.6	OK
S3.001	S27	2	87.317	-0.124	0.000	0.41		28.1	OK
S1.006	S7	2	86.936	-0.152	0.000	0.77		233.3	OK
S4.000	S28	2	87.319	-0.181	0.000	0.33		36.3	OK
S4.001	S29	2	87.089	-0.147	0.000	0.51		57.2	OK
S4.002	S30	2	86.690	-0.185	0.000	0.31		86.1	OK
S1.007	S8	9	83.804	-0.580	0.000	0.08		330.8	OK
S1.008	S9	9	83.781	-0.496	0.000	0.07		237.9	OK
S5.000	S31	2	86.468	-0.157	0.000	0.20		27.6	OK
S6.000	S35	8	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 30 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	8	83.978	-0.441	0.000	0.16		29.4	OK
S5.002	S33	9	83.770	-0.631	0.000	0.01		36.8	OK
S5.003	S34	9	83.770	-0.580	0.000	0.01		34.2	OK
S1.009	S10	9	83.770	-0.450	0.000	0.03		106.9	OK
S7.000	S36	2	87.866	-0.234	0.000	0.11		34.5	OK
S7.001	S37	2	84.956	-0.217	0.000	0.17		41.8	OK
S7.002	S38	9	83.757	-0.472	0.000	0.01		37.3	OK
S7.003	S39	9	83.757	-0.430	0.000	0.01		13.2	OK
S1.010	S11	9	83.757	1.156	0.000	0.41		24.9	SURCHARGED
S1.011	S12	9	82.373	-0.188	0.000	0.30		24.9	OK
S1.012	S13	9	82.143	-0.208	0.000	0.21		24.9	OK
S1.013	S14	9	81.675	-0.202	0.000	0.23		24.9	OK
S1.014	S15	9	81.314	-0.216	0.000	0.18		24.9	OK
S1.015	S16	9	80.342	-0.246	0.000	0.08		24.9	OK
S1.016	S17	9	75.996	-0.212	0.000	0.19		24.9	OK
S1.017	S18	9	73.393	-0.245	0.000	0.08		24.9	OK
S1.018	S19	9	69.954	-0.242	0.000	0.08		24.9	OK
S1.019	S20	9	67.592	-0.235	0.000	0.11		24.9	OK

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Summary Wizard of 60 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	3	88.572	-0.153	0.000	0.22		10.1	OK
S1.001	S2	3	88.133	-0.375	0.000	0.07		14.5	OK
S1.002	S3	3	88.030	-0.300	0.000	0.21		41.4	OK
S2.000	S22	3	92.575	-0.150	0.000	0.24		25.5	OK
S2.001	S23	3	90.440	-0.138	0.000	0.32		32.5	OK
S2.002	S24	3	89.470	-0.203	0.000	0.23		46.9	OK
S2.003	S25	3	88.594	-0.200	0.000	0.24		47.7	OK
S1.003	S4	3	87.956	-0.205	0.000	0.57		90.8	OK
S1.004	S5	3	87.906	-0.205	0.000	0.57		117.7	OK
S1.005	S6	3	87.604	-0.271	0.000	0.33		136.0	OK
S3.000	S26	3	87.828	-0.147	0.000	0.26		16.3	OK
S3.001	S27	3	87.296	-0.145	0.000	0.27		18.6	OK
S1.006	S7	3	86.868	-0.220	0.000	0.52		157.6	OK
S4.000	S28	3	87.295	-0.205	0.000	0.22		23.9	OK
S4.001	S29	3	87.056	-0.180	0.000	0.34		37.9	OK
S4.002	S30	3	86.667	-0.208	0.000	0.20		57.0	OK
S1.007	S8	5	84.038	-0.346	0.000	0.06		224.6	OK
S1.008	S9	6	84.000	-0.277	0.000	0.05		162.9	OK
S5.000	S31	3	86.454	-0.171	0.000	0.13		18.2	OK
S6.000	S35	7	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 60 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	7	83.985	-0.434	0.000	0.10		19.4	OK
S5.002	S33	6	83.985	-0.416	0.000	0.01		24.4	OK
S5.003	S34	6	83.985	-0.365	0.000	0.00		19.8	OK
S1.009	S10	6	83.985	-0.235	0.000	0.02		76.9	OK
S7.000	S36	3	87.853	-0.247	0.000	0.07		22.7	OK
S7.001	S37	3	84.940	-0.233	0.000	0.11		27.5	OK
S7.002	S38	6	83.962	-0.267	0.000	0.01		24.7	OK
S7.003	S39	6	83.962	-0.225	0.000	0.00		7.8	OK
S1.010	S11	6	83.962	1.361	0.000	0.44		26.9	SURCHARGED
S1.011	S12	6	82.378	-0.183	0.000	0.33		26.9	OK
S1.012	S13	6	82.147	-0.204	0.000	0.23		26.9	OK
S1.013	S14	6	81.679	-0.198	0.000	0.25		26.9	OK
S1.014	S15	6	81.318	-0.212	0.000	0.19		26.9	OK
S1.015	S16	6	80.345	-0.243	0.000	0.08		26.9	OK
S1.016	S17	6	76.000	-0.208	0.000	0.21		26.9	OK
S1.017	S18	6	73.396	-0.242	0.000	0.08		26.9	OK
S1.018	S19	6	69.956	-0.240	0.000	0.09		26.9	OK
S1.019	S20	6	67.594	-0.233	0.000	0.11		26.9	OK

