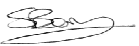




BELL MUNRO CONSULTING LTD.

**72 Errwood Road,
Burnage**

**Detailed Hyraulic
Calculations – Rev A
February 2022**

	Initials	Signature	Date
Prepared by:	RH		03/2022
Checked by:	SB		03/2022
Approved by:	SB		03/2022

Bell Munro Consulting Ltd.
Consulting Civil and Structural Engineers
Turing House
5 Archway
Manchester
M15 5RL
Tel: 0161 209 8032
Fax: 0161 209 8033
E-Mail: consulting@bellmunro.co.uk
Ref: J7036

Bell Munro Consulting Ltd		Page 1
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:51 File ERWOOD 2.MDX	Designed by Robert Checked by	
XP Solutions		
Network 2018.1		

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)	18.000	Add Flow / Climate Change (%)	0
Ratio R	0.359	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 Soffits

Time Area Diagram for Storm

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.060	4-8	0.003

Total Area Contributing (ha) = 0.063

Total Pipe Volume (m³) = 3.302

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
S1.000	3.726	0.046	80.1	0.000	2.00	0.0	0.600	o	100	Pipe/Conduit	
S1.001	4.053	0.018	225.2	0.002	0.00	0.0	0.600	o	300	Pipe/Conduit	
S2.000	6.688	0.084	79.8	0.005	2.00	0.0	0.600	o	100	Pipe/Conduit	
S1.002	2.475	0.011	225.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S1.000	50.00	2.07	98.500	0.000	0.0	0.0	0.0	0.86	6.8	0.0
S1.001	50.00	2.14	98.473	0.002	0.0	0.0	0.0	1.04	73.8	0.3
S2.000	50.00	2.13	99.450	0.005	0.0	0.0	0.0	0.86	6.8	0.6
S1.002	50.00	2.18	98.456	0.007	0.0	0.0	0.0	1.04	73.8	0.9

Bell Munro Consulting Ltd		Page 3
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:51 File ERWOOD 2.MDX	Designed by Robert Checked by	
XP Solutions		Network 2018.1

Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam., L*W (mm)	PN	Pipe Out Invert Level (m)	Diameter (mm)	PN	Pipes In Invert Level (m)	Diameter (mm)	Backdrop (mm)
S1	99.900	1.400	Sealed Manhole	200	S1.000	98.500	100				
S2	99.900	1.446	Open Manhole	900	S1.001	98.473	300	S1.000	98.454	100	
S3	100.000	0.550	Open Manhole	200	S2.000	99.450	100				
S3	100.150	1.695	Open Manhole	600	S1.002	98.456	300	S1.001	98.455	300	
								S2.000	99.366	100	710
S5	100.250	0.398	Open Manhole	200	S3.000	99.852	100				
S6	100.250	0.750	Open Manhole	450	S3.001	99.500	150	S3.000	99.500	100	
S4	100.050	1.606	Open Manhole	600	S1.003	98.444	300	S1.002	98.445	300	
								S3.001	99.400	150	800
S8	101.000	1.031	Open Manhole	200	S4.000	99.969	150				
S9	100.250	0.950	Open Manhole	450	S4.001	99.300	150	S4.000	99.433	150	130
S5	99.900	1.506	Open Manhole	600	S1.004	98.394	300	S1.003	98.394	300	
								S4.001	99.093	150	540
S6	100.000	0.405	Open Manhole	200	S5.000	99.595	100				
S7	99.800	0.625	Open Manhole	450	S5.001	99.175	100	S5.000	99.175	100	
S6	99.800	1.445	Open Manhole	600	S1.005	98.355	300	S1.004	98.355	300	
								S5.001	99.114	100	550
S9	99.716	1.371	Open Manhole	1200	S1.006	98.345	300	S1.005	98.348	300	
S	99.700	1.360	Open Manhole	450		OUTFALL		S1.006	98.340	300	

Bell Munro Consulting Ltd		Page 4
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:51 File ERWOOD 2.MDX	Designed by Robert Checked by	
XP Solutions Network 2018.1		

