



Simon Beale + Associates
Chartered Engineers

Stormwater Drainage Design

for

Pinner Road,

Northwood

London,

HA6 1DD,

HEAD OFFICE

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Simon Beale + Associates is a
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Company Number: 540335
Registered Address:
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The Old School House Casement Street Ballina, Ireland	SUDS Design Pinner Road, Northwood, UK	
Date 27/07/2022 15:54 File 22-182 Pinner Road, Nor...	Designed by AK Checked by SB	
Innovyze	Network 2020.1.3	

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)	100	PIMP (%)	100
M5-60 (mm)	20.300	Add Flow / Climate Change (%)	40
Ratio R	0.414	Minimum Backdrop Height (m)	0.200
Maximum Rainfall (mm/hr)	50	Maximum Backdrop Height (m)	1.500
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)	1.00
Volumetric Runoff Coeff.	0.750	Min Slope for Optimisation (1:X)	500

Designed with Level Inverts

Time Area Diagram for Storm

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.045	4-8	0.016

Total Area Contributing (ha) = 0.061

Total Pipe Volume (m³) = 0.866

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	4.291	0.072	60.0	0.009	5.00	0.0	0.600	o	100	Pipe/Conduit	
2.000	7.775	0.130	60.0	0.011	5.00	0.0	0.600	o	100	Pipe/Conduit	
2.001	5.052	0.084	60.0	0.004	0.00	0.0	0.600	o	100	Pipe/Conduit	
3.000	1.025	0.017	60.0	0.020	5.00	0.0	0.600	o	100	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	I.Area (ha)	Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.000	50.00	5.07	63.900	0.009	0.0	0.0	0.5	1.00	7.8	1.7
2.000	50.00	5.13	64.042	0.011	0.0	0.0	0.6	1.00	7.8	2.1
2.001	50.00	5.21	63.912	0.015	0.0	0.0	0.8	1.00	7.8	2.8
3.000	50.00	5.02	63.900	0.020	0.0	0.0	1.1	1.00	7.8	3.8

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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
1.001	8.603	0.034	253.0	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
1.002	9.264	0.154	60.2	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
1.003	15.490	0.258	60.0	0.017	0.00	0.0	0.600	o	150	Pipe/Conduit	
1.004	7.580	0.126	60.2	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)
1.001	50.00	5.44	63.828	0.044	0.0	0.0	2.4	0.63	11.1	8.3
1.002	50.00	5.56	63.794	0.044	0.0	0.0	2.4	1.30	23.0	8.3
1.003	50.00	5.76	63.640	0.061	0.0	0.0	3.3	1.30	23.0	11.6
1.004	50.00	5.86	63.382	0.061	0.0	0.0	3.3	1.30	23.0	11.6

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Area Summary for Storm

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
1.000	-	-	100	0.009	0.009	0.009
2.000	-	-	100	0.011	0.011	0.011
2.001	-	-	100	0.004	0.004	0.004
3.000	-	-	100	0.020	0.020	0.020
1.001	-	-	100	0.000	0.000	0.000
1.002	-	-	100	0.000	0.000	0.000
1.003	-	-	100	0.017	0.017	0.017
1.004	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				0.061	0.061	0.061

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	Public Surface Sewer	65.080	63.256	62.770	150	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 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)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.300	Storm Duration (mins)	30
Ratio R	0.414		

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Online Controls for Storm

Hydro-Brake® Optimum Manhole: 7, DS/PN: 1.004, Volume (m³): 2.4

Unit Reference	MD-SHE-0070-2000-0800-2000
Design Head (m)	0.800
Design Flow (l/s)	2.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	70
Invert Level (m)	63.382
Minimum Outlet Pipe Diameter (mm)	100
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	0.800	2.0
Flush-Flo™	0.240	2.0
Kick-Flo®	0.504	1.6
Mean Flow over Head Range	-	1.7

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

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	1.8	1.200	2.4	3.000	3.7	7.000	5.5
0.200	2.0	1.400	2.6	3.500	3.9	7.500	5.6
0.300	2.0	1.600	2.7	4.000	4.2	8.000	5.8
0.400	1.9	1.800	2.9	4.500	4.4	8.500	6.0
0.500	1.6	2.000	3.0	5.000	4.7	9.000	6.2
0.600	1.8	2.200	3.2	5.500	4.9	9.500	6.3
0.800	2.0	2.400	3.3	6.000	5.1		
1.000	2.2	2.600	3.4	6.500	5.3		

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Date 27/07/2022 15:54 File 22-182 Pinner Road, Nor...	Designed by AK Checked by SB																			
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Storage Structures for Storm Cellular Storage Manhole: 5, DS/PN: 1.002 Invert Level (m) 63.828 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00000 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>33.8</td><td>0.0</td><td>0.801</td><td>0.0</td><td>0.0</td></tr><tr><td>0.800</td><td>33.8</td><td>0.0</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	33.8	0.0	0.801	0.0	0.0	0.800	33.8	0.0			
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<table><tr><th colspan="2"></th><th colspan="3">Water Surcharged</th><th colspan="2">Flooded</th><th colspan="2">Half Drain</th><th>Pipe</th><th></th></tr><tr><th>PN</th><th>US/MH Name</th><th>Storm Rank</th><th>Level (m)</th><th>Depth (m)</th><th>Volume (m³)</th><th>Flow / Cap.</th><th>Overflow (l/s)</th><th>Time (mins)</th><th>Flow (l/s)</th><th>Status</th></tr><tr><td>1.000</td><td>1</td><td>38</td><td>64.015</td><td>0.015</td><td>0.000</td><td>0.41</td><td></td><td></td><td>2.8</td><td>SURCHARGED</td></tr><tr><td>2.000</td><td>2</td><td>31</td><td>64.092</td><td>-0.050</td><td>0.000</td><td>0.49</td><td></td><td></td><td>3.5</td><td>OK</td></tr><tr><td>2.001</td><td>3</td><td>37</td><td>64.038</td><td>0.026</td><td>0.000</td><td>0.65</td><td></td><td></td><td>4.5</td><td>SURCHARGED</td></tr><tr><td>3.000</td><td>4</td><td>33</td><td>64.052</td><td>0.052</td><td>0.000</td><td>1.56</td><td></td><td></td><td>6.2</td><td>SURCHARGED</td></tr><tr><td>1.001</td><td>4</td><td>42</td><td>64.002</td><td>0.024</td><td>0.000</td><td>1.37</td><td></td><td></td><td>13.3</td><td>SURCHARGED</td></tr><tr><td>1.002</td><td>5</td><td>45</td><td>63.975</td><td>0.031</td><td>0.000</td><td>0.19</td><td></td><td>32</td><td>3.9</td><td>SURCHARGED</td></tr><tr><td>1.003</td><td>6</td><td>45</td><td>63.971</td><td>0.181</td><td>0.000</td><td>0.27</td><td></td><td></td><td>5.7</td><td>SURCHARGED</td></tr><tr><td>1.004</td><td>7</td><td>45</td><td>63.964</td><td>0.432</td><td>0.000</td><td>0.10</td><td></td><td></td><td>2.0</td><td>SURCHARGED</td></tr></table>												Water Surcharged			Flooded		Half Drain		Pipe		PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Status	1.000	1	38	64.015	0.015	0.000	0.41			2.8	SURCHARGED	2.000	2	31	64.092	-0.050	0.000	0.49			3.5	OK	2.001	3	37	64.038	0.026	0.000	0.65			4.5	SURCHARGED	3.000	4	33	64.052	0.052	0.000	1.56			6.2	SURCHARGED	1.001	4	42	64.002	0.024	0.000	1.37			13.3	SURCHARGED	1.002	5	45	63.975	0.031	0.000	0.19		32	3.9	SURCHARGED	1.003	6	45	63.971	0.181	0.000	0.27			5.7	SURCHARGED	1.004	7	45	63.964	0.432	0.000	0.10			2.0	SURCHARGED
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Summary Wizard of 30 minute 5 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 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

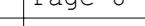
Rainfall Model FSR Ratio R 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 40

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

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	1	40	64.005	0.005	0.000	0.36			2.4	SURCHARGED	
2.000	2	33	64.088	-0.054	0.000	0.43			3.1	OK	
2.001	3	39	64.020	0.007	0.000	0.59			4.0	SURCHARGED	
3.000	4	38	64.030	0.030	0.000	1.39			5.5	SURCHARGED	
1.001	4	39	64.003	0.025	0.000	1.23			12.0	SURCHARGED	
1.002	5	39	63.999	0.055	0.000	0.16			3.2	SURCHARGED	
1.003	6	39	63.995	0.205	0.000	0.18			3.9	SURCHARGED	
1.004	7	39	63.987	0.455	0.000	0.10			2.0	SURCHARGED	

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Summary Wizard of 60 minute 5 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 * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Number of Input Hydrographs	0	Number of 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	0.414
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 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	1	42	64.003	0.003	0.000	0.27				1.8	SURCHARGED
2.000	2	35	64.081	-0.061	0.000	0.32				2.3	OK
2.001	3	42	64.005	-0.008	0.000	0.44				3.0	OK
3.000	4	42	64.003	0.003	0.000	1.00				3.9	SURCHARGED
1.001	4	41	64.002	0.024	0.000	0.90				8.8	SURCHARGED
1.002	5	41	63.998	0.054	0.000	0.16			46	3.2	SURCHARGED
1.003	6	41	63.994	0.204	0.000	0.17				3.7	SURCHARGED
1.004	7	41	63.986	0.454	0.000	0.10				2.0	SURCHARGED

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The Old School House Casement Street Ballina, Ireland	SUDS Design Pinner Road, Northwood, UK	
Date 27/07/2022 15:54 File 22-182 Pinner Road, Nor...	Designed by AK Checked by SB	
Innovyze	Network 2020.1.3	

Summary Wizard of 120 minute 5 year Summer I+40% for Storm

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

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

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The Old School House Casement Street Ballina, Ireland	SUDS Design Pinner Road, Northwood, UK	
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Innovyze	Network 2020.1.3	

Summary Wizard of 180 minute 5 year Summer I+40% for Storm

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

Synthetic Rainfall Details

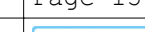
Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

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The Old School House Casement Street Ballina, Ireland				SUDS Design Pinner Road, Northwood, UK						
Date 27/07/2022 15:54 File 22-182 Pinner Road, Nor...				Designed by AK Checked by SB						
Innovyze				Network 2020.1.3						
<u>Summary Wizard of 240 minute 5 year Summer I+40% for Storm</u>										
<u>Simulation Criteria</u>										
Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000				
Hot Start (mins)		0		MADD Factor * 10m³/ha Storage		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 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				
<u>Synthetic Rainfall Details</u>										
Rainfall Model		FSR		Ratio R		0.414				
Region England and Wales Cv (Summer)		0.750								
M5-60 (mm)		20.300		Cv (Winter)		0.840				
Margin for Flood Risk Warning (mm)						300.0				
Analysis Timestep		2.5		Second Increment (Extended)						
DTS Status						OFF				
DVD Status						ON				
Inertia Status						ON				
Profile(s)						Summer and Winter				
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080								
Return Period(s) (years)		5, 30, 100								
Climate Change (%)		40, 40, 40								

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The Old School House Casement Street Ballina, Ireland				SUDS Design Pinner Road, Northwood, UK																																																																																																								
Date 27/07/2022 15:54 File 22-182 Pinner Road, Nor...				Designed by AK Checked by SB																																																																																																								
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<u>Summary Wizard of 360 minute 5 year Summer I+40% for Storm</u>																																																																																																												
<u>Simulation Criteria</u>																																																																																																												
Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000																																																																																																						
Hot Start (mins)		0		MADD Factor * 10m³/ha Storage		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																																																																																																										
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Number of Online Controls		1		Number of Time/Area Diagrams		0																																																																																																						
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Return Period(s) (years)		5, 30, 100																																																																																																										
Climate Change (%)		40, 40, 40																																																																																																										
<table><tr><th colspan="3"></th><th colspan="4">Water Surcharged Flooded</th><th colspan="2">Half Drain Pipe</th><th rowspan="2">Status</th></tr><tr><th>PN</th><th>US/MH Name</th><th>Storm Rank</th><th>Level (m)</th><th>Depth (m)</th><th>Volume (m³)</th><th>Flow / Cap. (l/s)</th><th>Time (mins)</th><th>Flow (l/s)</th></tr><tr><td>1.000</td><td>1</td><td>54</td><td>63.919</td><td>-0.081</td><td>0.000</td><td>0.08</td><td></td><td>0.6</td><td>OK</td></tr><tr><td>2.000</td><td>2</td><td>46</td><td>64.063</td><td>-0.079</td><td>0.000</td><td>0.10</td><td></td><td>0.7</td><td>OK</td></tr><tr><td>2.001</td><td>3</td><td>52</td><td>63.937</td><td>-0.076</td><td>0.000</td><td>0.14</td><td></td><td>0.9</td><td>OK</td></tr><tr><td>3.000</td><td>4</td><td>51</td><td>63.938</td><td>-0.062</td><td>0.000</td><td>0.32</td><td></td><td>1.2</td><td>OK</td></tr><tr><td>1.001</td><td>4</td><td>54</td><td>63.908</td><td>-0.070</td><td>0.000</td><td>0.28</td><td></td><td>2.7</td><td>OK</td></tr><tr><td>1.002</td><td>5</td><td>54</td><td>63.904</td><td>-0.040</td><td>0.000</td><td>0.11</td><td>39</td><td>2.3</td><td>OK</td></tr><tr><td>1.003</td><td>6</td><td>54</td><td>63.900</td><td>0.110</td><td>0.000</td><td>0.13</td><td></td><td>2.7</td><td>SURCHARGED</td></tr><tr><td>1.004</td><td>7</td><td>54</td><td>63.894</td><td>0.362</td><td>0.000</td><td>0.10</td><td></td><td>2.0</td><td>SURCHARGED</td></tr></table>													Water Surcharged Flooded				Half Drain Pipe		Status	PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap. (l/s)	Time (mins)	Flow (l/s)	1.000	1	54	63.919	-0.081	0.000	0.08		0.6	OK	2.000	2	46	64.063	-0.079	0.000	0.10		0.7	OK	2.001	3	52	63.937	-0.076	0.000	0.14		0.9	OK	3.000	4	51	63.938	-0.062	0.000	0.32		1.2	OK	1.001	4	54	63.908	-0.070	0.000	0.28		2.7	OK	1.002	5	54	63.904	-0.040	0.000	0.11	39	2.3	OK	1.003	6	54	63.900	0.110	0.000	0.13		2.7	SURCHARGED	1.004	7	54	63.894	0.362	0.000	0.10		2.0	SURCHARGED
			Water Surcharged Flooded				Half Drain Pipe		Status																																																																																																			
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<u>Summary Wizard of 480 minute 5 year Summer I+40% for Storm</u>										
<u>Simulation Criteria</u>										
Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000				
Hot Start (mins)		0		MADD Factor * 10m³/ha Storage		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 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				
<u>Synthetic Rainfall Details</u>										
Rainfall Model		FSR		Ratio R		0.414				
Region England and Wales Cv (Summer)		0.750								
M5-60 (mm)		20.300		Cv (Winter)		0.840				
Margin for Flood Risk Warning (mm)						300.0				
Analysis Timestep		2.5		Second Increment (Extended)						
DTS Status						OFF				
DVD Status						ON				
Inertia Status						ON				
Profile(s)						Summer and Winter				
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080								
Return Period(s) (years)		5, 30, 100								
Climate Change (%)		40, 40, 40								