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Summary Wizard of 120 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	4	88.555	-0.170	0.000	0.14		6.2	OK
S1.001	S2	4	88.116	-0.392	0.000	0.04		9.0	OK
S1.002	S3	4	87.988	-0.342	0.000	0.13		25.9	OK
S2.000	S22	4	92.557	-0.168	0.000	0.15		15.8	OK
S2.001	S23	4	90.420	-0.158	0.000	0.20		20.1	OK
S2.002	S24	4	89.447	-0.226	0.000	0.14		29.0	OK
S2.003	S25	4	88.571	-0.223	0.000	0.15		29.7	OK
S1.003	S4	4	87.896	-0.265	0.000	0.36		56.5	OK
S1.004	S5	4	87.846	-0.265	0.000	0.36		73.3	OK
S1.005	S6	4	87.564	-0.311	0.000	0.21		84.9	OK
S3.000	S26	4	87.810	-0.165	0.000	0.16		10.1	OK
S3.001	S27	4	87.278	-0.163	0.000	0.17		11.5	OK
S1.006	S7	4	86.814	-0.274	0.000	0.32		98.5	OK
S4.000	S28	4	87.273	-0.227	0.000	0.14		14.7	OK
S4.001	S29	4	87.028	-0.208	0.000	0.21		23.4	OK
S4.002	S30	4	86.646	-0.229	0.000	0.13		35.3	OK
S1.007	S8	3	84.194	-0.190	0.000	0.04		141.0	OK
S1.008	S9	3	84.162	-0.115	0.000	0.03		103.9	OK
S5.000	S31	4	86.442	-0.183	0.000	0.08		11.2	OK
S6.000	S35	12	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 120 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

PN	US/MH Name	Storm Rank	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status
S5.001	S32	3	84.142	-0.277	0.000	0.06		12.0	OK
S5.002	S33	3	84.142	-0.259	0.000	0.00		15.2	OK
S5.003	S34	3	84.142	-0.208	0.000	0.00		12.5	OK
S1.009	S10	3	84.140	-0.080	0.000	0.02		53.8	OK
S7.000	S36	4	87.840	-0.260	0.000	0.04		14.0	OK
S7.001	S37	4	84.925	-0.248	0.000	0.07		17.0	OK
S7.002	S38	3	84.099	-0.130	0.000	0.01		15.4	OK
S7.003	S39	3	84.099	-0.088	0.000	0.00		5.5	OK
S1.010	S11	3	84.099	1.498	0.000	0.46		28.2	SURCHARGED
S1.011	S12	3	82.382	-0.179	0.000	0.34		28.2	OK
S1.012	S13	3	82.149	-0.202	0.000	0.24		28.2	OK
S1.013	S14	3	81.681	-0.196	0.000	0.26		28.2	OK
S1.014	S15	3	81.320	-0.210	0.000	0.20		28.2	OK
S1.015	S16	3	80.347	-0.241	0.000	0.09		28.2	OK
S1.016	S17	3	76.002	-0.206	0.000	0.22		28.2	OK
S1.017	S18	3	73.397	-0.241	0.000	0.09		28.2	OK
S1.018	S19	3	69.957	-0.239	0.000	0.09		28.2	OK
S1.019	S20	3	67.595	-0.232	0.000	0.12		28.2	OK

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Summary Wizard of 180 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	5	88.548	-0.177	0.000	0.10		4.7	OK
S1.001	S2	5	88.109	-0.399	0.000	0.03		6.8	OK
S1.002	S3	5	87.974	-0.356	0.000	0.10		19.5	OK
S2.000	S22	5	92.550	-0.175	0.000	0.11		11.9	OK
S2.001	S23	5	90.410	-0.168	0.000	0.15		15.1	OK
S2.002	S24	5	89.438	-0.235	0.000	0.11		21.8	OK
S2.003	S25	5	88.561	-0.233	0.000	0.11		22.3	OK
S1.003	S4	5	87.869	-0.292	0.000	0.27		42.4	OK
S1.004	S5	5	87.819	-0.292	0.000	0.27		55.0	OK
S1.005	S6	5	87.544	-0.331	0.000	0.16		63.7	OK
S3.000	S26	5	87.802	-0.173	0.000	0.12		7.6	OK
S3.001	S27	5	87.269	-0.172	0.000	0.13		8.7	OK
S1.006	S7	5	86.788	-0.300	0.000	0.24		73.8	OK
S4.000	S28	5	87.264	-0.236	0.000	0.10		11.1	OK
S4.001	S29	5	87.015	-0.221	0.000	0.16		17.6	OK
S4.002	S30	5	86.637	-0.238	0.000	0.10		26.5	OK
S1.007	S8	1	84.217	-0.167	0.000	0.03		105.7	OK
S1.008	S9	1	84.179	-0.098	0.000	0.02		79.0	OK
S5.000	S31	5	86.436	-0.189	0.000	0.06		8.4	OK
S6.000	S35	11	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 180 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	1	84.160	-0.259	0.000	0.05		9.0	OK
S5.002	S33	1	84.160	-0.241	0.000	0.00		11.5	OK
S5.003	S34	1	84.160	-0.190	0.000	0.00		9.9	OK
S1.009	S10	1	84.159	-0.061	0.000	0.01		44.3	OK
S7.000	S36	5	87.836	-0.264	0.000	0.03		10.5	OK
S7.001	S37	5	84.917	-0.256	0.000	0.05		12.8	OK
S7.002	S38	1	84.115	-0.114	0.000	0.00		11.7	OK
S7.003	S39	1	84.115	-0.072	0.000	0.00		4.6	OK
S1.010	S11	1	84.114	1.513	0.000	0.46		28.4	SURCHARGED
S1.011	S12	1	82.382	-0.179	0.000	0.34		28.4	OK
S1.012	S13	1	82.149	-0.202	0.000	0.24		28.4	OK
S1.013	S14	1	81.682	-0.195	0.000	0.27		28.4	OK
S1.014	S15	1	81.321	-0.209	0.000	0.20		28.4	OK
S1.015	S16	1	80.347	-0.241	0.000	0.09		28.4	OK
S1.016	S17	1	76.002	-0.206	0.000	0.22		28.4	OK
S1.017	S18	1	73.397	-0.241	0.000	0.09		28.4	OK
S1.018	S19	1	69.958	-0.238	0.000	0.09		28.4	OK
S1.019	S20	1	67.596	-0.231	0.000	0.12		28.4	OK