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., (mm)	L*W
S1.000	o	100	S1	99.900	98.500	1.300	Sealed Manhole		200
S1.001	o	300	S2	99.900	98.473	1.127	Open Manhole		900
S2.000	o	100	S3	100.000	99.450	0.450	Open Manhole		200
S1.002	o	300	S3	100.150	98.456	1.394	Open Manhole		600
S3.000	o	100	S5	100.250	99.852	0.298	Open Manhole		200
S3.001	o	150	S6	100.250	99.500	0.600	Open Manhole		450
S1.003	o	300	S4	100.050	98.444	1.306	Open Manhole		600
S4.000	o	150	S8	101.000	99.969	0.881	Open Manhole		200
S4.001	o	150	S9	100.250	99.300	0.800	Open Manhole		450
S1.004	o	300	S5	99.900	98.394	1.206	Open Manhole		600
S5.000	o	100	S6	100.000	99.595	0.305	Open Manhole		200
S5.001	o	100	S7	99.800	99.175	0.525	Open Manhole		450
S1.005	o	300	S6	99.800	98.355	1.145	Open Manhole		600

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., (mm)	L*W
S1.000	3.726	80.1	S2	99.900	98.454	1.346	Open Manhole		900
S1.001	4.053	225.2	S3	100.150	98.455	1.395	Open Manhole		600
S2.000	6.688	79.8	S3	100.150	99.366	0.684	Open Manhole		600
S1.002	2.475	225.0	S4	100.050	98.445	1.305	Open Manhole		600
S3.000	15.487	44.0	S6	100.250	99.500	0.650	Open Manhole		450
S3.001	7.970	79.7	S4	100.050	99.400	0.500	Open Manhole		600
S1.003	11.263	225.3	S5	99.900	98.394	1.206	Open Manhole		600
S4.000	26.471	49.4	S9	100.250	99.433	0.667	Open Manhole		450
S4.001	16.523	79.8	S5	99.900	99.093	0.657	Open Manhole		600
S1.004	8.778	225.1	S6	99.800	98.355	1.145	Open Manhole		600
S5.000	11.327	27.0	S7	99.800	99.175	0.525	Open Manhole		450
S5.001	4.896	80.2	S6	99.800	99.114	0.586	Open Manhole		600
S1.005	1.577	225.3	S9	99.716	98.348	1.068	Open Manhole		1200

Bell Munro Consulting Ltd		Page 5
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:51 File ERWOOD 2.MDX	Designed by Robert Checked by	
XP Solutions Network 2018.1		

Network 2018.1

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd	Diam	MH	C.Level	I.Level	D.Depth	MH	MH DIAM., L*W
	Sect	(mm)	Name	(m)	(m)	(m)	Connection	(mm)
S1.006	o	300	S9	99.716	98.345	1.071	Open Manhole	1200

Downstream Manhole

PN	Length	Slope	MH	C.Level	I.Level	D.Depth	MH	MH DIAM., L*W
	(m)	(1:X)	Name	(m)	(m)	(m)	Connection	(mm)
S1.006	1.150	230.0	S	99.700	98.340	1.060	Open Manhole	450

Bell Munro Consulting Ltd		Page 6
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:51 File ERWOOD 2.MDX	Designed by Robert Checked by	
XP Solutions		Network 2018.1

Area Summary for Storm

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
1.000	-	-	100	0.000	0.000	0.000
1.001	User	-	100	0.002	0.002	0.002
2.000	User	-	100	0.005	0.005	0.005
1.002	-	-	100	0.000	0.000	0.000
3.000	User	-	100	0.003	0.003	0.003
3.001	User	-	100	0.008	0.008	0.008
1.003	-	-	100	0.000	0.000	0.000
4.000	User	-	100	0.005	0.005	0.005
4.001	User	-	100	0.014	0.014	0.014
1.004	User	-	100	0.012	0.012	0.012
5.000	User	-	100	0.005	0.005	0.005
5.001	User	-	100	0.006	0.006	0.006
1.005	User	-	100	0.004	0.004	0.004
1.006	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				0.063	0.063	0.063

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)
S1.006	S	99.700	98.340	98.345	450	0

Bell Munro Consulting Ltd		Page 7												
Turing House 5 Archway Manchester M15 5RL														
Date 01/03/2022 11:51 File ERWOOD 2.MDX	Designed by Robert Checked by													
XP Solutions		Network 2018.1												
Storage Structures for Storm Tank or Pond Manhole: S1, DS/PN: S1.000 Invert Level (m) 98.500 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>30.0</td><td>0.800</td><td>30.0</td><td>0.801</td><td>0.0</td></tr></tbody></table>			Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	0.000	30.0	0.800	30.0	0.801	0.0
Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)									
0.000	30.0	0.800	30.0	0.801	0.0									
©1982-2018 Innovyze														

