



Project					
Alpha Place, Jordan Street, Manchester					
Made By	Date	Checked By	Date	Rev	Contract No./Sheet number
PSS	Jul-21			A	9198 1
<u>1.0 INTRODUCTION</u> The flood risk assessment and drainage assessment for this development has agreed a discharge rate of 5.0l/s from the entire site. This flow is to be directed to the combined sewer under Jordan Street given there is no room on the site to allow infiltration methods and the use of a watercourse is not viable. A climate change allowance of 40% has been taken within the designs and no flood waters will be allowed to leave the site within any storm event up to and including the 100-year event. No surface flooding will be allowed for the 30-year storm event. Calculations indicate that, for all storm events within the 100 year return period including climate change, there is no surface flooding. This means that the risk of affecting adjacent land is very low with no surface water to control on the surface of the site. MicroDrainage calculations are provided within Appendix A taking the discharge rate of 5.0l/s. These designs utilise a 3.0x2.0x1.0m deep geo-cellular tank as the attenuation with Hydrobrake controlling the rate of discharge.					

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STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Storm

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - England and Wales

Return Period (years)	2	PIMP (%)	100
M5-60 (mm)	18.000	Add Flow / Climate Change (%)	0
Ratio R	0.361	Minimum Backdrop Height (m)	0.750
Maximum Rainfall (mm/hr)	250	Maximum Backdrop Height (m)	1.500
Maximum Time of Concentration (mins)	30	Min Design Depth for Optimisation (m)	0.800
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)	300

Designed with Level Soffits

Time Area Diagram for Storm

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.040	4-8	0.005

Total Area Contributing (ha) = 0.045

Total Pipe Volume (m³) = 0.560

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
1.000	7.107	0.069	103.0	0.015	3.00	0.0	0.600	o	100	Pipe/Conduit	
1.001	4.757	0.046	103.0	0.015	0.00	0.0	0.600	o	100	Pipe/Conduit	
1.002	2.577	0.015	171.8	0.015	0.00	0.0	0.600	o	150	Pipe/Conduit	
1.003	1.734	0.010	171.8	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
1.004	22.111	0.126	175.1	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.000	70.96	3.16	28.000	0.015	0.0	0.0	0.0	0.76	5.9	2.9
1.001	70.21	3.26	27.931	0.030	0.0	0.0	0.0	0.76	5.9	5.7
1.002	69.81	3.32	26.835	0.045	0.0	0.0	0.0	0.76	13.5	8.5
1.003	69.55	3.36	26.820	0.045	0.0	0.0	0.0	0.76	13.5	8.5
1.004	66.35	3.84	26.810	0.045	0.0	0.0	0.0	0.76	13.4	8.5

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Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam., L*W (mm)	PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
SWMH 01	28.900	0.900	Open Manhole	610	1.000	28.000	100				
SWMH 02	28.900	0.969	Open Manhole	610	1.001	27.931	100	1.000	27.931	100	
SWMH 03	28.900	2.065	Open Manhole	1500	1.002	26.835	150	1.001	27.885	100	1000
CWMH 01	29.040	2.220	Open Manhole	1200	1.003	26.820	150	1.002	26.820	150	
CWMH 02	28.700	1.890	Open Manhole	1200	1.004	26.810	150	1.003	26.810	150	
	29.100	2.416	Open Manhole	1200		OUTFALL		1.004	26.684	150	

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
SWMH 01	37.819	-5.094	37.819	-5.094	Required	
SWMH 02	37.837	2.012	37.837	2.012	Required	
SWMH 03	37.819	6.769	37.819	6.769	Required	
CWMH 01	39.752	8.473	39.752	8.473	Required	
CWMH 02	39.763	10.207	39.763	10.207	Required	
	61.874	10.220			No Entry	

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PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.000	o	100	SWMH 01	28.900	28.000	0.800	Open Manhole	610
1.001	o	100	SWMH 02	28.900	27.931	0.869	Open Manhole	610
1.002	o	150	SWMH 03	28.900	26.835	1.915	Open Manhole	1500
1.003	o	150	CWMH 01	29.040	26.820	2.070	Open Manhole	1200
1.004	o	150	CWMH 02	28.700	26.810	1.740	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)
1.000	7.107	103.0	SWMH 02	28.900	27.931	0.869	Open Manhole	610
1.001	4.757	103.0	SWMH 03	28.900	27.885	0.915	Open Manhole	1500
1.002	2.577	171.8	CWMH 01	29.040	26.820	2.070	Open Manhole	1200
1.003	1.734	171.8	CWMH 02	28.700	26.810	1.740	Open Manhole	1200
1.004	22.111	175.1		29.100	26.684	2.266	Open Manhole	1200