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Summary Wizard of 240 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	6	88.543	-0.182	0.000	0.08		3.8	OK
S1.001	S2	6	88.105	-0.403	0.000	0.02		5.5	OK
S1.002	S3	6	87.964	-0.366	0.000	0.08		15.8	OK
S2.000	S22	6	92.545	-0.180	0.000	0.09		9.6	OK
S2.001	S23	6	90.404	-0.174	0.000	0.12		12.2	OK
S2.002	S24	6	89.432	-0.241	0.000	0.09		17.7	OK
S2.003	S25	6	88.555	-0.239	0.000	0.09		18.0	OK
S1.003	S4	6	87.852	-0.309	0.000	0.22		34.4	OK
S1.004	S5	6	87.802	-0.309	0.000	0.22		44.6	OK
S1.005	S6	6	87.531	-0.344	0.000	0.13		51.6	OK
S3.000	S26	6	87.797	-0.178	0.000	0.10		6.1	OK
S3.001	S27	6	87.264	-0.177	0.000	0.10		7.0	OK
S1.006	S7	6	86.773	-0.315	0.000	0.20		59.9	OK
S4.000	S28	6	87.257	-0.243	0.000	0.08		9.0	OK
S4.001	S29	6	87.007	-0.229	0.000	0.13		14.2	OK
S4.002	S30	6	86.630	-0.245	0.000	0.08		21.4	OK
S1.007	S8	2	84.203	-0.181	0.000	0.02		85.8	OK
S1.008	S9	2	84.170	-0.107	0.000	0.02		65.2	OK
S5.000	S31	6	86.432	-0.193	0.000	0.05		6.8	OK
S6.000	S35	10	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 240 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	2	84.150	-0.269	0.000	0.04		7.3	OK
S5.002	S33	2	84.150	-0.251	0.000	0.00		9.4	OK
S5.003	S34	2	84.150	-0.200	0.000	0.00		8.4	OK
S1.009	S10	2	84.149	-0.071	0.000	0.01		39.1	OK
S7.000	S36	6	87.833	-0.267	0.000	0.03		8.5	OK
S7.001	S37	6	84.913	-0.260	0.000	0.04		10.3	OK
S7.002	S38	2	84.108	-0.121	0.000	0.00		9.5	OK
S7.003	S39	2	84.107	-0.080	0.000	0.00		4.2	OK
S1.010	S11	2	84.107	1.506	0.000	0.46		28.3	SURCHARGED
S1.011	S12	2	82.382	-0.179	0.000	0.34		28.3	OK
S1.012	S13	2	82.149	-0.202	0.000	0.24		28.3	OK
S1.013	S14	2	81.681	-0.196	0.000	0.26		28.3	OK
S1.014	S15	2	81.321	-0.209	0.000	0.20		28.3	OK
S1.015	S16	2	80.347	-0.241	0.000	0.09		28.3	OK
S1.016	S17	2	76.002	-0.206	0.000	0.22		28.3	OK
S1.017	S18	2	73.397	-0.241	0.000	0.09		28.3	OK
S1.018	S19	2	69.958	-0.238	0.000	0.09		28.3	OK
S1.019	S20	2	67.596	-0.231	0.000	0.12		28.3	OK

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Summary Wizard of 360 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	7	88.536	-0.189	0.000	0.06		2.8	OK
S1.001	S2	7	88.096	-0.412	0.000	0.02		4.0	OK
S1.002	S3	7	87.950	-0.380	0.000	0.06		11.6	OK
S2.000	S22	7	92.538	-0.187	0.000	0.07		7.0	OK
S2.001	S23	7	90.398	-0.180	0.000	0.09		9.0	OK
S2.002	S24	7	89.422	-0.251	0.000	0.06		13.0	OK
S2.003	S25	7	88.544	-0.250	0.000	0.07		13.3	OK
S1.003	S4	7	87.830	-0.331	0.000	0.16		25.3	OK
S1.004	S5	7	87.780	-0.331	0.000	0.16		32.8	OK
S1.005	S6	7	87.517	-0.358	0.000	0.09		38.0	OK
S3.000	S26	7	87.790	-0.185	0.000	0.07		4.5	OK
S3.001	S27	7	87.257	-0.184	0.000	0.08		5.1	OK
S1.006	S7	7	86.752	-0.336	0.000	0.15		44.1	OK
S4.000	S28	7	87.248	-0.252	0.000	0.06		6.6	OK
S4.001	S29	7	86.997	-0.239	0.000	0.09		10.5	OK
S4.002	S30	7	86.621	-0.254	0.000	0.06		15.8	OK
S1.007	S8	4	84.115	-0.269	0.000	0.02		63.2	OK
S1.008	S9	4	84.096	-0.181	0.000	0.02		49.3	OK
S5.000	S31	7	86.427	-0.198	0.000	0.04		5.0	OK
S6.000	S35	3	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 360 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	4	84.084	-0.335	0.000	0.03		5.4	OK
S5.002	S33	4	84.084	-0.317	0.000	0.00		7.0	OK
S5.003	S34	4	84.084	-0.266	0.000	0.00		6.8	OK
S1.009	S10	4	84.083	-0.137	0.000	0.01		33.0	OK
S7.000	S36	7	87.828	-0.272	0.000	0.02		6.3	OK
S7.001	S37	7	84.908	-0.265	0.000	0.03		7.6	OK
S7.002	S38	4	84.055	-0.174	0.000	0.00		7.1	OK
S7.003	S39	4	84.055	-0.132	0.000	0.00		3.8	OK
S1.010	S11	4	84.054	1.453	0.000	0.45		27.8	SURCHARGED
S1.011	S12	4	82.381	-0.180	0.000	0.34		27.8	OK
S1.012	S13	4	82.149	-0.202	0.000	0.23		27.8	OK
S1.013	S14	4	81.680	-0.197	0.000	0.26		27.8	OK
S1.014	S15	4	81.320	-0.210	0.000	0.20		27.8	OK
S1.015	S16	4	80.346	-0.242	0.000	0.08		27.8	OK
S1.016	S17	4	76.002	-0.206	0.000	0.21		27.8	OK
S1.017	S18	4	73.397	-0.241	0.000	0.09		27.8	OK
S1.018	S19	4	69.957	-0.239	0.000	0.09		27.8	OK
S1.019	S20	4	67.595	-0.232	0.000	0.12		27.8	OK