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Innovyze				Network 2020.1.3							
<u>Summary Wizard of 600 minute 5 year Summer I+40% for Storm</u>											
<u>Simulation Criteria</u>											
Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000					
Hot Start (mins)		0		MADD Factor * 10m³/ha Storage		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 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					
<u>Synthetic Rainfall Details</u>											
Rainfall Model		FSR		Ratio R		0.414					
Region England and Wales Cv (Summer)		0.750									
M5-60 (mm)		20.300		Cv (Winter)		0.840					
Margin for Flood Risk Warning (mm)						300.0					
Analysis Timestep		2.5		Second Increment (Extended)							
DTS Status						OFF					
DVD Status						ON					
Inertia Status						ON					
Profile(s)						Summer and Winter					
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080									
Return Period(s) (years)		5, 30, 100									
Climate Change (%)		40, 40, 40									

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Innovyze	Network 2020.1.3	

Summary Wizard of 720 minute 5 year Summer I+40% for Storm

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

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The Old School House Casement Street Ballina, Ireland				SUDS Design Pinner Road, Northwood, UK																																																																																																																	
Date 27/07/2022 15:54				Designed by AK																																																																																																																	
File 22-182 Pinner Road, Nor...				Checked by SB																																																																																																																	
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<u>Summary Wizard of 960 minute 5 year Summer I+40% for Storm</u>																																																																																																																					
<u>Simulation Criteria</u>																																																																																																																					
Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000																																																																																																															
Hot Start (mins)		0		MADD Factor * 10m³/ha Storage		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 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																																																																																																															
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Rainfall Model		FSR		Ratio R		0.414																																																																																																															
Region England and Wales Cv (Summer)		0.750																																																																																																																			
M5-60 (mm)		20.300		Cv (Winter)		0.840																																																																																																															
Margin for Flood Risk Warning (mm)						300.0																																																																																																															
Analysis Timestep		2.5 Second Increment (Extended)																																																																																																																			
DTS Status						OFF																																																																																																															
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Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600,				720, 960, 1440, 2160, 2880, 4320, 5760,																																																																																																															
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Climate Change (%)						40, 40, 40																																																																																																															
<table><tr><th rowspan="2">PN</th><th rowspan="2">US/MH Name</th><th rowspan="2">Storm Rank</th><th>Water Level</th><th>Surcharged Depth</th><th>Flooded Volume</th><th colspan="2">Flow / Overflow</th><th>Half Drain Time</th><th>Pipe Flow</th><th rowspan="2">Status</th></tr><tr><th>(m)</th><th>(m)</th><th>(m³)</th><th>Cap.</th><th>(l/s)</th><th>(mins)</th><th>(l/s)</th></tr><tr><td>1.000</td><td>1</td><td>66</td><td>63.913</td><td>-0.087</td><td>0.000</td><td>0.04</td><td></td><td></td><td>0.3</td><td>OK</td></tr><tr><td>2.000</td><td>2</td><td>66</td><td>64.056</td><td>-0.086</td><td>0.000</td><td>0.05</td><td></td><td></td><td>0.3</td><td>OK</td></tr><tr><td>2.001</td><td>3</td><td>66</td><td>63.929</td><td>-0.084</td><td>0.000</td><td>0.06</td><td></td><td></td><td>0.4</td><td>OK</td></tr><tr><td>3.000</td><td>4</td><td>66</td><td>63.926</td><td>-0.074</td><td>0.000</td><td>0.15</td><td></td><td></td><td>0.6</td><td>OK</td></tr><tr><td>1.001</td><td>4</td><td>66</td><td>63.864</td><td>-0.114</td><td>0.000</td><td>0.13</td><td></td><td></td><td>1.3</td><td>OK</td></tr><tr><td>1.002</td><td>5</td><td>66</td><td>63.819</td><td>-0.125</td><td>0.000</td><td>0.06</td><td></td><td>121</td><td>1.3</td><td>OK</td></tr><tr><td>1.003</td><td>6</td><td>66</td><td>63.669</td><td>-0.121</td><td>0.000</td><td>0.08</td><td></td><td></td><td>1.8</td><td>OK</td></tr><tr><td>1.004</td><td>7</td><td>66</td><td>63.488</td><td>-0.044</td><td>0.000</td><td>0.09</td><td></td><td></td><td>1.8</td><td>OK</td></tr></table>												PN	US/MH Name	Storm Rank	Water Level	Surcharged Depth	Flooded Volume	Flow / Overflow		Half Drain Time	Pipe Flow	Status	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	1.000	1	66	63.913	-0.087	0.000	0.04			0.3	OK	2.000	2	66	64.056	-0.086	0.000	0.05			0.3	OK	2.001	3	66	63.929	-0.084	0.000	0.06			0.4	OK	3.000	4	66	63.926	-0.074	0.000	0.15			0.6	OK	1.001	4	66	63.864	-0.114	0.000	0.13			1.3	OK	1.002	5	66	63.819	-0.125	0.000	0.06		121	1.3	OK	1.003	6	66	63.669	-0.121	0.000	0.08			1.8	OK	1.004	7	66	63.488	-0.044	0.000	0.09			1.8	OK
PN	US/MH Name	Storm Rank	Water Level	Surcharged Depth	Flooded Volume	Flow / Overflow		Half Drain Time	Pipe Flow	Status																																																																																																											
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3.000	4	66	63.926	-0.074	0.000	0.15			0.6	OK																																																																																																											
1.001	4	66	63.864	-0.114	0.000	0.13			1.3	OK																																																																																																											
1.002	5	66	63.819	-0.125	0.000	0.06		121	1.3	OK																																																																																																											
1.003	6	66	63.669	-0.121	0.000	0.08			1.8	OK																																																																																																											
1.004	7	66	63.488	-0.044	0.000	0.09			1.8	OK																																																																																																											
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Innovyze Network 2020.1.3		

Summary Wizard of 1440 minute 5 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	73	63.911	-0.089	0.000	0.03		0.2	OK
2.000	2	73	64.054	-0.088	0.000	0.03		0.2	OK
2.001	3	73	63.926	-0.086	0.000	0.05		0.3	OK
3.000	4	73	63.922	-0.078	0.000	0.11		0.4	OK
1.001	4	73	63.859	-0.119	0.000	0.10		0.9	OK
1.002	5	73	63.815	-0.129	0.000	0.05	165	0.9	OK
1.003	6	73	63.664	-0.126	0.000	0.06		1.3	OK
1.004	7	73	63.450	-0.082	0.000	0.07		1.3	OK

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Summary Wizard of 2160 minute 5 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	80	63.910	-0.090	0.000	0.02		0.1	OK
2.000	2	80	64.052	-0.090	0.000	0.02		0.2	OK
2.001	3	80	63.924	-0.088	0.000	0.03		0.2	OK
3.000	4	80	63.919	-0.081	0.000	0.08		0.3	OK
1.001	4	80	63.854	-0.124	0.000	0.07		0.7	OK
1.002	5	80	63.812	-0.132	0.000	0.03	183	0.7	OK
1.003	6	80	63.660	-0.130	0.000	0.05		1.0	OK
1.004	7	80	63.435	-0.097	0.000	0.05		1.0	OK

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Summary Wizard of 2880 minute 5 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	84	63.908	-0.092	0.000	0.02		0.1	OK
2.000	2	84	64.051	-0.091	0.000	0.02		0.1	OK
2.001	3	84	63.923	-0.089	0.000	0.03		0.2	OK
3.000	4	84	63.916	-0.084	0.000	0.06		0.3	OK
1.001	4	84	63.851	-0.127	0.000	0.06		0.6	OK
1.002	5	84	63.810	-0.134	0.000	0.03	198	0.6	OK
1.003	6	84	63.658	-0.132	0.000	0.04		0.8	OK
1.004	7	84	63.428	-0.104	0.000	0.04		0.8	OK

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Summary Wizard of 4320 minute 5 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	91	63.906	-0.094	0.000	0.01		0.1	OK
2.000	2	91	64.049	-0.093	0.000	0.01		0.1	OK
2.001	3	91	63.922	-0.090	0.000	0.02		0.1	OK
3.000	4	91	63.914	-0.086	0.000	0.05		0.2	OK
1.001	4	91	63.848	-0.130	0.000	0.04		0.4	OK
1.002	5	91	63.808	-0.136	0.000	0.02	231	0.4	OK
1.003	6	91	63.656	-0.134	0.000	0.03		0.6	OK
1.004	7	91	63.420	-0.112	0.000	0.03		0.6	OK

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The Old School House Casement Street Ballina, Ireland				SUDS Design Pinner Road, Northwood, UK																																																																																																																		
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<u>Summary Wizard of 5760 minute 5 year Summer I+40% for Storm</u>																																																																																																																						
<u>Simulation Criteria</u>																																																																																																																						
Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000																																																																																																																
Hot Start (mins)		0		MADD Factor * 10m³/ha Storage		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 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																																																																																																																
<u>Synthetic Rainfall Details</u>																																																																																																																						
Rainfall Model		FSR		Ratio R		0.414																																																																																																																
Region England and Wales Cv (Summer)		0.750																																																																																																																				
M5-60 (mm)		20.300		Cv (Winter)		0.840																																																																																																																
Margin for Flood Risk Warning (mm)						300.0																																																																																																																
Analysis Timestep		2.5		Second Increment (Extended)																																																																																																																		
DTS Status						OFF																																																																																																																
DVD Status						ON																																																																																																																
Inertia Status						ON																																																																																																																
Profile(s)						Summer and Winter																																																																																																																
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080																																																																																																																				
Return Period(s) (years)		5, 30, 100																																																																																																																				
Climate Change (%)		40, 40, 40																																																																																																																				
<table><tr><th colspan="7">Water Surcharged Flooded</th><th>Half Drain</th><th>Pipe</th><th></th></tr><tr><th>PN</th><th>US/MH Name</th><th>Storm Rank</th><th>Level (m)</th><th>Depth (m)</th><th>Volume (m³)</th><th>Flow / Cap.</th><th>Overflow (l/s)</th><th>Time (mins)</th><th>Flow (l/s)</th><th>Status</th></tr><tr><td>1.000</td><td>1</td><td>98</td><td>63.905</td><td>-0.095</td><td>0.000</td><td>0.01</td><td></td><td></td><td>0.1</td><td>OK</td></tr><tr><td>2.000</td><td>2</td><td>98</td><td>64.047</td><td>-0.095</td><td>0.000</td><td>0.01</td><td></td><td></td><td>0.1</td><td>OK</td></tr><tr><td>2.001</td><td>3</td><td>98</td><td>63.920</td><td>-0.092</td><td>0.000</td><td>0.02</td><td></td><td></td><td>0.1</td><td>OK</td></tr><tr><td>3.000</td><td>4</td><td>98</td><td>63.912</td><td>-0.088</td><td>0.000</td><td>0.04</td><td></td><td></td><td>0.1</td><td>OK</td></tr><tr><td>1.001</td><td>4</td><td>98</td><td>63.846</td><td>-0.132</td><td>0.000</td><td>0.03</td><td></td><td></td><td>0.3</td><td>OK</td></tr><tr><td>1.002</td><td>5</td><td>98</td><td>63.805</td><td>-0.139</td><td>0.000</td><td>0.02</td><td></td><td>265</td><td>0.3</td><td>OK</td></tr><tr><td>1.003</td><td>6</td><td>98</td><td>63.655</td><td>-0.135</td><td>0.000</td><td>0.02</td><td></td><td></td><td>0.5</td><td>OK</td></tr><tr><td>1.004</td><td>7</td><td>98</td><td>63.415</td><td>-0.117</td><td>0.000</td><td>0.02</td><td></td><td></td><td>0.5</td><td>OK</td></tr></table>										Water Surcharged Flooded							Half Drain	Pipe		PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Status	1.000	1	98	63.905	-0.095	0.000	0.01			0.1	OK	2.000	2	98	64.047	-0.095	0.000	0.01			0.1	OK	2.001	3	98	63.920	-0.092	0.000	0.02			0.1	OK	3.000	4	98	63.912	-0.088	0.000	0.04			0.1	OK	1.001	4	98	63.846	-0.132	0.000	0.03			0.3	OK	1.002	5	98	63.805	-0.139	0.000	0.02		265	0.3	OK	1.003	6	98	63.655	-0.135	0.000	0.02			0.5	OK	1.004	7	98	63.415	-0.117	0.000	0.02			0.5	OK
Water Surcharged Flooded							Half Drain	Pipe																																																																																																														
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Status																																																																																																												
1.000	1	98	63.905	-0.095	0.000	0.01			0.1	OK																																																																																																												
2.000	2	98	64.047	-0.095	0.000	0.01			0.1	OK																																																																																																												
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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 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																																																																																																									
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M5-60 (mm)		20.300		Cv (Winter)		0.840																																																																																																									
Margin for Flood Risk Warning (mm)						300.0																																																																																																									
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DTS Status						OFF																																																																																																									
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Profile(s)						Summer and Winter																																																																																																									
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080																																																																																																													
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Climate Change (%)		40, 40, 40																																																																																																													
<table><tr><th colspan="7">Water Surcharged Flooded</th><th>Half Drain</th><th>Pipe</th><th></th></tr><tr><th>PN</th><th>US/MH Name</th><th>Storm Rank</th><th>Level (m)</th><th>Depth (m)</th><th>Volume (m³)</th><th>Flow / Overflow Cap.</th><th>Time (mins)</th><th>Flow (l/s)</th><th>Status</th></tr><tr><td>1.000</td><td>1</td><td>104</td><td>63.904</td><td>-0.096</td><td>0.000</td><td>0.01</td><td></td><td>0.1</td><td>OK</td></tr><tr><td>2.000</td><td>2</td><td>104</td><td>64.047</td><td>-0.095</td><td>0.000</td><td>0.01</td><td></td><td>0.1</td><td>OK</td></tr><tr><td>2.001</td><td>3</td><td>104</td><td>63.919</td><td>-0.094</td><td>0.000</td><td>0.01</td><td></td><td>0.1</td><td>OK</td></tr><tr><td>3.000</td><td>4</td><td>104</td><td>63.912</td><td>-0.088</td><td>0.000</td><td>0.03</td><td></td><td>0.1</td><td>OK</td></tr><tr><td>1.001</td><td>4</td><td>104</td><td>63.845</td><td>-0.133</td><td>0.000</td><td>0.03</td><td></td><td>0.3</td><td>OK</td></tr><tr><td>1.002</td><td>5</td><td>104</td><td>63.804</td><td>-0.140</td><td>0.000</td><td>0.01</td><td>268</td><td>0.3</td><td>OK</td></tr><tr><td>1.003</td><td>6</td><td>104</td><td>63.653</td><td>-0.137</td><td>0.000</td><td>0.02</td><td></td><td>0.4</td><td>OK</td></tr><tr><td>1.004</td><td>7</td><td>104</td><td>63.412</td><td>-0.120</td><td>0.000</td><td>0.02</td><td></td><td>0.4</td><td>OK</td></tr></table>												Water Surcharged Flooded							Half Drain	Pipe		PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap.	Time (mins)	Flow (l/s)	Status	1.000	1	104	63.904	-0.096	0.000	0.01		0.1	OK	2.000	2	104	64.047	-0.095	0.000	0.01		0.1	OK	2.001	3	104	63.919	-0.094	0.000	0.01		0.1	OK	3.000	4	104	63.912	-0.088	0.000	0.03		0.1	OK	1.001	4	104	63.845	-0.133	0.000	0.03		0.3	OK	1.002	5	104	63.804	-0.140	0.000	0.01	268	0.3	OK	1.003	6	104	63.653	-0.137	0.000	0.02		0.4	OK	1.004	7	104	63.412	-0.120	0.000	0.02		0.4	OK
Water Surcharged Flooded							Half Drain	Pipe																																																																																																							
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap.	Time (mins)	Flow (l/s)	Status																																																																																																						
1.000	1	104	63.904	-0.096	0.000	0.01		0.1	OK																																																																																																						
2.000	2	104	64.047	-0.095	0.000	0.01		0.1	OK																																																																																																						
2.001	3	104	63.919	-0.094	0.000	0.01		0.1	OK																																																																																																						
3.000	4	104	63.912	-0.088	0.000	0.03		0.1	OK																																																																																																						
1.001	4	104	63.845	-0.133	0.000	0.03		0.3	OK																																																																																																						
1.002	5	104	63.804	-0.140	0.000	0.01	268	0.3	OK																																																																																																						
1.003	6	104	63.653	-0.137	0.000	0.02		0.4	OK																																																																																																						
1.004	7	104	63.412	-0.120	0.000	0.02		0.4	OK																																																																																																						
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Summary Wizard of 8640 minute 5 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	107	63.903	-0.097	0.000	0.01		0.0	OK
2.000	2	107	64.046	-0.096	0.000	0.01		0.1	OK
2.001	3	107	63.918	-0.094	0.000	0.01		0.1	OK
3.000	4	107	63.911	-0.089	0.000	0.03		0.1	OK
1.001	4	107	63.844	-0.134	0.000	0.02		0.2	OK
1.002	5	107	63.802	-0.142	0.000	0.01		323 0.2	OK
1.003	6	107	63.651	-0.139	0.000	0.02		0.3	OK
1.004	7	107	63.410	-0.122	0.000	0.02		0.3	OK