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
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1.004		29.100	26.684	24.000	1200	0
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Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start (mins)	0	Inlet Coefficient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1
Number of Input Hydrographs	0	Number of Offline Controls	0
Number of Online Controls	1	Number of Storage Structures	1
		Number of Time/Area Diagrams	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)	18.000	Storm Duration (mins)	30
Ratio R	0.360		

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Online Controls for Storm

Hydro-Brake® Optimum Manhole: SWMH 03, DS/PN: 1.002, Volume (m³): 3.7

Unit Reference MD-SHE-0105-5000-1000-5000
Design Head (m) 1.000
Design Flow (l/s) 5.0
Flush-Flo™ Calculated
Objective Minimise upstream storage
Application Surface
Sump Available Yes
Diameter (mm) 105
Invert Level (m) 26.835
Minimum Outlet Pipe Diameter (mm) 150
Suggested Manhole Diameter (mm) 1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.000	5.0	Kick-Flo®	0.637	4.1
Flush-Flo™	0.296	5.0	Mean Flow over Head Range	-	4.3

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	3.6	0.800	4.5	2.000	6.9	4.000	9.6	7.000	12.5
0.200	4.8	1.000	5.0	2.200	7.2	4.500	10.1	7.500	12.9
0.300	5.0	1.200	5.4	2.400	7.5	5.000	10.6	8.000	13.3
0.400	4.9	1.400	5.8	2.600	7.8	5.500	11.1	8.500	13.7
0.500	4.7	1.600	6.2	3.000	8.4	6.000	11.6	9.000	14.1
0.600	4.3	1.800	6.6	3.500	9.0	6.500	12.1	9.500	14.5

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Storage Structures for Storm

Cellular Storage Manhole: SWMH 03, DS/PN: 1.002

Invert Level (m) 26.835 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00000

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	6.0	6.0	1.000	6.0	16.0	1.001	0.0	16.0

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Summary Wizard of 15 minute 1 year Summer I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	16	28.045	-0.055	0.000	0.40			2.2	OK
1.001	SWMH 02	19	27.994	-0.037	0.000	0.70			3.6	OK
1.002	SWMH 03	29	26.957	-0.028	0.000	0.27		9	3.0	OK
1.003	CWMH 01	29	26.873	-0.097	0.000	0.27			3.0	OK
1.004	CWMH 02	29	26.859	-0.101	0.000	0.23			3.0	OK

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Summary Wizard of 30 minute 1 year Summer I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	21	28.040	-0.060	0.000	0.33			1.8	OK
1.001	SWMH 02	23	27.987	-0.044	0.000	0.60			3.1	OK
1.002	SWMH 03	28	26.960	-0.025	0.000	0.28		10	3.1	OK
1.003	CWMH 01	28	26.874	-0.096	0.000	0.28			3.1	OK
1.004	CWMH 02	28	26.860	-0.100	0.000	0.24			3.1	OK

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Summary Wizard of 60 minute 1 year Summer I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	27	28.033	-0.067	0.000	0.23			1.2	OK
1.001	SWMH 02	29	27.978	-0.053	0.000	0.44			2.3	OK
1.002	SWMH 03	30	26.946	-0.039	0.000	0.25		12	2.7	OK
1.003	CWMH 01	30	26.871	-0.099	0.000	0.25			2.7	OK
1.004	CWMH 02	30	26.857	-0.103	0.000	0.21			2.7	OK

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Summary Wizard of 120 minute 1 year Summer I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Overflow		Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	34	28.025	-0.075	0.000	0.15			0.8	OK
1.001	SWMH 02	34	27.969	-0.062	0.000	0.31			1.6	OK
1.002	SWMH 03	34	26.923	-0.062	0.000	0.19		24	2.1	OK
1.003	CWMH 01	34	26.864	-0.106	0.000	0.19			2.1	OK
1.004	CWMH 02	34	26.850	-0.110	0.000	0.16			2.1	OK