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Summary Wizard of 480 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	8	88.532	-0.193	0.000	0.05		2.2	OK
S1.001	S2	8	88.089	-0.419	0.000	0.01		3.2	OK
S1.002	S3	8	87.942	-0.388	0.000	0.05		9.3	OK
S2.000	S22	8	92.533	-0.192	0.000	0.05		5.7	OK
S2.001	S23	8	90.392	-0.186	0.000	0.07		7.2	OK
S2.002	S24	8	89.416	-0.257	0.000	0.05		10.4	OK
S2.003	S25	8	88.538	-0.256	0.000	0.05		10.7	OK
S1.003	S4	8	87.817	-0.344	0.000	0.13		20.3	OK
S1.004	S5	8	87.767	-0.344	0.000	0.13		26.4	OK
S1.005	S6	8	87.506	-0.369	0.000	0.08		30.5	OK
S3.000	S26	8	87.785	-0.190	0.000	0.06		3.6	OK
S3.001	S27	8	87.252	-0.189	0.000	0.06		4.1	OK
S1.006	S7	8	86.740	-0.348	0.000	0.12		35.4	OK
S4.000	S28	8	87.242	-0.258	0.000	0.05		5.3	OK
S4.001	S29	8	86.990	-0.246	0.000	0.07		8.4	OK
S4.002	S30	8	86.616	-0.259	0.000	0.05		12.7	OK
S1.007	S8	6	84.024	-0.360	0.000	0.01		50.9	OK
S1.008	S9	5	84.010	-0.267	0.000	0.01		40.7	OK
S5.000	S31	8	86.425	-0.200	0.000	0.03		4.0	OK
S6.000	S35	2	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 480 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	6	84.003	-0.416	0.000	0.02		4.3	OK
S5.002	S33	5	84.003	-0.398	0.000	0.00		5.6	OK
S5.003	S34	5	84.003	-0.347	0.000	0.00		6.0	OK
S1.009	S10	5	84.002	-0.218	0.000	0.01		29.6	OK
S7.000	S36	8	87.823	-0.277	0.000	0.02		5.0	OK
S7.001	S37	8	84.905	-0.268	0.000	0.03		6.1	OK
S7.002	S38	5	83.983	-0.246	0.000	0.00		5.8	OK
S7.003	S39	5	83.983	-0.204	0.000	0.00		3.5	OK
S1.010	S11	5	83.982	1.381	0.000	0.44		27.1	SURCHARGED
S1.011	S12	5	82.379	-0.182	0.000	0.33		27.1	OK
S1.012	S13	5	82.147	-0.204	0.000	0.23		27.1	OK
S1.013	S14	5	81.679	-0.198	0.000	0.25		27.1	OK
S1.014	S15	5	81.318	-0.212	0.000	0.19		27.1	OK
S1.015	S16	5	80.345	-0.243	0.000	0.08		27.1	OK
S1.016	S17	5	76.000	-0.208	0.000	0.21		27.1	OK
S1.017	S18	5	73.396	-0.242	0.000	0.08		27.1	OK
S1.018	S19	5	69.956	-0.240	0.000	0.09		27.1	OK
S1.019	S20	5	67.594	-0.233	0.000	0.11		27.1	OK

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Summary Wizard of 600 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	9	88.529	-0.196	0.000	0.04		1.9	OK
S1.001	S2	9	88.084	-0.424	0.000	0.01		2.7	OK
S1.002	S3	9	87.937	-0.393	0.000	0.04		7.9	OK
S2.000	S22	9	92.530	-0.195	0.000	0.04		4.8	OK
S2.001	S23	9	90.388	-0.190	0.000	0.06		6.1	OK
S2.002	S24	9	89.413	-0.260	0.000	0.04		8.8	OK
S2.003	S25	9	88.535	-0.259	0.000	0.05		9.0	OK
S1.003	S4	9	87.809	-0.352	0.000	0.11		17.2	OK
S1.004	S5	9	87.759	-0.352	0.000	0.11		22.2	OK
S1.005	S6	9	87.498	-0.377	0.000	0.06		25.8	OK
S3.000	S26	9	87.782	-0.193	0.000	0.05		3.1	OK
S3.001	S27	9	87.249	-0.192	0.000	0.05		3.5	OK
S1.006	S7	9	86.732	-0.356	0.000	0.10		29.9	OK
S4.000	S28	9	87.239	-0.261	0.000	0.04		4.5	OK
S4.001	S29	9	86.985	-0.251	0.000	0.06		7.1	OK
S4.002	S30	9	86.613	-0.262	0.000	0.04		10.7	OK
S1.007	S8	7	83.940	-0.444	0.000	0.01		43.0	OK
S1.008	S9	7	83.929	-0.348	0.000	0.01		35.1	OK
S5.000	S31	9	86.424	-0.201	0.000	0.02		3.4	OK
S6.000	S35	1	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 600 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	9	83.924	-0.495	0.000	0.02		3.7	OK
S5.002	S33	7	83.924	-0.477	0.000	0.00		4.8	OK
S5.003	S34	7	83.924	-0.426	0.000	0.00		5.4	OK
S1.009	S10	7	83.923	-0.297	0.000	0.01		27.4	OK
S7.000	S36	9	87.819	-0.281	0.000	0.01		4.2	OK
S7.001	S37	9	84.903	-0.270	0.000	0.02		5.2	OK
S7.002	S38	7	83.908	-0.321	0.000	0.00		4.9	OK
S7.003	S39	7	83.908	-0.279	0.000	0.00		3.3	OK
S1.010	S11	7	83.908	1.307	0.000	0.43		26.4	SURCHARGED
S1.011	S12	7	82.377	-0.184	0.000	0.32		26.4	OK
S1.012	S13	7	82.146	-0.205	0.000	0.22		26.4	OK
S1.013	S14	7	81.678	-0.199	0.000	0.25		26.4	OK
S1.014	S15	7	81.317	-0.213	0.000	0.19		26.4	OK
S1.015	S16	7	80.344	-0.244	0.000	0.08		26.4	OK
S1.016	S17	7	75.999	-0.209	0.000	0.20		26.4	OK
S1.017	S18	7	73.395	-0.243	0.000	0.08		26.4	OK
S1.018	S19	7	69.956	-0.240	0.000	0.09		26.4	OK
S1.019	S20	7	67.593	-0.234	0.000	0.11		26.4	OK