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Summary Wizard of 10080 minute 5 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 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

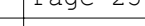
Rainfall Model	FSR	Ratio R	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	110	63.903	-0.097	0.000	0.01		0.0	OK
2.000	2	110	64.046	-0.096	0.000	0.01		0.1	OK
2.001	3	110	63.917	-0.095	0.000	0.01		0.1	OK
3.000	4	110	63.910	-0.090	0.000	0.02		0.1	OK
1.001	4	110	63.843	-0.135	0.000	0.02		0.2	OK
1.002	5	110	63.801	-0.143	0.000	0.01		377 0.2	OK
1.003	6	110	63.650	-0.140	0.000	0.01		0.3	OK
1.004	7	110	63.408	-0.124	0.000	0.01		0.3	OK

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Summary Wizard of 15 minute 30 year Summer I+40% for Storm

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 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	1	26	64.113	0.113	0.000	0.56				3.8	SURCHARGED
2.000	2	16	64.208	0.066	0.000	0.64				4.6	SURCHARGED
2.001	3	20	64.154	0.142	0.000	0.88				6.1	SURCHARGED
3.000	4	17	64.184	0.184	0.000	2.24				8.8	SURCHARGED
1.001	4	27	64.098	0.120	0.000	1.89				18.4	SURCHARGED
1.002	5	30	64.073	0.129	0.000	0.17				3.4	SURCHARGED
1.003	6	30	64.067	0.277	0.000	0.24				5.2	SURCHARGED
1.004	7	30	64.060	0.528	0.000	0.10				2.0	SURCHARGED

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Summary Wizard of 30 minute 30 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 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

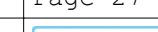
Rainfall Model FSR Ratio R 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 40

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

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	1	23	64.133	0.133	0.000	0.49				3.3	SURCHARGED
2.000	2	20	64.180	0.038	0.000	0.58				4.1	SURCHARGED
2.001	3	23	64.142	0.129	0.000	0.77				5.2	SURCHARGED
3.000	4	20	64.164	0.164	0.000	1.99				7.8	SURCHARGED
1.001	4	22	64.131	0.153	0.000	1.64				16.0	SURCHARGED
1.002	5	23	64.125	0.181	0.000	0.14				2.9	SURCHARGED
1.003	6	23	64.120	0.330	0.000	0.18				3.7	SURCHARGED
1.004	7	23	64.112	0.580	0.000	0.10				2.0	SURCHARGE

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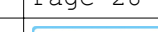
Summary Wizard of 60 minute 30 year Summer I+40% for Storm

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 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	1	20	64.148	0.148	0.000	0.35			2.4	SURCHARGED	
2.000	2	23	64.152	0.010	0.000	0.47			3.4	SURCHARGED	
2.001	3	22	64.150	0.137	0.000	0.61			4.1	SURCHARGED	
3.000	4	23	64.148	0.148	0.000	1.44			5.7	SURCHARGED	
1.001	4	20	64.147	0.169	0.000	1.21			11.7	SURCHARGED	
1.002	5	20	64.142	0.198	0.000	0.13			2.6	SURCHARGED	
1.003	6	20	64.138	0.348	0.000	0.14			3.1	SURCHARGED	
1.004	7	20	64.130	0.598	0.000	0.10			2.0	SURCHARGE	

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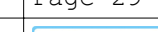
Summary Wizard of 120 minute 30 year Summer I+40% for Storm

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Synthetic Rainfall Details

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

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	1	24	64.132	0.132	0.000	0.23			1.6	SURCHARGED
2.000	2	25	64.136	-0.006	0.000	0.31			2.2	OK
2.001	3	25	64.133	0.121	0.000	0.40			2.7	SURCHARGED
3.000	4	25	64.131	0.131	0.000	0.97			3.8	SURCHARGED
1.001	4	23	64.130	0.152	0.000	0.80			7.7	SURCHARGED
1.002	5	22	64.126	0.182	0.000	0.13		80	2.6	SURCHARGED
1.003	6	22	64.121	0.331	0.000	0.15			3.3	SURCHARGED
1.004	7	22	64.113	0.581	0.000	0.10			2.0	SURCHARGED

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Summary Wizard of 180 minute 30 year Summer I+40% for Storm

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

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Summary Wizard of 240 minute 30 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 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 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 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	1	29	64.089	0.089	0.000	0.14			1.0	SURCHARGED
2.000	2	29	64.093	-0.049	0.000	0.19			1.4	OK
2.001	3	29	64.091	0.078	0.000	0.25			1.7	SURCHARGED
3.000	4	29	64.089	0.089	0.000	0.62			2.4	SURCHARGED
1.001	4	29	64.088	0.110	0.000	0.50			4.9	SURCHARGED
1.002	5	28	64.084	0.140	0.000	0.12		94	2.4	SURCHARGED
1.003	6	28	64.079	0.289	0.000	0.14			3.0	SURCHARGED
1.004	7	28	64.071	0.539	0.000	0.10			2.0	SURCHARGED

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Summary Wizard of 360 minute 30 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 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 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

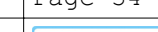
Margin for Flood Risk Warning (mm) 300.0
 Analysis Timestep 2.5 Second Increment (Extended)
 DTS Status OFF
 DVD Status ON
 Inertia Status ON

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 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	1	33	64.046	0.046	0.000	0.11			0.8	SURCHARGED
2.000	2	40	64.067	-0.075	0.000	0.14			1.0	OK
2.001	3	34	64.047	0.034	0.000	0.20			1.3	SURCHARGED
3.000	4	35	64.045	0.045	0.000	0.47			1.8	SURCHARGED
1.001	4	33	64.044	0.066	0.000	0.39			3.8	SURCHARGED
1.002	5	33	64.040	0.096	0.000	0.11		86	2.3	SURCHARGED
1.003	6	33	64.036	0.246	0.000	0.13			2.8	SURCHARGED
1.004	7	33	64.028	0.496	0.000	0.10			2.0	SURCHARGED

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<u>Summary Wizard of 480 minute 30 year Summer I+40% for Storm</u>											
Simulation Criteria											
Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000					
Hot Start (mins)		0		MADD Factor * 10m³/ha Storage		2.000					
Hot Start Level (mm)		0		Inlet Coeffiecient		0.800					
Manhole Headloss Coeff (Global)		0.500		Flow per Person per Day (l/per/day)		0.000					
Foul Sewage per hectare (l/s)		0.000									
Number of Input Hydrographs		0		Number of 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		0.414					
Region England and Wales Cv (Summer)		0.750									
M5-60 (mm)		20.300		Cv (Winter)		0.840					
Margin for Flood Risk Warning (mm)						300.0					
Analysis Timestep		2.5 Second Increment (Extended)									
DTS Status						OFF					
DVD Status						ON					
Inertia Status						ON					
Profile(s)						Summer and Winter					
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080									
Return Period(s) (years)		5, 30, 100									
Climate Change (%)		40, 40, 40									
Water Surcharged Flooded Half Drain Pipe											
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Status	
1.000	1	41	64.004	0.004	0.000	0.10			0.7	SURCHARGED	
2.000	2	43	64.064	-0.078	0.000	0.11			0.8	OK	
2.001	3	41	64.005	-0.007	0.000	0.16			1.1	OK	
3.000	4	41	64.004	0.004	0.000	0.37			1.5	SURCHARGED	
1.001	4	40	64.003	0.025	0.000	0.32			3.2	SURCHARGED	
1.002	5	40	63.999	0.055	0.000	0.11		77	2.2	SURCHARGED	
1.003	6	40	63.994	0.204	0.000	0.12			2.6	SURCHARGED	
1.004	7	40	63.987	0.455	0.000	0.10			2.0	SURCHARGED	
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<u>Summary Wizard of 600 minute 30 year Summer I+40% for Storm</u>										
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 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		0.414				
Region England and Wales Cv (Summer)		0.750								
M5-60 (mm)		20.300		Cv (Winter)		0.840				
Margin for Flood Risk Warning (mm)						300.0				
Analysis Timestep		2.5		Second Increment (Extended)						
DTS Status						OFF				
DVD Status						ON				
Inertia Status						ON				
Profile(s)						Summer and Winter				
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080								
Return Period(s) (years)		5, 30, 100								
Climate Change (%)		40, 40, 40								
Water Surcharged Flooded Half Drain Pipe										
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Status
1.000	1	48	63.967	-0.033	0.000	0.08			0.6	OK
2.000	2	47	64.063	-0.079	0.000	0.09			0.7	OK
2.001	3	48	63.968	-0.045	0.000	0.13			0.9	OK
3.000	4	48	63.966	-0.034	0.000	0.31			1.2	OK
1.001	4	48	63.965	-0.013	0.000	0.28			2.7	OK
1.002	5	48	63.961	0.017	0.000	0.10		70	2.1	SURCHARGED
1.003	6	48	63.957	0.167	0.000	0.12			2.5	SURCHARGED
1.004	7	48	63.950	0.418	0.000	0.10			2.0	SURCHARGED
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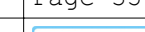
Summary Wizard of 720 minute 30 year Summer I+40% for Storm

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Synthetic Rainfall Details

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

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	1	52	63.933	-0.067	0.000	0.07			0.5	OK
2.000	2	50	64.061	-0.081	0.000	0.08			0.6	OK
2.001	3	53	63.936	-0.077	0.000	0.12			0.8	OK
3.000	4	53	63.935	-0.065	0.000	0.27			1.1	OK
1.001	4	52	63.932	-0.046	0.000	0.24			2.3	OK
1.002	5	52	63.928	-0.016	0.000	0.10		61	2.0	OK
1.003	6	52	63.924	0.134	0.000	0.12			2.5	SURCHARGED
1.004	7	52	63.917	0.385	0.000	0.10			2.0	SURCHARGED

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Summary Wizard of 960 minute 30 year Summer I+40% for Storm

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

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Summary Wizard of 1440 minute 30 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	63	63.913	-0.087	0.000	0.04		0.3	OK
2.000	2	63	64.056	-0.086	0.000	0.05		0.3	OK
2.001	3	63	63.929	-0.083	0.000	0.07		0.5	OK
3.000	4	63	63.926	-0.074	0.000	0.16		0.6	OK
1.001	4	63	63.865	-0.113	0.000	0.14		1.4	OK
1.002	5	63	63.819	-0.125	0.000	0.07	186	1.4	OK
1.003	6	63	63.670	-0.120	0.000	0.09		1.9	OK
1.004	7	63	63.511	-0.021	0.000	0.09		1.9	OK