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Summary Wizard of 180 minute 1 year Summer I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Overflow		Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	36	28.023	-0.077	0.000	0.12			0.6	OK
1.001	SWMH 02	36	27.965	-0.066	0.000	0.25			1.3	OK
1.002	SWMH 03	37	26.908	-0.077	0.000	0.16		24	1.7	OK
1.003	CWMH 01	37	26.860	-0.110	0.000	0.16			1.7	OK
1.004	CWMH 02	37	26.846	-0.113	0.000	0.14			1.7	OK

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Summary Wizard of 240 minute 1 year Summer I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Overflow		Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	38	28.021	-0.079	0.000	0.10			0.5	OK
1.001	SWMH 02	38	27.962	-0.069	0.000	0.21			1.1	OK
1.002	SWMH 03	38	26.898	-0.087	0.000	0.14		32	1.5	OK
1.003	CWMH 01	38	26.856	-0.114	0.000	0.14			1.5	OK
1.004	CWMH 02	38	26.844	-0.116	0.000	0.12			1.5	OK

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Summary Wizard of 360 minute 1 year Summer I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	40	28.018	-0.082	0.000	0.07			0.4	OK
1.001	SWMH 02	40	27.957	-0.074	0.000	0.16			0.8	OK
1.002	SWMH 03	40	26.885	-0.100	0.000	0.11		42	1.1	OK
1.003	CWMH 01	41	26.852	-0.118	0.000	0.11			1.2	OK
1.004	CWMH 02	41	26.840	-0.120	0.000	0.09			1.2	OK

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Summary Wizard of 15 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded			Half Drain	Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	6	28.197	0.097	0.000	0.90			4.9	SURCHARGED
1.001	SWMH 02	6	28.138	0.107	0.000	1.84			9.5	SURCHARGED
1.002	SWMH 03	13	27.233	0.248	0.000	0.46		9	5.0	SURCHARGED
1.003	CWMH 01	12	26.891	-0.079	0.000	0.46			5.0	OK
1.004	CWMH 02	13	26.875	-0.085	0.000	0.39			5.0	OK

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Summary Wizard of 30 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded			Half Drain	Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	9	28.145	0.045	0.000	0.77			4.2	SURCHARGED
1.001	SWMH 02	9	28.101	0.070	0.000	1.59			8.2	SURCHARGED
1.002	SWMH 03	12	27.251	0.266	0.000	0.46		11	5.0	SURCHARGED
1.003	CWMH 01	5	26.891	-0.079	0.000	0.46			5.0	OK
1.004	CWMH 02	5	26.875	-0.085	0.000	0.39			5.0	OK

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Summary Wizard of 60 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded			Half Drain	Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	12	28.066	-0.034	0.000	0.55			2.9	OK
1.001	SWMH 02	12	28.044	0.013	0.000	1.13			5.9	SURCHARGED
1.002	SWMH 03	16	27.183	0.198	0.000	0.46		14	5.0	SURCHARGED
1.003	CWMH 01	16	26.891	-0.079	0.000	0.46			5.0	OK
1.004	CWMH 02	16	26.875	-0.085	0.000	0.39			5.0	OK

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Summary Wizard of 120 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Half Drain Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap. (l/s)	Time (mins)	
1.000	SWMH 01	20	28.041	-0.059	0.000	0.35	1.9	OK
1.001	SWMH 02	18	27.995	-0.036	0.000	0.73	3.8	OK
1.002	SWMH 03	19	27.066	0.081	0.000	0.42	20	4.6 SURCHARGED
1.003	CWMH 01	19	26.887	-0.083	0.000	0.42	4.6	OK
1.004	CWMH 02	19	26.872	-0.088	0.000	0.36	4.6	OK

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Summary Wizard of 180 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded			Half Drain	Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	24	28.036	-0.064	0.000	0.28			1.5	OK
1.001	SWMH 02	24	27.986	-0.045	0.000	0.58			3.0	OK
1.002	SWMH 03	22	27.009	0.024	0.000	0.36		21	3.9	SURCHARGED
1.003	CWMH 01	22	26.882	-0.088	0.000	0.36			3.9	OK
1.004	CWMH 02	22	26.867	-0.093	0.000	0.31			3.9	OK