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Summary Wizard of 720 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model		FSR	Ratio R 0.372
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
Sensitivity flows(s) (%)	0

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	10	88.527	-0.198	0.000	0.04		1.6	OK
S1.001	S2	10	88.081	-0.427	0.000	0.01		2.4	OK
S1.002	S3	10	87.934	-0.396	0.000	0.03		6.8	OK
S2.000	S22	10	92.528	-0.197	0.000	0.04		4.2	OK
S2.001	S23	10	90.386	-0.192	0.000	0.05		5.3	OK
S2.002	S24	10	89.410	-0.263	0.000	0.04		7.7	OK
S2.003	S25	10	88.532	-0.262	0.000	0.04		7.8	OK
S1.003	S4	10	87.803	-0.358	0.000	0.09		14.9	OK
S1.004	S5	10	87.753	-0.358	0.000	0.09		19.4	OK
S1.005	S6	10	87.493	-0.382	0.000	0.06		22.4	OK
S3.000	S26	10	87.780	-0.195	0.000	0.04		2.7	OK
S3.001	S27	10	87.246	-0.195	0.000	0.04		3.0	OK
S1.006	S7	10	86.726	-0.362	0.000	0.09		26.0	OK
S4.000	S28	10	87.236	-0.264	0.000	0.04		3.9	OK
S4.001	S29	10	86.981	-0.255	0.000	0.05		6.2	OK
S4.002	S30	10	86.610	-0.265	0.000	0.03		9.3	OK
S1.007	S8	8	83.855	-0.529	0.000	0.01		37.5	OK
S1.008	S9	8	83.847	-0.430	0.000	0.01		31.1	OK
S5.000	S31	10	86.423	-0.202	0.000	0.02		3.0	OK
S6.000	S35	6	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 720 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	10	83.867	-0.552	0.000	0.02		3.2	OK
S5.002	S33	8	83.842	-0.559	0.000	0.00		4.2	OK
S5.003	S34	8	83.842	-0.508	0.000	0.00		5.0	OK
S1.009	S10	8	83.842	-0.378	0.000	0.01		25.7	OK
S7.000	S36	10	87.817	-0.283	0.000	0.01		3.7	OK
S7.001	S37	10	84.899	-0.274	0.000	0.02		4.5	OK
S7.002	S38	8	83.830	-0.399	0.000	0.00		4.3	OK
S7.003	S39	8	83.830	-0.357	0.000	0.00		3.1	OK
S1.010	S11	8	83.830	1.229	0.000	0.42		25.7	SURCHARGED
S1.011	S12	8	82.375	-0.186	0.000	0.31		25.6	OK
S1.012	S13	8	82.145	-0.206	0.000	0.21		25.7	OK
S1.013	S14	8	81.676	-0.201	0.000	0.24		25.7	OK
S1.014	S15	8	81.316	-0.214	0.000	0.18		25.7	OK
S1.015	S16	8	80.343	-0.245	0.000	0.08		25.7	OK
S1.016	S17	8	75.998	-0.210	0.000	0.20		25.7	OK
S1.017	S18	8	73.394	-0.244	0.000	0.08		25.7	OK
S1.018	S19	8	69.955	-0.241	0.000	0.09		25.7	OK
S1.019	S20	8	67.593	-0.234	0.000	0.11		25.7	OK

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Summary Wizard of 960 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	11	88.525	-0.200	0.000	0.03		1.3	OK
S1.001	S2	11	88.076	-0.432	0.000	0.01		1.9	OK
S1.002	S3	11	87.929	-0.401	0.000	0.03		5.5	OK
S2.000	S22	11	92.526	-0.199	0.000	0.03		3.3	OK
S2.001	S23	11	90.382	-0.196	0.000	0.04		4.3	OK
S2.002	S24	11	89.407	-0.266	0.000	0.03		6.2	OK
S2.003	S25	11	88.529	-0.265	0.000	0.03		6.3	OK
S1.003	S4	11	87.792	-0.369	0.000	0.08		12.0	OK
S1.004	S5	11	87.742	-0.369	0.000	0.08		15.5	OK
S1.005	S6	11	87.485	-0.390	0.000	0.04		18.0	OK
S3.000	S26	11	87.777	-0.198	0.000	0.03		2.1	OK
S3.001	S27	11	87.243	-0.198	0.000	0.04		2.4	OK
S1.006	S7	11	86.715	-0.373	0.000	0.07		20.9	OK
S4.000	S28	11	87.233	-0.267	0.000	0.03		3.1	OK
S4.001	S29	11	86.976	-0.260	0.000	0.04		5.0	OK
S4.002	S30	11	86.608	-0.267	0.000	0.03		7.5	OK
S1.007	S8	10	83.713	-0.671	0.000	0.01		30.1	OK
S1.008	S9	10	83.707	-0.570	0.000	0.01		25.8	OK
S5.000	S31	11	86.418	-0.207	0.000	0.02		2.4	OK
S6.000	S35	5	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 960 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	11	83.858	-0.561	0.000	0.01		2.5	OK
S5.002	S33	10	83.704	-0.697	0.000	0.00		3.4	OK
S5.003	S34	10	83.704	-0.646	0.000	0.00		4.5	OK
S1.009	S10	10	83.703	-0.517	0.000	0.01		23.4	OK
S7.000	S36	11	87.813	-0.287	0.000	0.01		3.0	OK
S7.001	S37	11	84.894	-0.279	0.000	0.01		3.6	OK
S7.002	S38	10	83.695	-0.534	0.000	0.00		3.5	OK
S7.003	S39	10	83.695	-0.492	0.000	0.00		2.9	OK
S1.010	S11	10	83.695	1.094	0.000	0.40		24.3	SURCHARGED
S1.011	S12	10	82.372	-0.189	0.000	0.29		24.3	OK
S1.012	S13	10	82.142	-0.209	0.000	0.20		24.3	OK
S1.013	S14	10	81.673	-0.204	0.000	0.23		24.3	OK
S1.014	S15	10	81.313	-0.217	0.000	0.17		24.3	OK
S1.015	S16	10	80.341	-0.247	0.000	0.07		24.3	OK
S1.016	S17	10	75.995	-0.213	0.000	0.19		24.3	OK
S1.017	S18	10	73.392	-0.246	0.000	0.07		24.3	OK
S1.018	S19	10	69.953	-0.243	0.000	0.08		24.3	OK
S1.019	S20	10	67.591	-0.236	0.000	0.10		24.3	OK