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Summary Wizard of 2160 minute 30 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	70	63.911	-0.089	0.000	0.03		0.2	OK
2.000	2	70	64.054	-0.088	0.000	0.03		0.2	OK
2.001	3	70	63.927	-0.086	0.000	0.05		0.3	OK
3.000	4	70	63.922	-0.078	0.000	0.11		0.4	OK
1.001	4	70	63.860	-0.118	0.000	0.10		1.0	OK
1.002	5	70	63.815	-0.129	0.000	0.05	256	1.0	OK
1.003	6	70	63.665	-0.125	0.000	0.06		1.4	OK
1.004	7	70	63.453	-0.079	0.000	0.07		1.4	OK

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Summary Wizard of 2880 minute 30 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	76	63.910	-0.090	0.000	0.02		0.2	OK
2.000	2	76	64.053	-0.089	0.000	0.03		0.2	OK
2.001	3	76	63.925	-0.087	0.000	0.04		0.3	OK
3.000	4	76	63.920	-0.080	0.000	0.09		0.4	OK
1.001	4	76	63.856	-0.122	0.000	0.08		0.8	OK
1.002	5	76	63.813	-0.131	0.000	0.04	289	0.8	OK
1.003	6	76	63.662	-0.128	0.000	0.05		1.1	OK
1.004	7	76	63.440	-0.092	0.000	0.05		1.1	OK

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Summary Wizard of 4320 minute 30 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	82	63.908	-0.092	0.000	0.02		0.1	OK
2.000	2	82	64.051	-0.091	0.000	0.02		0.1	OK
2.001	3	82	63.923	-0.089	0.000	0.03		0.2	OK
3.000	4	82	63.917	-0.083	0.000	0.07		0.3	OK
1.001	4	82	63.851	-0.127	0.000	0.06		0.6	OK
1.002	5	82	63.810	-0.134	0.000	0.03	285	0.6	OK
1.003	6	82	63.658	-0.132	0.000	0.04		0.8	OK
1.004	7	82	63.428	-0.104	0.000	0.04		0.8	OK

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Summary Wizard of 5760 minute 30 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water		Surcharged		Flooded		Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)				
1.000	1	89	63.906	-0.094	0.000	0.01				0.1	OK	
2.000	2	89	64.049	-0.093	0.000	0.02				0.1	OK	
2.001	3	89	63.923	-0.090	0.000	0.02				0.2	OK	
3.000	4	89	63.915	-0.085	0.000	0.05				0.2	OK	
1.001	4	89	63.849	-0.129	0.000	0.05				0.4	OK	
1.002	5	89	63.809	-0.135	0.000	0.02			325	0.4	OK	
1.003	6	89	63.657	-0.133	0.000	0.03				0.6	OK	
1.004	7	89	63.422	-0.110	0.000	0.03				0.6	OK	

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Summary Wizard of 7200 minute 30 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	95	63.905	-0.095	0.000	0.01		0.1	OK
2.000	2	95	64.048	-0.094	0.000	0.01		0.1	OK
2.001	3	95	63.921	-0.091	0.000	0.02		0.1	OK
3.000	4	95	63.913	-0.087	0.000	0.04		0.2	OK
1.001	4	95	63.847	-0.131	0.000	0.04		0.4	OK
1.002	5	95	63.807	-0.137	0.000	0.02		340 0.4	OK
1.003	6	95	63.656	-0.134	0.000	0.02		0.5	OK
1.004	7	95	63.418	-0.114	0.000	0.03		0.5	OK

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Summary Wizard of 8640 minute 30 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	100	63.905	-0.095	0.000	0.01		0.1	OK
2.000	2	100	64.047	-0.095	0.000	0.01		0.1	OK
2.001	3	100	63.920	-0.092	0.000	0.02		0.1	OK
3.000	4	100	63.912	-0.088	0.000	0.04		0.1	OK
1.001	4	100	63.846	-0.132	0.000	0.03		0.3	OK
1.002	5	100	63.805	-0.139	0.000	0.02	409	0.3	OK
1.003	6	100	63.655	-0.135	0.000	0.02		0.4	OK
1.004	7	100	63.415	-0.117	0.000	0.02		0.4	OK

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The Old School House Casement Street Ballina, Ireland				SUDS Design Pinner Road, Northwood, UK																																																																																																																				
Date 27/07/2022 15:54				Designed by AK																																																																																																																				
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Innovyze							Network 2020.1.3																																																																																																																	
<u>Summary Wizard of 10080 minute 30 year Summer I+40% for Storm</u>																																																																																																																								
<u>Simulation Criteria</u>																																																																																																																								
Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000																																																																																																																		
Hot Start (mins)		0		MADD Factor * 10m³/ha Storage		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 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																																																																																																																		
<u>Synthetic Rainfall Details</u>																																																																																																																								
Rainfall Model		FSR		Ratio R		0.414																																																																																																																		
Region England and Wales Cv (Summer)		0.750																																																																																																																						
M5-60 (mm)		20.300		Cv (Winter)		0.840																																																																																																																		
Margin for Flood Risk Warning (mm)						300.0																																																																																																																		
Analysis Timestep		2.5		Second Increment (Extended)																																																																																																																				
DTS Status						OFF																																																																																																																		
DVD Status						ON																																																																																																																		
Inertia Status						ON																																																																																																																		
Profile(s)						Summer and Winter																																																																																																																		
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600,				720, 960, 1440, 2160, 2880, 4320, 5760,																																																																																																																		
						7200, 8640, 10080																																																																																																																		
Return Period(s) (years)						5, 30, 100																																																																																																																		
Climate Change (%)						40, 40, 40																																																																																																																		
<table><tr><th colspan="7">Water Surcharged Flooded</th><th>Half Drain</th><th>Pipe</th><th></th></tr><tr><th>PN</th><th>US/MH Name</th><th>Storm Rank</th><th>Level (m)</th><th>Depth (m)</th><th>Volume (m³)</th><th>Flow / Cap.</th><th>Overflow (l/s)</th><th>Time (mins)</th><th>Flow (l/s)</th><th>Status</th></tr><tr><td>1.000</td><td>1</td><td>103</td><td>63.904</td><td>-0.096</td><td>0.000</td><td>0.01</td><td></td><td></td><td>0.1</td><td>OK</td></tr><tr><td>2.000</td><td>2</td><td>103</td><td>64.047</td><td>-0.095</td><td>0.000</td><td>0.01</td><td></td><td></td><td>0.1</td><td>OK</td></tr><tr><td>2.001</td><td>3</td><td>103</td><td>63.919</td><td>-0.093</td><td>0.000</td><td>0.01</td><td></td><td></td><td>0.1</td><td>OK</td></tr><tr><td>3.000</td><td>4</td><td>103</td><td>63.912</td><td>-0.088</td><td>0.000</td><td>0.03</td><td></td><td></td><td>0.1</td><td>OK</td></tr><tr><td>1.001</td><td>4</td><td>103</td><td>63.845</td><td>-0.133</td><td>0.000</td><td>0.03</td><td></td><td></td><td>0.3</td><td>OK</td></tr><tr><td>1.002</td><td>5</td><td>103</td><td>63.804</td><td>-0.140</td><td>0.000</td><td>0.01</td><td></td><td>480</td><td>0.3</td><td>OK</td></tr><tr><td>1.003</td><td>6</td><td>103</td><td>63.653</td><td>-0.137</td><td>0.000</td><td>0.02</td><td></td><td></td><td>0.4</td><td>OK</td></tr><tr><td>1.004</td><td>7</td><td>103</td><td>63.413</td><td>-0.119</td><td>0.000</td><td>0.02</td><td></td><td></td><td>0.4</td><td>OK</td></tr></table>												Water Surcharged Flooded							Half Drain	Pipe		PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Status	1.000	1	103	63.904	-0.096	0.000	0.01			0.1	OK	2.000	2	103	64.047	-0.095	0.000	0.01			0.1	OK	2.001	3	103	63.919	-0.093	0.000	0.01			0.1	OK	3.000	4	103	63.912	-0.088	0.000	0.03			0.1	OK	1.001	4	103	63.845	-0.133	0.000	0.03			0.3	OK	1.002	5	103	63.804	-0.140	0.000	0.01		480	0.3	OK	1.003	6	103	63.653	-0.137	0.000	0.02			0.4	OK	1.004	7	103	63.413	-0.119	0.000	0.02			0.4	OK
Water Surcharged Flooded							Half Drain	Pipe																																																																																																																
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Status																																																																																																														
1.000	1	103	63.904	-0.096	0.000	0.01			0.1	OK																																																																																																														
2.000	2	103	64.047	-0.095	0.000	0.01			0.1	OK																																																																																																														
2.001	3	103	63.919	-0.093	0.000	0.01			0.1	OK																																																																																																														
3.000	4	103	63.912	-0.088	0.000	0.03			0.1	OK																																																																																																														
1.001	4	103	63.845	-0.133	0.000	0.03			0.3	OK																																																																																																														
1.002	5	103	63.804	-0.140	0.000	0.01		480	0.3	OK																																																																																																														
1.003	6	103	63.653	-0.137	0.000	0.02			0.4	OK																																																																																																														
1.004	7	103	63.413	-0.119	0.000	0.02			0.4	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 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 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 40

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

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	1	11	64.242	0.242	0.000	0.68			4.6	SURCHARGED	
2.000	2	3	64.369	0.227	0.000	0.78			5.5	SURCHARGED	
2.001	3	8	64.292	0.280	0.000	1.03			7.1	SURCHARGED	
3.000	4	4	64.349	0.349	0.000	2.78			10.9	SURCHARGED	
1.001	4	13	64.216	0.238	0.000	2.24			21.8	SURCHARGED	
1.002	5	17	64.162	0.218	0.000	0.16			3.3	SURCHARGED	
1.003	6	17	64.156	0.366	0.000	0.26			5.5	SURCHARGED	
1.004	7	17	64.148	0.616	0.000	0.10			2.0	SURCHARGED	

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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 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 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 40

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

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)	Flow (l/s)	
1.000	1	10	64.253	0.253	0.000	0.59		4.0	SURCHARGED
2.000	2	6	64.352	0.210	0.000	0.69		4.9	SURCHARGED
2.001	3	9	64.291	0.279	0.000	0.91		6.2	SURCHARGED
3.000	4	6	64.334	0.334	0.000	2.48		9.8	SURCHARGED
1.001	4	10	64.251	0.273	0.000	1.99		19.3	SURCHARGED
1.002	5	9	64.245	0.301	0.000	0.16		3.2	SURCHARGED
1.003	6	9	64.239	0.449	0.000	0.19		4.1	SURCHARGED
1.004	7	9	64.230	0.698	0.000	0.10		2.1	SURCHARGED

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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 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

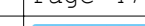
Rainfall Model FSR Ratio R 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 40

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

PN	US/MH Name	Storm Rank	Water Surcharged Flooded				Half Drain		Pipe Flow	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)		
1.000	1	5	64.296	0.296	0.000	0.45			3.0	SURCHARGED
2.000	2	8	64.301	0.159	0.000	0.53			3.8	SURCHARGED
2.001	3	6	64.298	0.285	0.000	0.70			4.8	SURCHARGED
3.000	4	8	64.296	0.296	0.000	1.87			7.3	SURCHARGED
1.001	4	5	64.294	0.316	0.000	1.51			14.7	SURCHARGED
1.002	5	5	64.289	0.345	0.000	0.12			2.4	SURCHARGED
1.003	6	5	64.284	0.494	0.000	0.14			3.0	SURCHARGED
1.004	7	5	64.275	0.743	0.000	0.11			2.1	SURCHARGED

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

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

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

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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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water Surcharged			Flooded		Half Drain Time (mins)	Pipe Flow (l/s)	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)				
1.000	1	9	64.254	0.254	0.000	0.23		1.6	SURCHARGED	
2.000	2	11	64.259	0.117	0.000	0.30		2.1	SURCHARGED	
2.001	3	11	64.256	0.243	0.000	0.39		2.6	SURCHARGED	
3.000	4	11	64.254	0.254	0.000	0.94		3.7	SURCHARGED	
1.001	4	9	64.253	0.275	0.000	0.78		7.6	SURCHARGED	
1.002	5	8	64.248	0.304	0.000	0.12	112	2.4	SURCHARGED	
1.003	6	8	64.243	0.453	0.000	0.14		3.0	SURCHARGED	
1.004	7	8	64.234	0.702	0.000	0.10		2.1	SURCHARGED	

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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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water Surcharged			Flooded		Half Drain Time (mins)	Pipe Flow (l/s)	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)				
1.000	1	12	64.229	0.229	0.000	0.19		1.3	SURCHARGED	
2.000	2	13	64.233	0.091	0.000	0.25		1.8	SURCHARGED	
2.001	3	12	64.230	0.218	0.000	0.32		2.2	SURCHARGED	
3.000	4	12	64.228	0.228	0.000	0.76		3.0	SURCHARGED	
1.001	4	11	64.227	0.249	0.000	0.64		6.3	SURCHARGED	
1.002	5	10	64.222	0.278	0.000	0.12	118	2.4	SURCHARGED	
1.003	6	10	64.217	0.427	0.000	0.14		2.9	SURCHARGED	
1.004	7	10	64.209	0.677	0.000	0.10		2.0	SURCHARGED	

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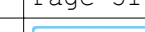
Simon Beale Associates		Page 50
The Old School House Casement Street Ballina, Ireland	SUDS Design Pinner Road, Northwood, UK	
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Summary Wizard of 360 minute 100 year Summer I+40% for Storm

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

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

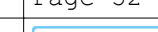
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The Old School House Casement Street Ballina, Ireland	SUDS Design Pinner Road, Northwood, UK	
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Innovyze	Network 2020.1.3	

Summary Wizard of 480 minute 100 year Summer I+40% for Storm

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

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Innovyze	Network 2020.1.3	

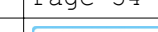
Summary Wizard of 600 minute 100 year Summer I+40% for Storm