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Summary Wizard of 240 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	29	28.032	-0.068	0.000	0.23			1.2	OK
1.001	SWMH 02	28	27.979	-0.052	0.000	0.47			2.4	OK
1.002	SWMH 03	24	26.976	-0.009	0.000	0.31		32	3.4	OK
1.003	CWMH 01	24	26.878	-0.092	0.000	0.32			3.4	OK
1.004	CWMH 02	24	26.863	-0.097	0.000	0.27			3.4	OK

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Summary Wizard of 360 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	33	28.027	-0.073	0.000	0.17			0.9	OK
1.001	SWMH 02	33	27.972	-0.059	0.000	0.35			1.8	OK
1.002	SWMH 03	32	26.944	-0.041	0.000	0.24		42	2.6	OK
1.003	CWMH 01	32	26.870	-0.100	0.000	0.24			2.6	OK
1.004	CWMH 02	32	26.856	-0.104	0.000	0.21			2.6	OK

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Summary Wizard of 15 minute 100 year Summer I+40% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water		Surcharged		Flooded		Half Drain Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)		
1.000	SWMH 01	1	28.619	0.519	0.000	1.52			8.2	FLOOD RISK	
1.001	SWMH 02	1	28.457	0.426	0.000	3.11			16.1	SURCHARGED	
1.002	SWMH 03	6	27.720	0.735	0.000	0.46			16	5.0 SURCHARGED	
1.003	CWMH 01	14	26.891	-0.079	0.000	0.46			5.0	OK	
1.004	CWMH 02	11	26.875	-0.085	0.000	0.39			5.0	OK	

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Summary Wizard of 30 minute 100 year Summer I+40% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water Surcharged Flooded		Flow / Cap.	Overflow (l/s)	Half Drain Pipe		Status
			Level (m)	Depth (m)			Volume (m³)	Time (mins)	
1.000	SWMH 01	3	28.484	0.384	0.000	1.33	7.2	SURCHARGED	
1.001	SWMH 02	3	28.352	0.321	0.000	2.82	14.6	SURCHARGED	
1.002	SWMH 03	4	27.822	0.837	0.000	0.46	21	5.0 SURCHARGED	
1.003	CWMH 01	4	26.891	-0.079	0.000	0.46	5.0	OK	
1.004	CWMH 02	4	26.875	-0.085	0.000	0.39	5.0	OK	

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Summary Wizard of 60 minute 100 year Summer I+40% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded			Half Drain	Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	5	28.261	0.161	0.000	0.97			5.2	SURCHARGED
1.001	SWMH 02	5	28.189	0.158	0.000	2.02			10.5	SURCHARGED
1.002	SWMH 03	5	27.795	0.810	0.000	0.46		26	5.0	SURCHARGED
1.003	CWMH 01	10	26.891	-0.079	0.000	0.46			5.0	OK
1.004	CWMH 02	9	26.875	-0.085	0.000	0.39			5.0	OK

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Summary Wizard of 120 minute 100 year Summer I+40% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded			Half Drain	Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	11	28.092	-0.008	0.000	0.64			3.5	OK
1.001	SWMH 02	11	28.063	0.032	0.000	1.34			6.9	SURCHARGED
1.002	SWMH 03	7	27.606	0.621	0.000	0.46		28	5.0	SURCHARGED
1.003	CWMH 01	15	26.891	-0.079	0.000	0.46			5.0	OK
1.004	CWMH 02	12	26.875	-0.085	0.000	0.39			5.0	OK

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Summary Wizard of 180 minute 100 year Summer I+40% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded			Half Drain	Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	13	28.052	-0.048	0.000	0.51			2.8	OK
1.001	SWMH 02	13	28.033	0.002	0.000	1.07			5.5	SURCHARGED
1.002	SWMH 03	9	27.372	0.387	0.000	0.46		24	5.0	SURCHARGED
1.003	CWMH 01	13	26.891	-0.079	0.000	0.46			5.0	OK
1.004	CWMH 02	15	26.875	-0.085	0.000	0.39			5.0	OK

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Summary Wizard of 240 minute 100 year Summer I+40% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water Surcharged Flooded				Half Drain Pipe			
	US/MH	Storm	Level	Depth	Volume	Flow /	Time	Flow		
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	17	28.045	-0.055	0.000	0.41			2.2	OK
1.001	SWMH 02	16	28.003	-0.028	0.000	0.87			4.5	OK
1.002	SWMH 03	15	27.216	0.231	0.000	0.46		24	5.0	SURCHARGED
1.003	CWMH 01	9	26.891	-0.079	0.000	0.46			5.0	OK
1.004	CWMH 02	8	26.875	-0.085	0.000	0.39			5.0	OK