Bell Munro Consulting Ltd		Page 9
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:51 File ERWOOD 2.MDX	Designed by Robert Checked by	
XP Solutions Network 2018.1		

Network 2018.1

Summary of Critical Results by Maximum Level (Rank 1) for Storm

		Surcharged		Flooded	Pipe			
	US/MH	Depth	Volume	Flow /	Overflow	Flow		Level
PN	Name	(m)	(m³)	Cap.	(l/s)	(l/s)	Status	Exceeded
S1.000	S1	0.403	0.000	0.63		3.6	SURCHARGED*	
S1.001	S2	0.691	0.000	0.08		4.1	SURCHARGED	
S2.000	S3	-0.048	0.000	0.53		3.2	OK	
S1.002	S3	0.733	0.000	0.07		3.9	SURCHARGED	
S3.000	S5	-0.065	0.000	0.26		2.3	OK	
S3.001	S6	-0.085	0.000	0.38		6.6	OK	
S1.003	S4	0.766	0.000	0.06		3.7	SURCHARGED	
S4.000	S8	-0.113	0.000	0.14		3.4	OK	
S4.001	S9	0.124	0.000	0.56		10.4	SURCHARGED	
S1.004	S5	0.842	0.000	0.08		4.6	SURCHARGED	
S5.000	S6	-0.062	0.000	0.31		3.4	OK	
S5.001	S7	0.297	0.000	0.91		5.3	FLOOD RISK	
S1.005	S6	0.885	0.000	0.17		9.3	FLOOD RISK	
S1.006	S9	0.895	0.000	0.05		2.9	FLOOD RISK	



Bell Munro Consulting Ltd		Page 1
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

				Water	Surcharged	Flooded		Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(l/s)	Status
S1.000	S1	43	98.506	-0.094	0.000	0.01		0.1	OK
S1.001	S2	37	98.576	-0.197	0.000	0.00		0.2	OK
S2.000	S3	15	99.473	-0.077	0.000	0.12		0.7	OK
S1.002	S3	37	98.577	-0.179	0.000	0.01		0.5	OK
S3.000	S5	15	99.868	-0.084	0.000	0.06		0.5	OK
S3.001	S6	19	99.527	-0.123	0.000	0.07		1.2	OK
S1.003	S4	37	98.577	-0.167	0.000	0.02		1.4	OK
S4.000	S8	15	99.986	-0.133	0.000	0.03		0.8	OK
S4.001	S9	19	99.333	-0.117	0.000	0.11		2.0	OK
S1.004	S5	37	98.577	-0.117	0.000	0.05		3.0	OK
S5.000	S6	15	99.612	-0.083	0.000	0.07		0.8	OK
S5.001	S7	19	99.207	-0.068	0.000	0.22		1.3	OK
S1.005	S6	37	98.576	-0.079	0.000	0.05		3.0	OK
S1.006	S9	37	98.575	-0.070	0.000	0.05		2.6	OK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 2
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales	Cv (Summer)	0.750	
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water Surcharged			Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)		
S1.000	S1	39	98.508	-0.092	0.000	0.02		0.1	OK	
S1.001	S2	36	98.586	-0.187	0.000	0.00		0.2	OK	
S2.000	S3	20	99.471	-0.079	0.000	0.09		0.6	OK	
S1.002	S3	36	98.587	-0.169	0.000	0.01		0.4	OK	
S3.000	S5	20	99.866	-0.086	0.000	0.05		0.4	OK	
S3.001	S6	25	99.524	-0.126	0.000	0.06		1.1	OK	
S1.003	S4	36	98.587	-0.157	0.000	0.02		1.1	OK	
S4.000	S8	20	99.985	-0.134	0.000	0.02		0.6	OK	
S4.001	S9	25	99.331	-0.119	0.000	0.10		1.8	OK	
S1.004	S5	36	98.587	-0.107	0.000	0.04		2.5	OK	
S5.000	S6	20	99.610	-0.085	0.000	0.05		0.6	OK	
S5.001	S7	23	99.204	-0.071	0.000	0.18		1.1	OK	
S1.005	S6	36	98.586	-0.069	0.000	0.05		2.9	OK	
S1.006	S9	36	98.585	-0.060	0.000	0.05		2.6	OK	

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 3
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales	Cv (Summer)	0.750	
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Summer and Winter
Return Period(s) (years)	1, 30, 100	
Climate Change (%)	0, 0, 40	