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

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The Old School House Casement Street Ballina, Ireland				SUDS Design Pinner Road, Northwood, UK																																																																																																																				
Date 27/07/2022 15:54				Designed by AK																																																																																																																				
File 22-182 Pinner Road, Nor...				Checked by SB																																																																																																																				
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<u>Summary Wizard of 720 minute 100 year Summer I+40% for Storm</u>																																																																																																																								
<u>Simulation Criteria</u>																																																																																																																								
Areal Reduction Factor			1.000		Additional Flow - % of Total Flow			0.000																																																																																																																
Hot Start (mins)			0		MADD Factor * 10m³/ha Storage			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 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																																																																																																																
<u>Synthetic Rainfall Details</u>																																																																																																																								
Rainfall Model			FSR		Ratio R			0.414																																																																																																																
Region England and Wales Cv (Summer)			0.750																																																																																																																					
M5-60 (mm)			20.300		Cv (Winter)			0.840																																																																																																																
Margin for Flood Risk Warning (mm)								300.0																																																																																																																
Analysis Timestep			2.5 Second Increment (Extended)																																																																																																																					
DTS Status								OFF																																																																																																																
DVD Status								ON																																																																																																																
Inertia Status								ON																																																																																																																
Profile(s)					Summer and Winter																																																																																																																			
Duration(s) (mins)			15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080																																																																																																																					
Return Period(s) (years)			5, 30, 100																																																																																																																					
Climate Change (%)			40, 40, 40																																																																																																																					
<table><tr><th colspan="2"></th><th colspan="3">Water Surcharged</th><th colspan="2">Flooded</th><th colspan="2">Half Drain</th><th>Pipe</th><th rowspan="2">Status</th></tr><tr><th>PN</th><th>US/MH Name</th><th>Storm Rank</th><th>Level (m)</th><th>Depth (m)</th><th>Volume (m³)</th><th>Flow / Cap.</th><th>Overflow (l/s)</th><th>Time (mins)</th><th>Flow (l/s)</th></tr><tr><td>1.000</td><td>1</td><td>32</td><td>64.050</td><td>0.050</td><td>0.000</td><td>0.09</td><td></td><td></td><td>0.6</td><td>SURCHARGED</td></tr><tr><td>2.000</td><td>2</td><td>44</td><td>64.064</td><td>-0.078</td><td>0.000</td><td>0.11</td><td></td><td></td><td>0.8</td><td>OK</td></tr><tr><td>2.001</td><td>3</td><td>32</td><td>64.052</td><td>0.039</td><td>0.000</td><td>0.15</td><td></td><td></td><td>1.0</td><td>SURCHARGED</td></tr><tr><td>3.000</td><td>4</td><td>34</td><td>64.050</td><td>0.050</td><td>0.000</td><td>0.35</td><td></td><td></td><td>1.4</td><td>SURCHARGED</td></tr><tr><td>1.001</td><td>4</td><td>32</td><td>64.049</td><td>0.071</td><td>0.000</td><td>0.30</td><td></td><td></td><td>2.9</td><td>SURCHARGED</td></tr><tr><td>1.002</td><td>5</td><td>32</td><td>64.045</td><td>0.101</td><td>0.000</td><td>0.10</td><td></td><td>99</td><td>2.0</td><td>SURCHARGED</td></tr><tr><td>1.003</td><td>6</td><td>32</td><td>64.040</td><td>0.250</td><td>0.000</td><td>0.11</td><td></td><td></td><td>2.4</td><td>SURCHARGED</td></tr><tr><td>1.004</td><td>7</td><td>32</td><td>64.033</td><td>0.501</td><td>0.000</td><td>0.10</td><td></td><td></td><td>2.0</td><td>SURCHARGED</td></tr></table>														Water Surcharged			Flooded		Half Drain		Pipe	Status	PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	1.000	1	32	64.050	0.050	0.000	0.09			0.6	SURCHARGED	2.000	2	44	64.064	-0.078	0.000	0.11			0.8	OK	2.001	3	32	64.052	0.039	0.000	0.15			1.0	SURCHARGED	3.000	4	34	64.050	0.050	0.000	0.35			1.4	SURCHARGED	1.001	4	32	64.049	0.071	0.000	0.30			2.9	SURCHARGED	1.002	5	32	64.045	0.101	0.000	0.10		99	2.0	SURCHARGED	1.003	6	32	64.040	0.250	0.000	0.11			2.4	SURCHARGED	1.004	7	32	64.033	0.501	0.000	0.10			2.0	SURCHARGED
		Water Surcharged			Flooded		Half Drain		Pipe	Status																																																																																																														
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1.003	6	32	64.040	0.250	0.000	0.11			2.4	SURCHARGED																																																																																																														
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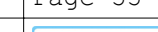
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Summary Wizard of 960 minute 100 year Summer I+40% for Storm

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

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Innovyze	Network 2020.1.3	

Summary Wizard of 1440 minute 100 year Summer I+40% for Storm

Simulation Criteria

Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Synthetic Rainfall Details

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

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	1	59	63.915	-0.085	0.000	0.05			0.4	OK
2.000	2	59	64.058	-0.084	0.000	0.06			0.4	OK
2.001	3	59	63.932	-0.080	0.000	0.09			0.6	OK
3.000	4	59	63.930	-0.070	0.000	0.20			0.8	OK
1.001	4	60	63.871	-0.107	0.000	0.18			1.7	OK
1.002	5	59	63.854	-0.090	0.000	0.08		39	1.7	OK
1.003	6	59	63.849	0.059	0.000	0.11			2.3	SURCHARGED
1.004	7	59	63.842	0.310	0.000	0.10			2.0	SURCHARGED

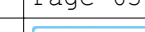
Simon Beale Associates							Page 56																																																																																																																	
The Old School House Casement Street Ballina, Ireland				SUDS Design Pinner Road, Northwood, UK																																																																																																																				
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<u>Summary Wizard of 2160 minute 100 year Summer I+40% for Storm</u>																																																																																																																								
<u>Simulation Criteria</u>																																																																																																																								
Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000																																																																																																																		
Hot Start (mins)		0		MADD Factor * 10m³/ha Storage		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 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																																																																																																																		
<u>Synthetic Rainfall Details</u>																																																																																																																								
Rainfall Model		FSR		Ratio R		0.414																																																																																																																		
Region England and Wales Cv (Summer)		0.750																																																																																																																						
M5-60 (mm)		20.300		Cv (Winter)		0.840																																																																																																																		
Margin for Flood Risk Warning (mm)						300.0																																																																																																																		
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DTS Status						OFF																																																																																																																		
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Inertia Status						ON																																																																																																																		
Profile(s)						Summer and Winter																																																																																																																		
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600,				720, 960, 1440, 2160, 2880, 4320, 5760,																																																																																																																		
						7200, 8640, 10080																																																																																																																		
Return Period(s) (years)						5, 30, 100																																																																																																																		
Climate Change (%)						40, 40, 40																																																																																																																		
<table><tr><th colspan="7">Water Surcharged Flooded</th><th>Half Drain</th><th>Pipe</th><th></th></tr><tr><th>PN</th><th>US/MH Name</th><th>Storm Rank</th><th>Level (m)</th><th>Depth (m)</th><th>Volume (m³)</th><th>Flow / Cap.</th><th>Overflow (l/s)</th><th>Time (mins)</th><th>Flow (l/s)</th><th>Status</th></tr><tr><td>1.000</td><td>1</td><td>68</td><td>63.912</td><td>-0.088</td><td>0.000</td><td>0.04</td><td></td><td></td><td>0.3</td><td>OK</td></tr><tr><td>2.000</td><td>2</td><td>68</td><td>64.055</td><td>-0.087</td><td>0.000</td><td>0.04</td><td></td><td></td><td>0.3</td><td>OK</td></tr><tr><td>2.001</td><td>3</td><td>68</td><td>63.928</td><td>-0.084</td><td>0.000</td><td>0.06</td><td></td><td></td><td>0.4</td><td>OK</td></tr><tr><td>3.000</td><td>4</td><td>68</td><td>63.925</td><td>-0.075</td><td>0.000</td><td>0.14</td><td></td><td></td><td>0.6</td><td>OK</td></tr><tr><td>1.001</td><td>4</td><td>68</td><td>63.863</td><td>-0.115</td><td>0.000</td><td>0.13</td><td></td><td></td><td>1.2</td><td>OK</td></tr><tr><td>1.002</td><td>5</td><td>68</td><td>63.818</td><td>-0.126</td><td>0.000</td><td>0.06</td><td></td><td>279</td><td>1.2</td><td>OK</td></tr><tr><td>1.003</td><td>6</td><td>68</td><td>63.668</td><td>-0.122</td><td>0.000</td><td>0.08</td><td></td><td></td><td>1.7</td><td>OK</td></tr><tr><td>1.004</td><td>7</td><td>68</td><td>63.473</td><td>-0.059</td><td>0.000</td><td>0.09</td><td></td><td></td><td>1.7</td><td>OK</td></tr></table>												Water Surcharged Flooded							Half Drain	Pipe		PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Status	1.000	1	68	63.912	-0.088	0.000	0.04			0.3	OK	2.000	2	68	64.055	-0.087	0.000	0.04			0.3	OK	2.001	3	68	63.928	-0.084	0.000	0.06			0.4	OK	3.000	4	68	63.925	-0.075	0.000	0.14			0.6	OK	1.001	4	68	63.863	-0.115	0.000	0.13			1.2	OK	1.002	5	68	63.818	-0.126	0.000	0.06		279	1.2	OK	1.003	6	68	63.668	-0.122	0.000	0.08			1.7	OK	1.004	7	68	63.473	-0.059	0.000	0.09			1.7	OK
Water Surcharged Flooded							Half Drain	Pipe																																																																																																																
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Status																																																																																																														
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The Old School House Casement Street Ballina, Ireland				SUDS Design Pinner Road, Northwood, UK							
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Innovyze				Network 2020.1.3							
<u>Summary Wizard of 2880 minute 100 year Summer I+40% for Storm</u>											
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 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		0.414					
Region England and Wales Cv (Summer)		0.750									
M5-60 (mm)		20.300		Cv (Winter)		0.840					
Margin for Flood Risk Warning (mm)						300.0					
Analysis Timestep		2.5		Second Increment (Extended)							
DTS Status						OFF					
DVD Status						ON					
Inertia Status						ON					
Profile(s)						Summer and Winter					
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600,				720, 960, 1440, 2160, 2880, 4320, 5760,					
						7200, 8640, 10080					
Return Period(s) (years)						5, 30, 100					
Climate Change (%)						40, 40, 40					
Water Surcharged Flooded Half Drain Pipe											
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Pipe Flow (l/s)	Status	
1.000	1	71	63.911	-0.089	0.000	0.03			0.2	OK	
2.000	2	71	64.054	-0.088	0.000	0.03			0.2	OK	
2.001	3	71	63.927	-0.086	0.000	0.05			0.3	OK	
3.000	4	71	63.922	-0.078	0.000	0.11			0.4	OK	
1.001	4	71	63.860	-0.118	0.000	0.10			1.0	OK	
1.002	5	71	63.815	-0.129	0.000	0.05		342	1.0	OK	
1.003	6	71	63.665	-0.125	0.000	0.06			1.4	OK	
1.004	7	71	63.453	-0.079	0.000	0.07			1.4	OK	
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Summary Wizard of 15 minute 5 year Winter I+40% for Storm

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /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		

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

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The Old School House Casement Street Ballina, Ireland	SUDS Design Pinner Road, Northwood, UK	
Date 27/07/2022 15:54 File 22-182 Pinner Road, Nor...	Designed by AK Checked by SB	
Innovyze	Network 2020.1.3	

Summary Wizard of 30 minute 5 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 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

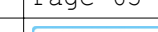
Rainfall Model FSR Ratio R 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 40

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

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	1	35	64.038	0.038	0.000	0.33			2.2	SURCHARGED	
2.000	2	34	64.085	-0.057	0.000	0.39			2.8	OK	
2.001	3	35	64.040	0.027	0.000	0.54			3.7	SURCHARGED	
3.000	4	37	64.038	0.038	0.000	1.28			5.0	SURCHARGED	
1.001	4	35	64.037	0.059	0.000	1.12			10.9	SURCHARGED	
1.002	5	35	64.032	0.088	0.000	0.16			3.3	SURCHARGED	
1.003	6	35	64.027	0.237	0.000	0.18			3.9	SURCHARGED	
1.004	7	35	64.020	0.488	0.000	0.10			2.0	SURCHARGED	

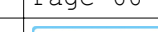
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The Old School House Casement Street Ballina, Ireland	SUDS Design Pinner Road, Northwood, UK	
Date 27/07/2022 15:54 File 22-182 Pinner Road, Nor...	Designed by AK Checked by SB	
Innovyze	Network 2020.1.3	

Summary Wizard of 60 minute 5 year Winter I+40% for Storm

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

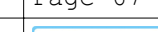
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The Old School House Casement Street Ballina, Ireland	SUDS Design Pinner Road, Northwood, UK	
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Innovyze	Network 2020.1.3	

Summary Wizard of 120 minute 5 year Winter I+40% for Storm

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

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The Old School House Casement Street Ballina, Ireland	SUDS Design Pinner Road, Northwood, UK	
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Innovyze	Network 2020.1.3	

Summary Wizard of 180 minute 5 year Winter I+40% for Storm

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

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

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<u>Simulation Criteria</u>																																																																																																																								
Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000																																																																																																																		
Hot Start (mins)		0		MADD Factor * 10m³/ha Storage		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																																																																																																																						
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Number of Online Controls		1		Number of Time/Area Diagrams		0																																																																																																																		
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M5-60 (mm)		20.300		Cv (Winter)		0.840																																																																																																																		
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Climate Change (%)		40, 40, 40																																																																																																																						
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Simon Beale Associates		Page 71
The Old School House Casement Street Ballina, Ireland	SUDS Design Pinner Road, Northwood, UK	
Date 27/07/2022 15:54 File 22-182 Pinner Road, Nor...	Designed by AK Checked by SB	
Innovyze	Network 2020.1.3	

Summary Wizard of 600 minute 5 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 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 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 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	1	65	63.913	-0.087	0.000	0.04				0.3	OK
2.000	2	65	64.056	-0.086	0.000	0.05				0.3	OK
2.001	3	65	63.929	-0.083	0.000	0.07				0.5	OK
3.000	4	65	63.926	-0.074	0.000	0.15				0.6	OK
1.001	4	65	63.865	-0.113	0.000	0.14				1.3	OK
1.002	5	65	63.819	-0.125	0.000	0.07			131	1.3	OK
1.003	6	65	63.670	-0.120	0.000	0.09				1.9	OK
1.004	7	65	63.504	-0.028	0.000	0.09				1.8	OK