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Summary Wizard of 360 minute 100 year Summer I+40% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded			Half Drain	Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	23	28.038	-0.062	0.000	0.30			1.6	OK
1.001	SWMH 02	22	27.989	-0.042	0.000	0.63			3.3	OK
1.002	SWMH 03	20	27.063	0.078	0.000	0.41		36	4.5	SURCHARGED
1.003	CWMH 01	20	26.887	-0.083	0.000	0.42			4.5	OK
1.004	CWMH 02	20	26.872	-0.088	0.000	0.36			4.5	OK

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Summary Wizard of 15 minute 1 year Winter I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded				Half Drain	Pipe
PN	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	Status
	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	
1.000	SWMH 01	18	28.043	-0.057	0.000	0.38			2.1	OK
1.001	SWMH 02	20	27.993	-0.038	0.000	0.69			3.6	OK
1.002	SWMH 03	26	26.968	-0.017	0.000	0.30		8	3.3	OK
1.003	CWMH 01	25	26.876	-0.094	0.000	0.30			3.3	OK
1.004	CWMH 02	26	26.861	-0.098	0.000	0.26			3.3	OK

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Summary Wizard of 30 minute 1 year Winter I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Overflow		Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	25	28.036	-0.064	0.000	0.28			1.5	OK
1.001	SWMH 02	26	27.983	-0.048	0.000	0.54			2.8	OK
1.002	SWMH 03	27	26.964	-0.021	0.000	0.29		11	3.1	OK
1.003	CWMH 01	27	26.875	-0.095	0.000	0.29			3.2	OK
1.004	CWMH 02	27	26.860	-0.099	0.000	0.25			3.1	OK

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Summary Wizard of 60 minute 1 year Winter I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded				Half Drain	Pipe
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	31	28.029	-0.071	0.000	0.18			1.0	OK
1.001	SWMH 02	31	27.973	-0.058	0.000	0.37			1.9	OK
1.002	SWMH 03	33	26.940	-0.045	0.000	0.23		16	2.5	OK
1.003	CWMH 01	33	26.869	-0.101	0.000	0.23			2.5	OK
1.004	CWMH 02	33	26.855	-0.105	0.000	0.20			2.5	OK

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Summary Wizard of 120 minute 1 year Winter I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	37	28.022	-0.078	0.000	0.12			0.6	OK
1.001	SWMH 02	37	27.964	-0.067	0.000	0.24			1.2	OK
1.002	SWMH 03	36	26.910	-0.075	0.000	0.16		28	1.8	OK
1.003	CWMH 01	36	26.860	-0.110	0.000	0.16			1.8	OK
1.004	CWMH 02	36	26.847	-0.113	0.000	0.14			1.8	OK

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Summary Wizard of 180 minute 1 year Winter I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Overflow		Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	39	28.020	-0.080	0.000	0.09			0.5	OK
1.001	SWMH 02	39	27.960	-0.071	0.000	0.19			1.0	OK
1.002	SWMH 03	39	26.895	-0.090	0.000	0.13		33	1.4	OK
1.003	CWMH 01	39	26.856	-0.114	0.000	0.13			1.4	OK
1.004	CWMH 02	39	26.843	-0.117	0.000	0.11			1.4	OK

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Summary Wizard of 240 minute 1 year Winter I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Overflow		Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	41	28.018	-0.082	0.000	0.07			0.4	OK
1.001	SWMH 02	41	27.957	-0.074	0.000	0.15			0.8	OK
1.002	SWMH 03	41	26.885	-0.100	0.000	0.11		44	1.2	OK
1.003	CWMH 01	40	26.853	-0.117	0.000	0.11			1.2	OK
1.004	CWMH 02	40	26.840	-0.120	0.000	0.09			1.2	OK