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Summary Wizard of 1440 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.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 Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

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

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.372
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
Sensitivity flows(s) (%)	0

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	12	88.523	-0.202	0.000	0.02		1.0	OK
S1.001	S2	12	88.071	-0.437	0.000	0.01		1.4	OK
S1.002	S3	12	87.923	-0.407	0.000	0.02		4.0	OK
S2.000	S22	12	92.523	-0.202	0.000	0.02		2.4	OK
S2.001	S23	12	90.379	-0.199	0.000	0.03		3.1	OK
S2.002	S24	12	89.403	-0.270	0.000	0.02		4.5	OK
S2.003	S25	12	88.525	-0.269	0.000	0.02		4.6	OK
S1.003	S4	12	87.779	-0.382	0.000	0.06		8.8	OK
S1.004	S5	12	87.729	-0.382	0.000	0.06		11.4	OK
S1.005	S6	12	87.478	-0.397	0.000	0.03		13.2	OK
S3.000	S26	12	87.774	-0.201	0.000	0.03		1.6	OK
S3.001	S27	12	87.240	-0.201	0.000	0.03		1.8	OK
S1.006	S7	12	86.703	-0.385	0.000	0.05		15.3	OK
S4.000	S28	12	87.230	-0.270	0.000	0.02		2.3	OK
S4.001	S29	12	86.971	-0.265	0.000	0.03		3.6	OK
S4.002	S30	12	86.603	-0.272	0.000	0.02		5.5	OK
S1.007	S8	12	83.494	-0.890	0.000	0.01		22.1	OK
S1.008	S9	12	83.490	-0.787	0.000	0.01		19.9	OK
S5.000	S31	12	86.413	-0.212	0.000	0.01		1.7	OK
S6.000	S35	4	84.350	-0.300	0.000	0.00		0.0	OK

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Summary Wizard of 1440 minute 30 year Winter Q+0% for 6015 1 IN 30 STORM REV A.SWS

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
S5.001	S32	12	83.847	-0.572	0.000	0.01		1.9	OK
S5.002	S33	12	83.488	-0.913	0.000	0.00		2.6	OK
S5.003	S34	12	83.488	-0.862	0.000	0.00		3.8	OK
S1.009	S10	12	83.488	-0.732	0.000	0.01		20.4	OK
S7.000	S36	12	87.810	-0.290	0.000	0.01		2.2	OK
S7.001	S37	12	84.888	-0.285	0.000	0.01		2.6	OK
S7.002	S38	12	83.483	-0.746	0.000	0.00		2.6	OK
S7.003	S39	12	83.483	-0.704	0.000	0.00		2.6	OK
S1.010	S11	12	83.483	0.882	0.000	0.36		22.0	SURCHARGED
S1.011	S12	12	82.366	-0.195	0.000	0.27		22.0	OK
S1.012	S13	12	82.137	-0.214	0.000	0.18		22.0	OK
S1.013	S14	12	81.669	-0.208	0.000	0.21		22.0	OK
S1.014	S15	12	81.308	-0.222	0.000	0.16		22.0	OK
S1.015	S16	12	80.338	-0.250	0.000	0.07		22.0	OK
S1.016	S17	12	75.990	-0.218	0.000	0.17		22.0	OK
S1.017	S18	12	73.389	-0.249	0.000	0.07		22.0	OK
S1.018	S19	12	69.949	-0.247	0.000	0.07		22.0	OK
S1.019	S20	12	67.588	-0.239	0.000	0.09		22.0	OK

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FOUL SEWERAGE DESIGN

Design Criteria for 6015 FOUL REV A.FWS

Pipe Sizes 6015 FOUL Manhole Sizes 6015 FOUL

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)	1.00
Domestic Peak Flow Factor	6.00	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Network Design Table for 6015 FOUL REV A.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	21.663	1.032	21.0	0.000	12	0.0	1.500	o	150	Pipe/Conduit	
F1.001	19.854	1.468	13.5	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F1.002	10.201	0.213	47.9	0.000	8	0.0	1.500	o	150	Pipe/Conduit	
F1.003	12.232	0.122	100.3	0.000	2	0.0	1.500	o	150	Pipe/Conduit	
F1.004	46.104	0.384	120.1	0.000	6	0.0	1.500	o	150	Pipe/Conduit	
F1.005	36.200	0.592	61.1	0.000	5	0.0	1.500	o	150	Pipe/Conduit	
F2.000	13.192	0.661	20.0	0.000	4	0.0	1.500	o	150	Pipe/Conduit	
F1.006	20.812	0.566	36.8	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F3.000	23.462	0.293	80.1	0.000	6	0.0	1.500	o	150	Pipe/Conduit	
F3.001	26.092	0.326	80.0	0.000	7	0.0	1.500	o	150	Pipe/Conduit	
F3.002	21.966	0.275	79.9	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)
F1.000	89.950	0.000	0.0	12	0.0	14	0.69	1.92	33.9	0.6
F1.001	88.918	0.000	0.0	12	0.0	12	0.81	2.39	42.2	0.6
F1.002	87.450	0.000	0.0	20	0.0	21	0.62	1.27	22.4	0.9
F1.003	87.237	0.000	0.0	22	0.0	26	0.49	0.87	15.5	1.0
F1.004	87.115	0.000	0.0	28	0.0	31	0.50	0.80	14.1	1.3
F1.005	86.731	0.000	0.0	33	0.0	29	0.66	1.12	19.8	1.5
F2.000	86.800	0.000	0.0	4	0.0	8	0.49	1.97	34.8	0.2
F1.006	86.139	0.000	0.0	37	0.0	27	0.82	1.45	25.6	1.7
F3.000	86.700	0.000	0.0	6	0.0	14	0.35	0.98	17.3	0.3
F3.001	86.407	0.000	0.0	13	0.0	20	0.45	0.98	17.3	0.6
F3.002	86.081	0.000	0.0	13	0.0	20	0.45	0.98	17.3	0.6