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Water Surcharged Flooded							Half Drain	Pipe																																																																																																																
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<u>Summary Wizard of 2160 minute 5 year Winter I+40% for Storm</u>																																																																																																															
<u>Simulation Criteria</u>																																																																																																															
Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000																																																																																																									
Hot Start (mins)		0		MADD Factor * 10m³/ha Storage		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 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																																																																																																									
<u>Synthetic Rainfall Details</u>																																																																																																															
Rainfall Model		FSR		Ratio R		0.414																																																																																																									
Region England and Wales Cv (Summer)		0.750																																																																																																													
M5-60 (mm)		20.300		Cv (Winter)		0.840																																																																																																									
Margin for Flood Risk Warning (mm)						300.0																																																																																																									
Analysis Timestep		2.5 Second Increment (Extended)																																																																																																													
DTS Status						OFF																																																																																																									
DVD Status						ON																																																																																																									
Inertia Status						ON																																																																																																									
Profile(s)						Summer and Winter																																																																																																									
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080																																																																																																													
Return Period(s) (years)		5, 30, 100																																																																																																													
Climate Change (%)		40, 40, 40																																																																																																													
<table><tr><th colspan="7">Water Surcharged Flooded</th><th>Half Drain</th><th>Pipe</th><th></th></tr><tr><th>PN</th><th>US/MH Name</th><th>Storm Rank</th><th>Level (m)</th><th>Depth (m)</th><th>Volume (m³)</th><th>Flow / Overflow Cap.</th><th>Time (mins)</th><th>Flow (l/s)</th><th>Status</th></tr><tr><td>1.000</td><td>1</td><td>87</td><td>63.907</td><td>-0.093</td><td>0.000</td><td>0.02</td><td></td><td>0.1</td><td>OK</td></tr><tr><td>2.000</td><td>2</td><td>87</td><td>64.050</td><td>-0.092</td><td>0.000</td><td>0.02</td><td></td><td>0.1</td><td>OK</td></tr><tr><td>2.001</td><td>3</td><td>87</td><td>63.923</td><td>-0.089</td><td>0.000</td><td>0.02</td><td></td><td>0.2</td><td>OK</td></tr><tr><td>3.000</td><td>4</td><td>87</td><td>63.915</td><td>-0.085</td><td>0.000</td><td>0.06</td><td></td><td>0.2</td><td>OK</td></tr><tr><td>1.001</td><td>4</td><td>87</td><td>63.850</td><td>-0.128</td><td>0.000</td><td>0.05</td><td></td><td>0.5</td><td>OK</td></tr><tr><td>1.002</td><td>5</td><td>87</td><td>63.810</td><td>-0.134</td><td>0.000</td><td>0.02</td><td>273</td><td>0.5</td><td>OK</td></tr><tr><td>1.003</td><td>6</td><td>87</td><td>63.658</td><td>-0.132</td><td>0.000</td><td>0.03</td><td></td><td>0.7</td><td>OK</td></tr><tr><td>1.004</td><td>7</td><td>87</td><td>63.425</td><td>-0.107</td><td>0.000</td><td>0.04</td><td></td><td>0.7</td><td>OK</td></tr></table>												Water Surcharged Flooded							Half Drain	Pipe		PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap.	Time (mins)	Flow (l/s)	Status	1.000	1	87	63.907	-0.093	0.000	0.02		0.1	OK	2.000	2	87	64.050	-0.092	0.000	0.02		0.1	OK	2.001	3	87	63.923	-0.089	0.000	0.02		0.2	OK	3.000	4	87	63.915	-0.085	0.000	0.06		0.2	OK	1.001	4	87	63.850	-0.128	0.000	0.05		0.5	OK	1.002	5	87	63.810	-0.134	0.000	0.02	273	0.5	OK	1.003	6	87	63.658	-0.132	0.000	0.03		0.7	OK	1.004	7	87	63.425	-0.107	0.000	0.04		0.7	OK
Water Surcharged Flooded							Half Drain	Pipe																																																																																																							
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap.	Time (mins)	Flow (l/s)	Status																																																																																																						
1.000	1	87	63.907	-0.093	0.000	0.02		0.1	OK																																																																																																						
2.000	2	87	64.050	-0.092	0.000	0.02		0.1	OK																																																																																																						
2.001	3	87	63.923	-0.089	0.000	0.02		0.2	OK																																																																																																						
3.000	4	87	63.915	-0.085	0.000	0.06		0.2	OK																																																																																																						
1.001	4	87	63.850	-0.128	0.000	0.05		0.5	OK																																																																																																						
1.002	5	87	63.810	-0.134	0.000	0.02	273	0.5	OK																																																																																																						
1.003	6	87	63.658	-0.132	0.000	0.03		0.7	OK																																																																																																						
1.004	7	87	63.425	-0.107	0.000	0.04		0.7	OK																																																																																																						
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<u>Summary Wizard of 4320 minute 5 year Winter I+40% for Storm</u>											
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 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		0.414					
Region England and Wales Cv (Summer)		0.750									
M5-60 (mm)		20.300		Cv (Winter)		0.840					
Margin for Flood Risk Warning (mm)						300.0					
Analysis Timestep		2.5 Second Increment (Extended)									
DTS Status						OFF					
DVD Status						ON					
Inertia Status						ON					
Profile(s)						Summer and Winter					
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080									
Return Period(s) (years)		5, 30, 100									
Climate Change (%)		40, 40, 40									
Water Surcharged Flooded Half Drain Pipe											
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Pipe Flow (l/s)	Status	
1.000	1	101	63.904	-0.096	0.000	0.01			0.1	OK	
2.000	2	101	64.047	-0.095	0.000	0.01			0.1	OK	
2.001	3	101	63.919	-0.093	0.000	0.01			0.1	OK	
3.000	4	101	63.912	-0.088	0.000	0.03			0.1	OK	
1.001	4	101	63.845	-0.133	0.000	0.03			0.3	OK	
1.002	5	101	63.804	-0.140	0.000	0.01		409	0.3	OK	
1.003	6	101	63.654	-0.136	0.000	0.02			0.4	OK	
1.004	7	101	63.414	-0.118	0.000	0.02			0.4	OK	

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Summary Wizard of 5760 minute 5 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	108	63.903	-0.097	0.000	0.01		0.0	OK
2.000	2	108	64.046	-0.096	0.000	0.01		0.1	OK
2.001	3	108	63.918	-0.094	0.000	0.01		0.1	OK
3.000	4	108	63.911	-0.089	0.000	0.03		0.1	OK
1.001	4	108	63.844	-0.134	0.000	0.02		0.2	OK
1.002	5	108	63.802	-0.142	0.000	0.01	494	0.2	OK
1.003	6	108	63.651	-0.139	0.000	0.02		0.3	OK
1.004	7	108	63.410	-0.122	0.000	0.02		0.3	OK

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Summary Wizard of 7200 minute 5 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	112	63.903	-0.097	0.000	0.01		0.0	OK
2.000	2	112	64.045	-0.097	0.000	0.01		0.0	OK
2.001	3	112	63.917	-0.095	0.000	0.01		0.1	OK
3.000	4	112	63.910	-0.090	0.000	0.02		0.1	OK
1.001	4	112	63.842	-0.136	0.000	0.02		0.2	OK
1.002	5	112	63.801	-0.143	0.000	0.01	471	0.2	OK
1.003	6	112	63.649	-0.141	0.000	0.01		0.3	OK
1.004	7	112	63.407	-0.125	0.000	0.01		0.3	OK

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Summary Wizard of 8640 minute 5 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 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 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 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	1	113	63.902	-0.098	0.000	0.01			0.0	OK
2.000	2	113	64.045	-0.097	0.000	0.01			0.0	OK
2.001	3	113	63.916	-0.096	0.000	0.01			0.1	OK
3.000	4	113	63.909	-0.091	0.000	0.02			0.1	OK
1.001	4	113	63.841	-0.137	0.000	0.02			0.2	OK
1.002	5	113	63.800	-0.144	0.000	0.01		457	0.2	OK
1.003	6	113	63.648	-0.142	0.000	0.01			0.2	OK
1.004	7	113	63.406	-0.126	0.000	0.01			0.2	OK

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Summary Wizard of 10080 minute 5 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	114	63.902	-0.098	0.000	0.00		0.0	OK
2.000	2	114	64.045	-0.097	0.000	0.01		0.0	OK
2.001	3	114	63.916	-0.096	0.000	0.01		0.1	OK
3.000	4	114	63.908	-0.092	0.000	0.02		0.1	OK
1.001	4	114	63.839	-0.139	0.000	0.02		0.2	OK
1.002	5	114	63.799	-0.145	0.000	0.01	366	0.2	OK
1.003	6	114	63.647	-0.143	0.000	0.01		0.2	OK
1.004	7	114	63.404	-0.128	0.000	0.01		0.2	OK

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Summary Wizard of 15 minute 30 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 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 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 40

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

PN	US/MH Name	Storm Rank	Water		Surcharged	Flooded	Flow / Overflow (l/s)	Half Drain	Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Time (mins)		Flow (l/s)		
1.000	1	21	64.142	0.142	0.000	0.58		3.9	SURCHARGED	
2.000	2	12	64.233	0.091	0.000	0.66		4.7	SURCHARGED	
2.001	3	18	64.179	0.167	0.000	0.89		6.1	SURCHARGED	
3.000	4	14	64.212	0.212	0.000	2.30		9.1	SURCHARGED	
1.001	4	24	64.126	0.148	0.000	1.91		18.5	SURCHARGED	
1.002	5	25	64.109	0.165	0.000	0.18		3.6	SURCHARGED	
1.003	6	25	64.104	0.314	0.000	0.29		6.1	SURCHARGED	
1.004	7	25	64.096	0.564	0.000	0.10		2.0	SURCHARGED	

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Summary Wizard of 30 minute 30 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 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

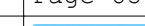
Rainfall Model FSR Ratio R 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 40

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

PN	US/MH Name	Storm Rank	Water Level		Surcharged Depth		Flooded Volume		Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status
			(m)	(m)	(m)	(m ³)	(m ³)	(m ³)					
1.000	1	16	64.182	0.182	0.000	0.43					2.9		SURCHARGED
2.000	2	18	64.189	0.047	0.000	0.53					3.8		SURCHARGED
2.001	3	16	64.184	0.172	0.000	0.71					4.8		SURCHARGED
3.000	4	18	64.182	0.182	0.000	1.77					7.0		SURCHARGED
1.001	4	16	64.180	0.202	0.000	1.45					14.1		SURCHARGED
1.002	5	15	64.174	0.230	0.000	0.15					3.1		SURCHARGED
1.003	6	15	64.169	0.379	0.000	0.19					4.0		SURCHARGED
1.004	7	15	64.160	0.628	0.000	0.10					2.0		SURCHARGED

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The Old School House Casement Street Ballina, Ireland	SUDS Design Pinner Road, Northwood, UK	
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Summary Wizard of 120 minute 30 year Winter I+40% for Storm

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

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

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The Old School House Casement Street Ballina, Ireland				SUDS Design Pinner Road, Northwood, UK																																																																																																																				
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Innovyze				Network 2020.1.3																																																																																																																				
<u>Summary Wizard of 180 minute 30 year Winter I+40% for Storm</u>																																																																																																																								
<u>Simulation Criteria</u>																																																																																																																								
Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000																																																																																																																		
Hot Start (mins)		0		MADD Factor * 10m³/ha Storage		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 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																																																																																																																		
<u>Synthetic Rainfall Details</u>																																																																																																																								
Rainfall Model		FSR		Ratio R		0.414																																																																																																																		
Region England and Wales Cv (Summer)		0.750																																																																																																																						
M5-60 (mm)		20.300		Cv (Winter)		0.840																																																																																																																		
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DTS Status						OFF																																																																																																																		
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Profile(s)						Summer and Winter																																																																																																																		
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080																																																																																																																						
Return Period(s) (years)		5, 30, 100																																																																																																																						
Climate Change (%)		40, 40, 40																																																																																																																						
<table><tr><th colspan="2"></th><th colspan="3">Water Surcharged</th><th colspan="2">Flooded</th><th colspan="2">Half Drain</th><th>Pipe</th><th rowspan="2">Status</th></tr><tr><th>PN</th><th>US/MH Name</th><th>Storm Rank</th><th>Level (m)</th><th>Depth (m)</th><th>Volume (m³)</th><th>Flow / Cap.</th><th>Overflow (l/s)</th><th>Time (mins)</th><th>Flow (l/s)</th></tr><tr><td>1.000</td><td>1</td><td>18</td><td>64.158</td><td>0.158</td><td>0.000</td><td>0.13</td><td></td><td></td><td>0.9</td><td>SURCHARGED</td></tr><tr><td>2.000</td><td>2</td><td>21</td><td>64.162</td><td>0.020</td><td>0.000</td><td>0.17</td><td></td><td></td><td>1.2</td><td>SURCHARGED</td></tr><tr><td>2.001</td><td>3</td><td>19</td><td>64.160</td><td>0.147</td><td>0.000</td><td>0.23</td><td></td><td></td><td>1.6</td><td>SURCHARGED</td></tr><tr><td>3.000</td><td>4</td><td>21</td><td>64.158</td><td>0.158</td><td>0.000</td><td>0.54</td><td></td><td></td><td>2.1</td><td>SURCHARGED</td></tr><tr><td>1.001</td><td>4</td><td>18</td><td>64.157</td><td>0.179</td><td>0.000</td><td>0.45</td><td></td><td></td><td>4.4</td><td>SURCHARGED</td></tr><tr><td>1.002</td><td>5</td><td>18</td><td>64.152</td><td>0.208</td><td>0.000</td><td>0.12</td><td></td><td>91</td><td>2.4</td><td>SURCHARGED</td></tr><tr><td>1.003</td><td>6</td><td>18</td><td>64.147</td><td>0.357</td><td>0.000</td><td>0.14</td><td></td><td></td><td>3.0</td><td>SURCHARGED</td></tr><tr><td>1.004</td><td>7</td><td>18</td><td>64.139</td><td>0.607</td><td>0.000</td><td>0.10</td><td></td><td></td><td>2.0</td><td>SURCHARGED</td></tr></table>														Water Surcharged			Flooded		Half Drain		Pipe	Status	PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	1.000	1	18	64.158	0.158	0.000	0.13			0.9	SURCHARGED	2.000	2	21	64.162	0.020	0.000	0.17			1.2	SURCHARGED	2.001	3	19	64.160	0.147	0.000	0.23			1.6	SURCHARGED	3.000	4	21	64.158	0.158	0.000	0.54			2.1	SURCHARGED	1.001	4	18	64.157	0.179	0.000	0.45			4.4	SURCHARGED	1.002	5	18	64.152	0.208	0.000	0.12		91	2.4	SURCHARGED	1.003	6	18	64.147	0.357	0.000	0.14			3.0	SURCHARGED	1.004	7	18	64.139	0.607	0.000	0.10			2.0	SURCHARGED
		Water Surcharged			Flooded		Half Drain		Pipe	Status																																																																																																														
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2.000	2	21	64.162	0.020	0.000	0.17			1.2	SURCHARGED																																																																																																														
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1.002	5	18	64.152	0.208	0.000	0.12		91	2.4	SURCHARGED																																																																																																														
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Summary Wizard of 240 minute 30 year Winter I+40% for Storm