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Summary Wizard of 360 minute 1 year Winter I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Overflow		Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	42	28.015	-0.085	0.000	0.06			0.3	OK
1.001	SWMH 02	42	27.954	-0.077	0.000	0.12			0.6	OK
1.002	SWMH 03	42	26.873	-0.112	0.000	0.08		60	0.9	OK
1.003	CWMH 01	42	26.849	-0.121	0.000	0.08			0.9	OK
1.004	CWMH 02	42	26.836	-0.124	0.000	0.07			0.9	OK

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Summary Wizard of 15 minute 30 year Winter I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Flow / Overflow		Half Drain Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Cap.	(l/s)	Time (mins)	Flow (l/s)	
1.000	SWMH 01	7	28.186	0.086	0.000	0.87		4.7	SURCHARGED	
1.001	SWMH 02	7	28.134	0.103	0.000	1.81		9.4	SURCHARGED	
1.002	SWMH 03	10	27.288	0.303	0.000	0.46		10	SURCHARGED	
1.003	CWMH 01	6	26.891	-0.079	0.000	0.46		5.0	OK	
1.004	CWMH 02	10	26.875	-0.085	0.000	0.39		5.0	OK	

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Summary Wizard of 30 minute 30 year Winter I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded			Half Drain	Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	10	28.102	0.002	0.000	0.67			3.6	SURCHARGED
1.001	SWMH 02	10	28.070	0.039	0.000	1.38			7.2	SURCHARGED
1.002	SWMH 03	11	27.282	0.297	0.000	0.46		12	5.0	SURCHARGED
1.003	CWMH 01	8	26.891	-0.079	0.000	0.46			5.0	OK
1.004	CWMH 02	6	26.875	-0.085	0.000	0.39			5.0	OK

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Summary Wizard of 60 minute 30 year Winter I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded			Half Drain	Pipe	
PN	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	15	28.047	-0.053	0.000	0.44			2.4	OK
1.001	SWMH 02	15	28.007	-0.024	0.000	0.92			4.8	OK
1.002	SWMH 03	17	27.162	0.177	0.000	0.45		14	4.9	SURCHARGED
1.003	CWMH 01	17	26.891	-0.079	0.000	0.45			4.9	OK
1.004	CWMH 02	17	26.875	-0.085	0.000	0.39			4.9	OK

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Summary Wizard of 120 minute 30 year Winter I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Half Drain Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Time (mins)	
						Overflow (l/s)	Flow (l/s)	
1.000	SWMH 01	26	28.036	-0.064	0.000	0.27	1.5	OK
1.001	SWMH 02	25	27.985	-0.046	0.000	0.57	3.0	OK
1.002	SWMH 03	21	27.021	0.036	0.000	0.37	24	SURCHARGED
1.003	CWMH 01	21	26.883	-0.087	0.000	0.37	4.0	OK
1.004	CWMH 02	21	26.868	-0.092	0.000	0.32	4.0	OK

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Summary Wizard of 180 minute 30 year Winter I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Overflow		Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	30	28.031	-0.069	0.000	0.21			1.1	OK
1.001	SWMH 02	30	27.977	-0.054	0.000	0.43			2.2	OK
1.002	SWMH 03	25	26.968	-0.017	0.000	0.30		36	3.3	OK
1.003	CWMH 01	26	26.876	-0.094	0.000	0.30			3.3	OK
1.004	CWMH 02	25	26.861	-0.098	0.000	0.26			3.3	OK

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Summary Wizard of 240 minute 30 year Winter I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Overflow		Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	32	28.027	-0.073	0.000	0.17			0.9	OK
1.001	SWMH 02	32	27.972	-0.059	0.000	0.35			1.8	OK
1.002	SWMH 03	31	26.945	-0.040	0.000	0.25		48	2.7	OK
1.003	CWMH 01	31	26.870	-0.100	0.000	0.25			2.7	OK
1.004	CWMH 02	31	26.856	-0.103	0.000	0.21			2.7	OK

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Summary Wizard of 360 minute 30 year Winter I+0% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Flow / Overflow		Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)	
1.000	SWMH 01	35	28.023	-0.077	0.000	0.12			0.7	OK
1.001	SWMH 02	35	27.965	-0.066	0.000	0.26			1.3	OK
1.002	SWMH 03	35	26.919	-0.066	0.000	0.18		72	2.0	OK
1.003	CWMH 01	35	26.863	-0.107	0.000	0.18			2.0	OK
1.004	CWMH 02	35	26.849	-0.110	0.000	0.16			2.0	OK