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Network Design Table for 6015 FOUL REV A.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
F3.003	14.622	0.233	62.8	0.000	6	0.0	1.500	o	150	Pipe/Conduit	
F1.007	38.820	0.554	70.1	0.000	4	0.0	1.500	o	150	Pipe/Conduit	
F1.008	31.690	3.119	10.2	0.000	3	0.0	1.500	o	150	Pipe/Conduit	
F4.000	11.836	0.148	80.0	0.000	3	0.0	1.500	o	150	Pipe/Conduit	
F4.001	22.227	0.278	80.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F4.002	52.322	0.654	80.0	0.000	11	0.0	1.500	o	150	Pipe/Conduit	
F1.009	27.975	0.233	120.1	0.000	6	0.0	1.500	o	150	Pipe/Conduit	
F1.010	4.986	0.042	120.0	0.000	5	0.0	1.500	o	150	Pipe/Conduit	
F1.011	28.586	0.238	120.0	0.000	9	0.0	1.500	o	150	Pipe/Conduit	
F1.012	34.024	0.290	117.3	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F1.013	30.815	0.342	90.1	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F1.014	50.324	0.915	55.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F1.015	44.328	4.433	10.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F1.016	52.463	0.807	65.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F1.017	36.930	3.693	10.0	0.000	0	0.0	1.500	o	150	Pipe/Conduit	
F1.018	16.429	1.643	10.0	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)
F3.003	85.806	0.000	0.0	19	0.0	22	0.55	1.11	19.6	0.9
F1.007	85.573	0.000	0.0	60	0.0	40	0.75	1.05	18.5	2.8
F1.008	85.019	0.000	0.0	63	0.0	25	1.51	2.76	48.8	3.0
F4.000	85.000	0.000	0.0	3	0.0	10	0.28	0.98	17.3	0.1
F4.001	84.852	0.000	0.0	3	0.0	10	0.28	0.98	17.3	0.1
F4.002	84.574	0.000	0.0	14	0.0	20	0.46	0.98	17.3	0.7
F1.009	81.900	0.000	0.0	83	0.0	54	0.68	0.80	14.1	3.9
F1.010	81.667	0.000	0.0	88	0.0	56	0.69	0.80	14.1	4.1
F1.011	81.625	0.000	0.0	97	0.0	59	0.71	0.80	14.1	4.5
F1.012	81.387	0.000	0.0	97	0.0	58	0.72	0.81	14.3	4.5
F1.013	81.097	0.000	0.0	97	0.0	54	0.79	0.92	16.3	4.5
F1.014	80.755	0.000	0.0	97	0.0	48	0.94	1.18	20.9	4.5
F1.015	79.840	0.000	0.0	97	0.0	31	1.73	2.78	49.1	4.5
F1.016	75.407	0.000	0.0	97	0.0	50	0.89	1.09	19.2	4.5
F1.017	73.720	0.000	0.0	97	0.0	31	1.73	2.78	49.1	4.5
F1.018	70.027	0.000	0.0	97	0.0	31	1.73	2.78	49.1	4.5

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Manhole Schedules for 6015 FOUL REV A.FWS

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
F1	91.906	1.956	Open Manhole	1200	F1.000	89.950	150				
F2	90.881	1.963	Open Manhole	1200	F1.001	88.918	150	F1.000	88.918	150	
F3	90.200	2.750	Open Manhole	1200	F1.002	87.450	150	F1.001	87.450	150	
F4	90.081	2.844	Open Manhole	1200	F1.003	87.237	150	F1.002	87.237	150	
F5	90.049	2.934	Open Manhole	1200	F1.004	87.115	150	F1.003	87.115	150	
F6	89.432	2.701	Open Manhole	1200	F1.005	86.731	150	F1.004	86.731	150	
F21	88.868	2.068	Open Manhole	1200	F2.000	86.800	150				
F7	88.633	2.494	Open Manhole	1200	F1.006	86.139	150	F1.005	86.139	150	
								F2.000	86.139	150	
F22	88.888	2.188	Open Manhole	1200	F3.000	86.700	150				
F23	88.869	2.462	Open Manhole	1200	F3.001	86.407	150	F3.000	86.407	150	
F24	88.293	2.212	Open Manhole	1200	F3.002	86.081	150	F3.001	86.081	150	
F25	87.913	2.107	Open Manhole	1200	F3.003	85.806	150	F3.002	85.806	150	
F8	88.088	2.515	Open Manhole	1200	F1.007	85.573	150	F1.006	85.573	150	
								F3.003	85.573	150	
F9	86.809	1.790	Open Manhole	1200	F1.008	85.019	150	F1.007	85.019	150	
F26	87.052	2.052	Open Manhole	1200	F4.000	85.000	150				
F27	86.760	1.908	Open Manhole	1200	F4.001	84.852	150	F4.000	84.852	150	
F28	86.472	1.898	Open Manhole	1200	F4.002	84.574	150	F4.001	84.574	150	
F10	85.820	3.920	Open Manhole	1500	F1.009	81.900	150	F1.008	81.900	150	
								F4.002	83.920	150	2020
F11	86.219	4.552	Open Manhole	1200	F1.010	81.667	150	F1.009	81.667	150	
F12	86.200	4.575	Open Manhole	1200	F1.011	81.625	150	F1.010	81.625	150	
F13	84.124	2.737	Open Manhole	1200	F1.012	81.387	150	F1.011	81.387	150	
F14	84.029	2.932	Open Manhole	1200	F1.013	81.097	150	F1.012	81.097	150	
F15	82.985	2.230	Open Manhole	1200	F1.014	80.755	150	F1.013	80.755	150	
F16	82.471	2.631	Open Manhole	1200	F1.015	79.840	150	F1.014	79.840	150	
F17	77.858	2.451	Open Manhole	1200	F1.016	75.407	150	F1.015	75.407	150	
F18	77.221	3.501	Open Manhole	1200	F1.017	73.720	150	F1.016	74.600	150	880
F19	71.259	1.232	Open Manhole	1200	F1.018	70.027	150	F1.017	70.027	150	
F20	69.349	0.965	Open Manhole	1200		OUTFALL		F1.018	68.384	150	