PN	US/MH Name	Storm Rank	Water			Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)				
S1.000	S1	41	98.507	-0.093	0.000	0.01			0.1		OK	
S1.001	S2	39	98.569	-0.204	0.000	0.00			0.2		OK	
S2.000	S3	28	99.466	-0.084	0.000	0.06			0.4		OK	
S1.002	S3	39	98.570	-0.186	0.000	0.01			0.4		OK	
S3.000	S5	28	99.863	-0.089	0.000	0.03			0.3		OK	
S3.001	S6	30	99.521	-0.129	0.000	0.05			0.8		OK	
S1.003	S4	39	98.570	-0.174	0.000	0.01			0.8		OK	
S4.000	S8	28	99.981	-0.138	0.000	0.02			0.4		OK	
S4.001	S9	30	99.327	-0.123	0.000	0.07			1.4		OK	
S1.004	S5	39	98.570	-0.124	0.000	0.04			2.2		OK	
S5.000	S6	28	99.607	-0.088	0.000	0.04			0.4		OK	
S5.001	S7	30	99.200	-0.075	0.000	0.14			0.8		OK	
S1.005	S6	39	98.569	-0.086	0.000	0.05			2.7		OK	
S1.006	S9	39	98.568	-0.077	0.000	0.05			2.6		OK	

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 4
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Summer and Winter
Return Period(s) (years)	1, 30, 100	
Climate Change (%)	0, 0, 40	

PN	US/MH Name	Storm Rank	Water Surcharged			Flooded		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)		
S1.000	S1	46	98.502	-0.098	0.000	0.00	0.0	OK	
S1.001	S2	43	98.534	-0.239	0.000	0.00	0.1	OK	
S2.000	S3	39	99.463	-0.087	0.000	0.04	0.2	OK	
S1.002	S3	43	98.535	-0.221	0.000	0.01	0.3	OK	
S3.000	S5	39	99.861	-0.091	0.000	0.02	0.2	OK	
S3.001	S6	39	99.518	-0.132	0.000	0.03	0.6	OK	
S1.003	S4	43	98.535	-0.209	0.000	0.01	0.7	OK	
S4.000	S8	39	99.976	-0.143	0.000	0.01	0.3	OK	
S4.001	S9	39	99.322	-0.128	0.000	0.05	1.0	OK	
S1.004	S5	43	98.534	-0.160	0.000	0.03	1.9	OK	
S5.000	S6	39	99.605	-0.090	0.000	0.02	0.3	OK	
S5.001	S7	39	99.196	-0.079	0.000	0.09	0.6	OK	
S1.005	S6	43	98.533	-0.122	0.000	0.04	2.4	OK	
S1.006	S9	43	98.533	-0.112	0.000	0.04	2.4	OK	

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 5
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Summer and Winter
Return Period(s) (years)	1, 30, 100	
Climate Change (%)	0, 0, 40	

PN	US/MH Name	Storm Rank	Water			Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)				
S1.000	S1	49	98.500	-0.100	0.000	0.00	0.0	OK				
S1.001	S2	49	98.505	-0.268	0.000	0.00	0.1	OK				
S2.000	S3	44	99.462	-0.088	0.000	0.03	0.2	OK				
S1.002	S3	49	98.505	-0.251	0.000	0.00	0.2	OK				
S3.000	S5	44	99.859	-0.093	0.000	0.02	0.1	OK				
S3.001	S6	44	99.516	-0.134	0.000	0.03	0.5	OK				
S1.003	S4	49	98.504	-0.240	0.000	0.01	0.6	OK				
S4.000	S8	44	99.975	-0.144	0.000	0.01	0.2	OK				
S4.001	S9	44	99.320	-0.130	0.000	0.04	0.8	OK				
S1.004	S5	49	98.504	-0.190	0.000	0.03	1.8	OK				
S5.000	S6	44	99.604	-0.091	0.000	0.02	0.2	OK				
S5.001	S7	44	99.193	-0.082	0.000	0.08	0.4	OK				
S1.005	S6	49	98.503	-0.152	0.000	0.04	2.2	OK				
S1.006	S9	49	98.503	-0.142	0.000	0.04	2.2	OK				

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 6
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Summer and Winter
Return Period(s) (years)	1, 30, 100	
Climate Change (%)	0, 0, 40	