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

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

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Summary Wizard of 360 minute 30 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 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 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 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	1	31	64.058	0.058	0.000	0.09			0.6	SURCHARGED
2.000	2	45	64.063	-0.079	0.000	0.10			0.7	OK
2.001	3	31	64.059	0.046	0.000	0.14			1.0	SURCHARGED
3.000	4	32	64.057	0.057	0.000	0.34			1.3	SURCHARGED
1.001	4	31	64.056	0.078	0.000	0.28			2.8	SURCHARGED
1.002	5	31	64.052	0.108	0.000	0.10		94	2.1	SURCHARGED
1.003	6	31	64.048	0.258	0.000	0.12			2.6	SURCHARGED
1.004	7	31	64.040	0.508	0.000	0.10			2.0	SURCHARGED

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The Old School House

Casement Street

Ballina, Ireland

SUDS Design

Pinner Road,

Northwood, UK

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Summary Wizard of 480 minute 30 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 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 0.414

Region England and Wales Cv (Summer) 0.750

M5-60 (mm) 20.300

Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0

Analysis Timestep 2.5 Second Increment (Extended)

DTS Status OFF

DVD Status ON

Inertia Status ON

Profile(s) Summer and Winter

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

Return Period(s) (years) 5, 30, 100

Climate Change (%) 40, 40, 40

		Water Surcharged			Flooded		Half Drain		Pipe	Status
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	
1.000	1	43	63.995	-0.005	0.000	0.07			0.5	OK
2.000	2	51	64.061	-0.081	0.000	0.08			0.6	OK
2.001	3	43	63.996	-0.016	0.000	0.12			0.8	OK
3.000	4	43	63.995	-0.005	0.000	0.27			1.1	OK
1.001	4	43	63.994	0.016	0.000	0.24			2.3	SURCHARGED
1.002	5	42	63.990	0.046	0.000	0.10		80	1.9	SURCHARGED
1.003	6	42	63.986	0.196	0.000	0.11			2.4	SURCHARGED
1.004	7	42	63.978	0.446	0.000	0.10			2.0	SURCHARGED

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<u>Summary Wizard of 600 minute 30 year Winter I+40% for Storm</u>																																																																																																																																																															
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Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000																																																																																																																																																									
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Manhole Headloss Coeff (Global)		0.500		Flow per Person per Day (l/per/day)		0.000																																																																																																																																																									
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Number of Input Hydrographs		0		Number of Storage Structures		1																																																																																																																																																									
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		Water			Surcharged		Flooded		Half Drain		Pipe																																																																																																																																																				
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<u>Summary Wizard of 720 minute 30 year Winter I+40% for Storm</u>																																																																																																																							
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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 Storage Structures		1																																																																																																																	
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Number of Offline Controls		0		Number of Real Time Controls		0																																																																																																																	
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Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080																																																																																																																					
Return Period(s) (years)		5, 30, 100																																																																																																																					
Climate Change (%)		40, 40, 40																																																																																																																					
<table><tr><th colspan="2"></th><th colspan="3">Water Surcharged</th><th colspan="2">Flooded</th><th colspan="2">Half Drain</th><th>Pipe</th><th rowspan="2">Status</th></tr><tr><th>PN</th><th>US/MH Name</th><th>Storm Rank</th><th>Level (m)</th><th>Depth (m)</th><th>Volume (m³)</th><th>Flow / Cap.</th><th>Overflow (l/s)</th><th>Time (mins)</th><th>Flow (l/s)</th></tr><tr><td>1.000</td><td>1</td><td>60</td><td>63.915</td><td>-0.085</td><td>0.000</td><td>0.05</td><td></td><td></td><td>0.3</td><td>OK</td></tr><tr><td>2.000</td><td>2</td><td>60</td><td>64.058</td><td>-0.084</td><td>0.000</td><td>0.06</td><td></td><td></td><td>0.4</td><td>OK</td></tr><tr><td>2.001</td><td>3</td><td>60</td><td>63.932</td><td>-0.081</td><td>0.000</td><td>0.08</td><td></td><td></td><td>0.6</td><td>OK</td></tr><tr><td>3.000</td><td>4</td><td>60</td><td>63.930</td><td>-0.070</td><td>0.000</td><td>0.20</td><td></td><td></td><td>0.8</td><td>OK</td></tr><tr><td>1.001</td><td>4</td><td>56</td><td>63.877</td><td>-0.101</td><td>0.000</td><td>0.17</td><td></td><td></td><td>1.7</td><td>OK</td></tr><tr><td>1.002</td><td>5</td><td>56</td><td>63.868</td><td>-0.076</td><td>0.000</td><td>0.08</td><td></td><td>44</td><td>1.7</td><td>OK</td></tr><tr><td>1.003</td><td>6</td><td>56</td><td>63.864</td><td>0.074</td><td>0.000</td><td>0.10</td><td></td><td></td><td>2.2</td><td>SURCHARGED</td></tr><tr><td>1.004</td><td>7</td><td>56</td><td>63.857</td><td>0.325</td><td>0.000</td><td>0.10</td><td></td><td></td><td>2.0</td><td>SURCHARGED</td></tr></table>													Water Surcharged			Flooded		Half Drain		Pipe	Status	PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	1.000	1	60	63.915	-0.085	0.000	0.05			0.3	OK	2.000	2	60	64.058	-0.084	0.000	0.06			0.4	OK	2.001	3	60	63.932	-0.081	0.000	0.08			0.6	OK	3.000	4	60	63.930	-0.070	0.000	0.20			0.8	OK	1.001	4	56	63.877	-0.101	0.000	0.17			1.7	OK	1.002	5	56	63.868	-0.076	0.000	0.08		44	1.7	OK	1.003	6	56	63.864	0.074	0.000	0.10			2.2	SURCHARGED	1.004	7	56	63.857	0.325	0.000	0.10			2.0	SURCHARGED
		Water Surcharged			Flooded		Half Drain		Pipe	Status																																																																																																													
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Innovyze	Network 2020.1.3	

Summary Wizard of 960 minute 30 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 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 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 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	1	64	63.913	-0.087	0.000	0.04				0.3	OK
2.000	2	64	64.056	-0.086	0.000	0.05				0.3	OK
2.001	3	64	63.929	-0.083	0.000	0.07				0.5	OK
3.000	4	64	63.926	-0.074	0.000	0.16				0.6	OK
1.001	4	64	63.865	-0.113	0.000	0.14				1.3	OK
1.002	5	64	63.819	-0.125	0.000	0.07			216	1.3	OK
1.003	6	64	63.670	-0.120	0.000	0.09				1.9	OK
1.004	7	64	63.510	-0.022	0.000	0.09				1.9	OK

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The Old School House Casement Street Ballina, Ireland				SUDS Design Pinner Road, Northwood, UK																																																																																																											
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<u>Simulation Criteria</u>																																																																																																															
Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000																																																																																																									
Hot Start (mins)		0		MADD Factor * 10m³/ha Storage		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 Storage Structures		1																																																																																																									
Number of Online Controls		1		Number of Time/Area Diagrams		0																																																																																																									
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Rainfall Model		FSR		Ratio R		0.414																																																																																																									
Region England and Wales Cv (Summer)		0.750																																																																																																													
M5-60 (mm)		20.300		Cv (Winter)		0.840																																																																																																									
Margin for Flood Risk Warning (mm)						300.0																																																																																																									
Analysis Timestep		2.5 Second Increment (Extended)																																																																																																													
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Profile(s)						Summer and Winter																																																																																																									
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080																																																																																																													
Return Period(s) (years)		5, 30, 100																																																																																																													
Climate Change (%)		40, 40, 40																																																																																																													
<table><tr><th colspan="7">Water Surcharged Flooded</th><th>Half Drain</th><th>Pipe</th><th></th></tr><tr><th>PN</th><th>US/MH Name</th><th>Storm Rank</th><th>Level (m)</th><th>Depth (m)</th><th>Volume (m³)</th><th>Flow / Overflow Cap.</th><th>Time (mins)</th><th>Flow (l/s)</th><th>Status</th></tr><tr><td>1.000</td><td>1</td><td>72</td><td>63.911</td><td>-0.089</td><td>0.000</td><td>0.03</td><td></td><td>0.2</td><td>OK</td></tr><tr><td>2.000</td><td>2</td><td>72</td><td>64.054</td><td>-0.088</td><td>0.000</td><td>0.03</td><td></td><td>0.2</td><td>OK</td></tr><tr><td>2.001</td><td>3</td><td>72</td><td>63.927</td><td>-0.086</td><td>0.000</td><td>0.05</td><td></td><td>0.3</td><td>OK</td></tr><tr><td>3.000</td><td>4</td><td>72</td><td>63.922</td><td>-0.078</td><td>0.000</td><td>0.11</td><td></td><td>0.4</td><td>OK</td></tr><tr><td>1.001</td><td>4</td><td>72</td><td>63.860</td><td>-0.118</td><td>0.000</td><td>0.10</td><td></td><td>1.0</td><td>OK</td></tr><tr><td>1.002</td><td>5</td><td>72</td><td>63.815</td><td>-0.129</td><td>0.000</td><td>0.05</td><td>289</td><td>1.0</td><td>OK</td></tr><tr><td>1.003</td><td>6</td><td>72</td><td>63.665</td><td>-0.125</td><td>0.000</td><td>0.06</td><td></td><td>1.4</td><td>OK</td></tr><tr><td>1.004</td><td>7</td><td>72</td><td>63.453</td><td>-0.079</td><td>0.000</td><td>0.07</td><td></td><td>1.4</td><td>OK</td></tr></table>												Water Surcharged Flooded							Half Drain	Pipe		PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap.	Time (mins)	Flow (l/s)	Status	1.000	1	72	63.911	-0.089	0.000	0.03		0.2	OK	2.000	2	72	64.054	-0.088	0.000	0.03		0.2	OK	2.001	3	72	63.927	-0.086	0.000	0.05		0.3	OK	3.000	4	72	63.922	-0.078	0.000	0.11		0.4	OK	1.001	4	72	63.860	-0.118	0.000	0.10		1.0	OK	1.002	5	72	63.815	-0.129	0.000	0.05	289	1.0	OK	1.003	6	72	63.665	-0.125	0.000	0.06		1.4	OK	1.004	7	72	63.453	-0.079	0.000	0.07		1.4	OK
Water Surcharged Flooded							Half Drain	Pipe																																																																																																							
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1.002	5	72	63.815	-0.129	0.000	0.05	289	1.0	OK																																																																																																						
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1.004	7	72	63.453	-0.079	0.000	0.07		1.4	OK																																																																																																						
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The Old School House Casement Street Ballina, Ireland	SUDS Design Pinner Road, Northwood, UK	
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Summary Wizard of 2160 minute 30 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	77	63.910	-0.090	0.000	0.02		0.1	OK
2.000	2	77	64.053	-0.089	0.000	0.02		0.2	OK
2.001	3	77	63.925	-0.088	0.000	0.04		0.2	OK
3.000	4	77	63.919	-0.081	0.000	0.08		0.3	OK
1.001	4	77	63.855	-0.123	0.000	0.07		0.7	OK
1.002	5	77	63.812	-0.132	0.000	0.03		367 0.7	OK
1.003	6	77	63.661	-0.129	0.000	0.05		1.0	OK
1.004	7	77	63.436	-0.096	0.000	0.05		1.0	OK

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Summary Wizard of 2880 minute 30 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	83	63.908	-0.092	0.000	0.02		0.1	OK
2.000	2	83	64.051	-0.091	0.000	0.02		0.1	OK
2.001	3	83	63.923	-0.089	0.000	0.03		0.2	OK
3.000	4	83	63.917	-0.083	0.000	0.07		0.3	OK
1.001	4	83	63.851	-0.127	0.000	0.06		0.6	OK
1.002	5	83	63.810	-0.134	0.000	0.03	426	0.6	OK
1.003	6	83	63.658	-0.132	0.000	0.04		0.8	OK
1.004	7	83	63.428	-0.104	0.000	0.04		0.8	OK