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PIPELINE SCHEDULES for 6015 FOUL REV A.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	91.906	89.950	1.806	Open Manhole	1200
F1.001	o	150	F2	90.881	88.918	1.813	Open Manhole	1200
F1.002	o	150	F3	90.200	87.450	2.600	Open Manhole	1200
F1.003	o	150	F4	90.081	87.237	2.694	Open Manhole	1200
F1.004	o	150	F5	90.049	87.115	2.784	Open Manhole	1200
F1.005	o	150	F6	89.432	86.731	2.551	Open Manhole	1200
F2.000	o	150	F21	88.868	86.800	1.918	Open Manhole	1200
F1.006	o	150	F7	88.633	86.139	2.344	Open Manhole	1200
F3.000	o	150	F22	88.888	86.700	2.038	Open Manhole	1200
F3.001	o	150	F23	88.869	86.407	2.312	Open Manhole	1200
F3.002	o	150	F24	88.293	86.081	2.062	Open Manhole	1200
F3.003	o	150	F25	87.913	85.806	1.957	Open Manhole	1200
F1.007	o	150	F8	88.088	85.573	2.365	Open Manhole	1200
F1.008	o	150	F9	86.809	85.019	1.640	Open Manhole	1200
F4.000	o	150	F26	87.052	85.000	1.902	Open Manhole	1200
F4.001	o	150	F27	86.760	84.852	1.758	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	21.663	21.0	F2	90.881	88.918	1.813	Open Manhole	1200
F1.001	19.854	13.5	F3	90.200	87.450	2.600	Open Manhole	1200
F1.002	10.201	47.9	F4	90.081	87.237	2.694	Open Manhole	1200
F1.003	12.232	100.3	F5	90.049	87.115	2.784	Open Manhole	1200
F1.004	46.104	120.1	F6	89.432	86.731	2.551	Open Manhole	1200
F1.005	36.200	61.1	F7	88.633	86.139	2.344	Open Manhole	1200
F2.000	13.192	20.0	F7	88.633	86.139	2.344	Open Manhole	1200
F1.006	20.812	36.8	F8	88.088	85.573	2.365	Open Manhole	1200
F3.000	23.462	80.1	F23	88.869	86.407	2.312	Open Manhole	1200
F3.001	26.092	80.0	F24	88.293	86.081	2.062	Open Manhole	1200
F3.002	21.966	79.9	F25	87.913	85.806	1.957	Open Manhole	1200
F3.003	14.622	62.8	F8	88.088	85.573	2.365	Open Manhole	1200
F1.007	38.820	70.1	F9	86.809	85.019	1.640	Open Manhole	1200
F1.008	31.690	10.2	F10	85.820	81.900	3.770	Open Manhole	1500
F4.000	11.836	80.0	F27	86.760	84.852	1.758	Open Manhole	1200
F4.001	22.227	80.0	F28	86.472	84.574	1.748	Open Manhole	1200

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PIPELINE SCHEDULES for 6015 FOUL REV A.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)
F4.002	o	150	F28	86.472	84.574	1.748	Open Manhole	1200
F1.009	o	150	F10	85.820	81.900	3.770	Open Manhole	1500
F1.010	o	150	F11	86.219	81.667	4.402	Open Manhole	1200
F1.011	o	150	F12	86.200	81.625	4.425	Open Manhole	1200
F1.012	o	150	F13	84.124	81.387	2.587	Open Manhole	1200
F1.013	o	150	F14	84.029	81.097	2.782	Open Manhole	1200
F1.014	o	150	F15	82.985	80.755	2.080	Open Manhole	1200
F1.015	o	150	F16	82.471	79.840	2.481	Open Manhole	1200
F1.016	o	150	F17	77.858	75.407	2.301	Open Manhole	1200
F1.017	o	150	F18	77.221	73.720	3.351	Open Manhole	1200
F1.018	o	150	F19	71.259	70.027	1.082	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)
F4.002	52.322	80.0	F10	85.820	83.920	1.750	Open Manhole	1500
F1.009	27.975	120.1	F11	86.219	81.667	4.402	Open Manhole	1200
F1.010	4.986	120.0	F12	86.200	81.625	4.425	Open Manhole	1200
F1.011	28.586	120.0	F13	84.124	81.387	2.587	Open Manhole	1200
F1.012	34.024	117.3	F14	84.029	81.097	2.782	Open Manhole	1200
F1.013	30.815	90.1	F15	82.985	80.755	2.080	Open Manhole	1200
F1.014	50.324	55.0	F16	82.471	79.840	2.481	Open Manhole	1200
F1.015	44.328	10.0	F17	77.858	75.407	2.301	Open Manhole	1200
F1.016	52.463	65.0	F18	77.221	74.600	2.471	Open Manhole	1200
F1.017	36.930	10.0	F19	71.259	70.027	1.082	Open Manhole	1200
F1.018	16.429	10.0	F20	69.349	68.384	0.815	Open Manhole	1200

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