PN	US/MH Name	Storm Rank	Water			Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)				
S1.000	S1	87	98.500	-0.100	0.000	0.00	0.0	OK				
S1.001	S2	51	98.483	-0.290	0.000	0.00	0.1	OK				
S2.000	S3	51	99.461	-0.089	0.000	0.03	0.2	OK				
S1.002	S3	51	98.483	-0.273	0.000	0.00	0.2	OK				
S3.000	S5	51	99.858	-0.094	0.000	0.01	0.1	OK				
S3.001	S6	51	99.515	-0.135	0.000	0.02	0.4	OK				
S1.003	S4	51	98.483	-0.261	0.000	0.01	0.6	OK				
S4.000	S8	51	99.974	-0.145	0.000	0.01	0.2	OK				
S4.001	S9	51	99.318	-0.132	0.000	0.04	0.6	OK				
S1.004	S5	51	98.480	-0.214	0.000	0.03	1.6	OK				
S5.000	S6	51	99.602	-0.093	0.000	0.02	0.2	OK				
S5.001	S7	51	99.191	-0.084	0.000	0.06	0.4	OK				
S1.005	S6	51	98.480	-0.175	0.000	0.04	2.0	OK				
S1.006	S9	51	98.479	-0.166	0.000	0.04	2.0	OK				

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 7
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water			Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)				
S1.000	S1	88	98.500	-0.100	0.000	0.00	0.0	OK				
S1.001	S2	57	98.475	-0.298	0.000	0.00	0.1	OK				
S2.000	S3	57	99.459	-0.091	0.000	0.02	0.1	OK				
S1.002	S3	58	98.468	-0.288	0.000	0.00	0.2	OK				
S3.000	S5	57	99.857	-0.095	0.000	0.01	0.1	OK				
S3.001	S6	57	99.512	-0.138	0.000	0.02	0.3	OK				
S1.003	S4	58	98.467	-0.277	0.000	0.01	0.5	OK				
S4.000	S8	57	99.973	-0.146	0.000	0.01	0.1	OK				
S4.001	S9	57	99.316	-0.134	0.000	0.03	0.5	OK				
S1.004	S5	58	98.458	-0.236	0.000	0.02	1.3	OK				
S5.000	S6	57	99.601	-0.094	0.000	0.01	0.1	OK				
S5.001	S7	57	99.189	-0.086	0.000	0.05	0.3	OK				
S1.005	S6	58	98.456	-0.199	0.000	0.03	1.7	OK				
S1.006	S9	58	98.456	-0.189	0.000	0.03	1.6	OK				

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 9
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 600 minute 1 year Summer I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Summer and Winter
Return Period(s) (years)	1, 30, 100	
Climate Change (%)	0, 0, 40	

PN	US/MH Name	Storm Rank	Water			Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)				
S1.000	S1	84	98.500	-0.100	0.000	0.00	0.0	OK				
S1.001	S2	66	98.474	-0.299	0.000	0.00	0.0	OK				
S2.000	S3	66	99.457	-0.093	0.000	0.01	0.1	OK				
S1.002	S3	66	98.460	-0.296	0.000	0.00	0.1	OK				
S3.000	S5	66	99.855	-0.097	0.000	0.01	0.1	OK				
S3.001	S6	66	99.509	-0.141	0.000	0.01	0.2	OK				
S1.003	S4	66	98.455	-0.289	0.000	0.01	0.3	OK				
S4.000	S8	66	99.972	-0.147	0.000	0.00	0.1	OK				
S4.001	S9	66	99.313	-0.137	0.000	0.02	0.3	OK				
S1.004	S5	66	98.435	-0.259	0.000	0.02	0.9	OK				
S5.000	S6	66	99.599	-0.096	0.000	0.01	0.1	OK				
S5.001	S7	66	99.187	-0.088	0.000	0.03	0.2	OK				
S1.005	S6	66	98.432	-0.223	0.000	0.02	1.2	OK				
S1.006	S9	66	98.431	-0.214	0.000	0.02	1.2	OK				

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 11
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 960 minute 1 year Summer I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Summer and Winter
Return Period(s) (years)	1, 30, 100	
Climate Change (%)	0, 0, 40	