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<u>Summary Wizard of 4320 minute 30 year Winter I+40% for Storm</u>																																																																																																																								
<u>Simulation Criteria</u>																																																																																																																								
Areal Reduction Factor			1.000		Additional Flow - % of Total Flow			0.000																																																																																																																
Hot Start (mins)			0		MADD Factor * 10m³/ha Storage			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 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																																																																																																																
<u>Synthetic Rainfall Details</u>																																																																																																																								
Rainfall Model			FSR		Ratio R			0.414																																																																																																																
Region England and Wales Cv (Summer)			0.750																																																																																																																					
M5-60 (mm)			20.300		Cv (Winter)			0.840																																																																																																																
Margin for Flood Risk Warning (mm)								300.0																																																																																																																
Analysis Timestep			2.5 Second Increment (Extended)																																																																																																																					
DTS Status								OFF																																																																																																																
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Inertia Status								ON																																																																																																																
Profile(s)								Summer and Winter																																																																																																																
Duration(s) (mins)			15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080																																																																																																																					
Return Period(s) (years)			5, 30, 100																																																																																																																					
Climate Change (%)			40, 40, 40																																																																																																																					
<table><tr><th colspan="7">Water Surcharged Flooded</th><th>Half Drain</th><th>Pipe</th><th></th></tr><tr><th>PN</th><th>US/MH Name</th><th>Storm Rank</th><th>Level (m)</th><th>Depth (m)</th><th>Volume (m³)</th><th>Flow / Cap.</th><th>Overflow (l/s)</th><th>Time (mins)</th><th>Flow (l/s)</th><th>Status</th></tr><tr><td>1.000</td><td>1</td><td>90</td><td>63.906</td><td>-0.094</td><td>0.000</td><td>0.01</td><td></td><td></td><td>0.1</td><td>OK</td></tr><tr><td>2.000</td><td>2</td><td>90</td><td>64.049</td><td>-0.093</td><td>0.000</td><td>0.01</td><td></td><td></td><td>0.1</td><td>OK</td></tr><tr><td>2.001</td><td>3</td><td>90</td><td>63.922</td><td>-0.090</td><td>0.000</td><td>0.02</td><td></td><td></td><td>0.1</td><td>OK</td></tr><tr><td>3.000</td><td>4</td><td>90</td><td>63.914</td><td>-0.086</td><td>0.000</td><td>0.05</td><td></td><td></td><td>0.2</td><td>OK</td></tr><tr><td>1.001</td><td>4</td><td>90</td><td>63.848</td><td>-0.130</td><td>0.000</td><td>0.04</td><td></td><td></td><td>0.4</td><td>OK</td></tr><tr><td>1.002</td><td>5</td><td>90</td><td>63.808</td><td>-0.136</td><td>0.000</td><td>0.02</td><td></td><td>457</td><td>0.4</td><td>OK</td></tr><tr><td>1.003</td><td>6</td><td>90</td><td>63.656</td><td>-0.134</td><td>0.000</td><td>0.03</td><td></td><td></td><td>0.6</td><td>OK</td></tr><tr><td>1.004</td><td>7</td><td>90</td><td>63.420</td><td>-0.112</td><td>0.000</td><td>0.03</td><td></td><td></td><td>0.6</td><td>OK</td></tr></table>												Water Surcharged Flooded							Half Drain	Pipe		PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Status	1.000	1	90	63.906	-0.094	0.000	0.01			0.1	OK	2.000	2	90	64.049	-0.093	0.000	0.01			0.1	OK	2.001	3	90	63.922	-0.090	0.000	0.02			0.1	OK	3.000	4	90	63.914	-0.086	0.000	0.05			0.2	OK	1.001	4	90	63.848	-0.130	0.000	0.04			0.4	OK	1.002	5	90	63.808	-0.136	0.000	0.02		457	0.4	OK	1.003	6	90	63.656	-0.134	0.000	0.03			0.6	OK	1.004	7	90	63.420	-0.112	0.000	0.03			0.6	OK
Water Surcharged Flooded							Half Drain	Pipe																																																																																																																
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Status																																																																																																														
1.000	1	90	63.906	-0.094	0.000	0.01			0.1	OK																																																																																																														
2.000	2	90	64.049	-0.093	0.000	0.01			0.1	OK																																																																																																														
2.001	3	90	63.922	-0.090	0.000	0.02			0.1	OK																																																																																																														
3.000	4	90	63.914	-0.086	0.000	0.05			0.2	OK																																																																																																														
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1.003	6	90	63.656	-0.134	0.000	0.03			0.6	OK																																																																																																														
1.004	7	90	63.420	-0.112	0.000	0.03			0.6	OK																																																																																																														
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Summary Wizard of 5760 minute 30 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	99	63.905	-0.095	0.000	0.01		0.1	OK
2.000	2	99	64.047	-0.095	0.000	0.01		0.1	OK
2.001	3	99	63.920	-0.092	0.000	0.02		0.1	OK
3.000	4	99	63.912	-0.088	0.000	0.04		0.1	OK
1.001	4	99	63.846	-0.132	0.000	0.03		0.3	OK
1.002	5	99	63.805	-0.139	0.000	0.02	611	0.3	OK
1.003	6	99	63.655	-0.135	0.000	0.02		0.4	OK
1.004	7	99	63.415	-0.117	0.000	0.02		0.4	OK

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Summary Wizard of 7200 minute 30 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	105	63.904	-0.096	0.000	0.01		0.1	OK
2.000	2	105	64.046	-0.096	0.000	0.01		0.1	OK
2.001	3	105	63.919	-0.094	0.000	0.01		0.1	OK
3.000	4	105	63.911	-0.089	0.000	0.03		0.1	OK
1.001	4	105	63.844	-0.134	0.000	0.03		0.3	OK
1.002	5	105	63.803	-0.141	0.000	0.01	629	0.3	OK
1.003	6	105	63.653	-0.137	0.000	0.02		0.4	OK
1.004	7	105	63.412	-0.120	0.000	0.02		0.4	OK

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Summary Wizard of 8640 minute 30 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 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	0.414
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	20.300	Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Half Drain		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)	
1.000	1	109	63.903	-0.097	0.000	0.01		0.0	OK
2.000	2	109	64.046	-0.096	0.000	0.01		0.1	OK
2.001	3	109	63.918	-0.095	0.000	0.01		0.1	OK
3.000	4	109	63.911	-0.089	0.000	0.03		0.1	OK
1.001	4	109	63.844	-0.134	0.000	0.02		0.2	OK
1.002	5	109	63.802	-0.142	0.000	0.01		733 0.2	OK
1.003	6	109	63.651	-0.139	0.000	0.02		0.3	OK
1.004	7	109	63.410	-0.122	0.000	0.02		0.3	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 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 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 40

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

PN	US/MH Name	Storm Rank	Water Surcharged Flooded				Half Drain Time (mins)	Pipe Flow (l/s)	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap. Overflow (l/s)			
1.000	1	7	64.283	0.283	0.000	0.68		4.6	SURCHARGED
2.000	2	1	64.414	0.272	0.000	0.79		5.7	SURCHARGED
2.001	3	3	64.340	0.328	0.000	1.04		7.1	SURCHARGED
3.000	4	1	64.394	0.394	0.000	2.87		11.3	SURCHARGED
1.001	4	8	64.255	0.277	0.000	2.29		22.2	SURCHARGED
1.002	5	12	64.210	0.266	0.000	0.18		3.7	SURCHARGED
1.003	6	12	64.204	0.414	0.000	0.27		5.8	SURCHARGED
1.004	7	12	64.195	0.663	0.000	0.10		2.0	SURCHARGED

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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 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 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 40

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

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	1	4	64.317	0.317	0.000	0.54			3.6	SURCHARGED	
2.000	2	5	64.358	0.216	0.000	0.63			4.5	SURCHARGED	
2.001	3	5	64.320	0.308	0.000	0.84			5.8	SURCHARGED	
3.000	4	5	64.337	0.337	0.000	2.26			8.9	SURCHARGED	
1.001	4	4	64.315	0.337	0.000	1.83			17.8	SURCHARGED	
1.002	5	4	64.308	0.364	0.000	0.17			3.4	SURCHARGED	
1.003	6	4	64.302	0.512	0.000	0.21			4.4	SURCHARGED	
1.004	7	4	64.293	0.761	0.000	0.11			2.1	SURCHARGED	

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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 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 0.414
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 20.300 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 5, 30, 100
 Climate Change (%) 40, 40, 40

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

PN	US/MH Name	Storm Rank	Water Surcharged Flooded				Half Drain Time (mins)	Pipe Flow (l/s)	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)			
1.000	1	1	64.378	0.378	0.000	0.37	2.5	SURCHARGED	
2.000	2	2	64.383	0.241	0.000	0.43	3.1	SURCHARGED	
2.001	3	1	64.379	0.367	0.000	0.58	4.0	SURCHARGED	
3.000	4	2	64.377	0.377	0.000	1.53	6.0	SURCHARGED	
1.001	4	1	64.376	0.398	0.000	1.24	12.1	SURCHARGED	
1.002	5	1	64.370	0.426	0.000	0.13	2.6	SURCHARGED	
1.003	6	1	64.364	0.574	0.000	0.16	3.4	SURCHARGED	
1.004	7	1	64.355	0.823	0.000	0.11	2.2	SURCHARGED	

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Micro
Drainage

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 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 0.414

Region England and Wales Cv (Summer) 0.750

M5-60 (mm) 20.300

Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0

Analysis Timestep 2.5 Second Increment (Extended)

DTS Status OFF

DVD Status ON

Inertia Status ON

Profile(s) Summer and Winter

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

Return Period(s) (years) 5, 30, 100

Climate Change (%) 40, 40, 40

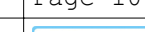
			Water	Surcharged	Flooded			Half Drain	Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Time	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(mins)	(l/s)	Status
1.000	1	2	64.363	0.363	0.000	0.23			1.5	SURCHARGED
2.000	2	4	64.368	0.226	0.000	0.29			2.0	SURCHARGED
2.001	3	2	64.365	0.352	0.000	0.37			2.5	SURCHARGED
3.000	4	3	64.363	0.363	0.000	0.94			3.7	SURCHARGED
1.001	4	2	64.362	0.384	0.000	0.78			7.5	SURCHARGED
1.002	5	2	64.357	0.413	0.000	0.12		100	2.4	SURCHARGED
1.003	6	2	64.351	0.561	0.000	0.12			2.6	SURCHARGED
1.004	7	2	64.342	0.810	0.000	0.11			2.2	SURCHARGED

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<u>Summary Wizard of 180 minute 100 year Winter I+40% for Storm</u>																																																																																																																									
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		Water Surcharged			Flooded		Half Drain		Pipe																																																																																																																
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The Old School House Casement Street Ballina, Ireland				SUDS Design Pinner Road, Northwood, UK						
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Innovyze				Network 2020.1.3						
<u>Summary Wizard of 240 minute 100 year Winter I+40% for Storm</u>										
<u>Simulation Criteria</u>										
Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000				
Hot Start (mins)		0		MADD Factor * 10m³/ha Storage		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 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				
<u>Synthetic Rainfall Details</u>										
Rainfall Model		FSR		Ratio R		0.414				
Region England and Wales Cv (Summer)		0.750								
M5-60 (mm)		20.300		Cv (Winter)		0.840				
Margin for Flood Risk Warning (mm)						300.0				
Analysis Timestep		2.5		Second Increment (Extended)						
DTS Status						OFF				
DVD Status						ON				
Inertia Status						ON				
Profile(s)						Summer and Winter				
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080								
Return Period(s) (years)						5, 30, 100				
Climate Change (%)						40, 40, 40				

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The Old School House Casement Street Ballina, Ireland				SUDS Design Pinner Road, Northwood, UK						
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Innovyze				Network 2020.1.3						
<u>Summary Wizard of 360 minute 100 year Winter I+40% for Storm</u>										
<u>Simulation Criteria</u>										
Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000				
Hot Start (mins)		0		MADD Factor * 10m³/ha Storage		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 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				
<u>Synthetic Rainfall Details</u>										
Rainfall Model		FSR		Ratio R		0.414				
Region England and Wales Cv (Summer)		0.750								
M5-60 (mm)		20.300		Cv (Winter)		0.840				
Margin for Flood Risk Warning (mm)						300.0				
Analysis Timestep		2.5 Second Increment (Extended)								
DTS Status						OFF				
DVD Status						ON				
Inertia Status						ON				
Profile(s)						Summer and Winter				
Duration(s) (mins)		15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080								
Return Period(s) (years)		5, 30, 100								
Climate Change (%)		40, 40, 40								

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The Old School House Casement Street Ballina, Ireland	SUDS Design Pinner Road, Northwood, UK	
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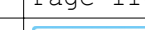
Summary Wizard of 600 minute 100 year Winter I+40% for Storm

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Synthetic Rainfall Details

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

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	1	30	64.086	0.086	0.000	0.07			0.5	SURCHARGED
2.000	2	32	64.090	-0.052	0.000	0.09			0.6	OK
2.001	3	30	64.087	0.075	0.000	0.12			0.8	SURCHARGED
3.000	4	30	64.086	0.086	0.000	0.29			1.1	SURCHARGED
1.001	4	30	64.085	0.107	0.000	0.24			2.4	SURCHARGED
1.002	5	29	64.081	0.137	0.000	0.09		112	1.9	SURCHARGED
1.003	6	29	64.076	0.286	0.000	0.11			2.4	SURCHARGED
1.004	7	29	64.068	0.536	0.000	0.10			2.0	SURCHARGED

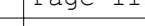
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The Old School House Casement Street Ballina, Ireland	SUDS Design Pinner Road, Northwood, UK	
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Innovyze	Network 2020.1.3	

Summary Wizard of 720 minute 100 year Winter I+40% for Storm

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

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The Old School House Casement Street Ballina, Ireland	SUDS Design Pinner Road, Northwood, UK	
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Innovyze	Network 2020.1.3	

Summary Wizard of 960 minute 100 year Winter I+40% for Storm

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m ³ /ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Synthetic Rainfall Details

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	5, 30, 100
Climate Change (%)	40, 40, 40

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<u>Summary Wizard of 1440 minute 100 year Winter I+40% for Storm</u>																																																																																																																								
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Areal Reduction Factor		1.000		Additional Flow - % of Total Flow		0.000																																																																																																																		
Hot Start (mins)		0		MADD Factor * 10m³/ha Storage		2.000																																																																																																																		
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Number of Input Hydrographs		0		Number of Storage Structures		1																																																																																																																		
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Water Surcharged Flooded							Half Drain	Pipe																																																																																																																
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<u>Summary Wizard of 7200 minute 100 year Winter I+40% for Storm</u>											
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 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					
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Rainfall Model		FSR		Ratio R		0.414					
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Analysis Timestep		2.5 Second Increment (Extended)									
DTS Status						OFF					
DVD Status						ON					
Inertia Status						ON					
Profile(s)						Summer and Winter					
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Return Period(s) (years)		5, 30, 100									
Climate Change (%)		40, 40, 40									
Water Surcharged Flooded Half Drain Pipe											
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Pipe Flow (l/s)	Status	
1.000	1	97	63.905	-0.095	0.000	0.01			0.1	OK	
2.000	2	97	64.048	-0.094	0.000	0.01			0.1	OK	
2.001	3	97	63.920	-0.092	0.000	0.02			0.1	OK	
3.000	4	97	63.913	-0.087	0.000	0.04			0.2	OK	
1.001	4	97	63.846	-0.132	0.000	0.03			0.3	OK	
1.002	5	97	63.806	-0.138	0.000	0.02		703	0.3	OK	
1.003	6	97	63.655	-0.135	0.000	0.02			0.5	OK	
1.004	7	97	63.416	-0.116	0.000	0.02			0.5	OK	
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