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Summary Wizard of 15 minute 100 year Winter I+40% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded			Half Drain	Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	2	28.607	0.507	0.000	1.48			8.0	FLOOD RISK
1.001	SWMH 02	2	28.449	0.418	0.000	3.10			16.0	SURCHARGED
1.002	SWMH 03	3	27.905	0.920	0.000	0.46		17	5.0	SURCHARGED
1.003	CWMH 01	3	26.892	-0.078	0.000	0.46			5.0	OK
1.004	CWMH 02	3	26.875	-0.085	0.000	0.40			5.0	OK

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Summary Wizard of 30 minute 100 year Winter I+40% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded			Half Drain	Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	4	28.369	0.269	0.000	1.19			6.4	SURCHARGED
1.001	SWMH 02	4	28.269	0.238	0.000	2.49			12.9	SURCHARGED
1.002	SWMH 03	1	28.151	1.166	0.000	0.51		22	5.5	SURCHARGED
1.003	CWMH 01	1	26.896	-0.074	0.000	0.51			5.5	OK
1.004	CWMH 02	1	26.879	-0.081	0.000	0.44			5.5	OK

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Summary Wizard of 60 minute 100 year Winter I+40% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm Rank	Water Surcharged Flooded		Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Pipe		Status
			Level (m)	Depth (m)				Time (mins)	Flow (l/s)	
1.000	SWMH 01	8	28.159	0.059	0.000	0.80		4.3	SURCHARGED	
1.001	SWMH 02	8	28.113	0.082	0.000	1.67		8.6	SURCHARGED	
1.002	SWMH 03	2	27.998	1.013	0.000	0.48	28	5.2	SURCHARGED	
1.003	CWMH 01	2	26.893	-0.077	0.000	0.48		5.2	OK	
1.004	CWMH 02	2	26.877	-0.083	0.000	0.41		5.2	OK	

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Summary Wizard of 120 minute 100 year Winter I+40% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

				Water	Surcharged	Flooded		Half Drain	Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	14	28.051	-0.049	0.000	0.51			2.7	OK
1.001	SWMH 02	14	28.031	0.000	0.000	1.06			5.5	SURCHARGED
1.002	SWMH 03	8	27.564	0.579	0.000	0.46		24	5.0	SURCHARGED
1.003	CWMH 01	11	26.891	-0.079	0.000	0.46			5.0	OK
1.004	CWMH 02	14	26.875	-0.085	0.000	0.39			5.0	OK

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Summary Wizard of 180 minute 100 year Winter I+40% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water Surcharged Flooded				Half Drain Pipe			
	US/MH	Storm	Level	Depth	Volume	Flow /	Time	Flow		
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	19	28.043	-0.057	0.000	0.38			2.1	OK
1.001	SWMH 02	17	27.999	-0.032	0.000	0.80			4.1	OK
1.002	SWMH 03	14	27.231	0.246	0.000	0.46		24	5.0	SURCHARGED
1.003	CWMH 01	7	26.891	-0.079	0.000	0.46			5.0	OK
1.004	CWMH 02	7	26.875	-0.085	0.000	0.39			5.0	OK

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Summary Wizard of 240 minute 100 year Winter I+40% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

				Water Surcharged Flooded				Half Drain Pipe		
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	22	28.038	-0.062	0.000	0.31			1.7	OK
1.001	SWMH 02	21	27.989	-0.042	0.000	0.64			3.3	OK
1.002	SWMH 03	18	27.081	0.096	0.000	0.44		36	4.7	SURCHARGED
1.003	CWMH 01	18	26.889	-0.081	0.000	0.44			4.7	OK
1.004	CWMH 02	18	26.873	-0.087	0.000	0.37			4.7	OK

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Summary Wizard of 360 minute 100 year Winter I+40% for Storm

Simulation Criteria

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.361 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded				Half Drain	Pipe
PN	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	SWMH 01	28	28.032	-0.068	0.000	0.23			1.2	OK
1.001	SWMH 02	27	27.979	-0.052	0.000	0.47			2.4	OK
1.002	SWMH 03	23	26.983	-0.002	0.000	0.33		66	3.6	OK
1.003	CWMH 01	23	26.879	-0.091	0.000	0.33			3.6	OK
1.004	CWMH 02	23	26.864	-0.096	0.000	0.29			3.6	OK