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Flow (l/s)	
S1.000	S1	92	98.500	-0.100	0.000	0.00	0.0	OK
S1.001	S2	74	98.474	-0.299	0.000	0.00	0.0	OK
S2.000	S3	74	99.455	-0.095	0.000	0.01	0.1	OK
S1.002	S3	74	98.458	-0.298	0.000	0.00	0.1	OK
S3.000	S5	74	99.854	-0.098	0.000	0.00	0.0	OK
S3.001	S6	74	99.506	-0.144	0.000	0.01	0.2	OK
S1.003	S4	74	98.451	-0.293	0.000	0.00	0.2	OK
S4.000	S8	74	99.971	-0.148	0.000	0.00	0.1	OK
S4.001	S9	74	99.310	-0.140	0.000	0.01	0.2	OK
S1.004	S5	74	98.424	-0.270	0.000	0.01	0.7	OK
S5.000	S6	74	99.598	-0.097	0.000	0.01	0.1	OK
S5.001	S7	74	99.185	-0.090	0.000	0.02	0.1	OK
S1.005	S6	74	98.414	-0.241	0.000	0.02	0.9	OK
S1.006	S9	74	98.414	-0.231	0.000	0.02	0.9	OK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 13
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 2160 minute 1 year Summer I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Flow (l/s)	
S1.000	S1	91	98.500	-0.100	0.000	0.00	0.0	OK
S1.001	S2	88	98.473	-0.300	0.000	0.00	0.0	OK
S2.000	S3	88	99.453	-0.097	0.000	0.01	0.0	OK
S1.002	S3	88	98.457	-0.299	0.000	0.00	0.1	OK
S3.000	S5	88	99.853	-0.099	0.000	0.00	0.0	OK
S3.001	S6	88	99.504	-0.146	0.000	0.01	0.1	OK
S1.003	S4	88	98.447	-0.297	0.000	0.00	0.1	OK
S4.000	S8	88	99.970	-0.149	0.000	0.00	0.0	OK
S4.001	S9	88	99.306	-0.144	0.000	0.01	0.1	OK
S1.004	S5	88	98.409	-0.285	0.000	0.01	0.4	OK
S5.000	S6	88	99.597	-0.098	0.000	0.00	0.0	OK
S5.001	S7	88	99.182	-0.093	0.000	0.01	0.1	OK
S1.005	S6	88	98.396	-0.259	0.000	0.01	0.5	OK
S1.006	S9	88	98.396	-0.249	0.000	0.01	0.5	OK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 14
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 2880 minute 1 year Summer I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

				Water	Surcharged	Flooded		Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(l/s)	Status
S1.000	S1	89	98.500	-0.100	0.000	0.00		0.0	OK
S1.001	S2	94	98.473	-0.300	0.000	0.00		0.0	OK
S2.000	S3	94	99.452	-0.098	0.000	0.00		0.0	OK
S1.002	S3	94	98.457	-0.299	0.000	0.00		0.0	OK
S3.000	S5	94	99.853	-0.099	0.000	0.00		0.0	OK
S3.001	S6	94	99.503	-0.147	0.000	0.00		0.1	OK
S1.003	S4	94	98.447	-0.297	0.000	0.00		0.1	OK
S4.000	S8	94	99.970	-0.149	0.000	0.00		0.0	OK
S4.001	S9	94	99.305	-0.145	0.000	0.01		0.1	OK
S1.004	S5	94	98.406	-0.288	0.000	0.01		0.3	OK
S5.000	S6	94	99.596	-0.099	0.000	0.00		0.0	OK
S5.001	S7	94	99.181	-0.094	0.000	0.01		0.1	OK
S1.005	S6	94	98.392	-0.263	0.000	0.01		0.4	OK
S1.006	S9	94	98.391	-0.254	0.000	0.01		0.4	OK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 15
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 4320 minute 1 year Summer I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Flow (l/s)	
S1.000	S1	90	98.500	-0.100	0.000	0.00	0.0	OK
S1.001	S2	100	98.473	-0.300	0.000	0.00	0.0	OK
S2.000	S3	100	99.452	-0.098	0.000	0.00	0.0	OK
S1.002	S3	100	98.457	-0.299	0.000	0.00	0.0	OK
S3.000	S5	100	99.853	-0.099	0.000	0.00	0.0	OK
S3.001	S6	100	99.502	-0.148	0.000	0.00	0.1	OK
S1.003	S4	100	98.446	-0.298	0.000	0.00	0.1	OK
S4.000	S8	100	99.970	-0.149	0.000	0.00	0.0	OK
S4.001	S9	100	99.303	-0.147	0.000	0.00	0.1	OK
S1.004	S5	100	98.402	-0.292	0.000	0.00	0.2	OK
S5.000	S6	100	99.596	-0.099	0.000	0.00	0.0	OK
S5.001	S7	100	99.179	-0.096	0.000	0.01	0.1	OK
S1.005	S6	100	98.386	-0.269	0.000	0.01	0.3	OK
S1.006	S9	100	98.386	-0.259	0.000	0.01	0.3	OK

©1982-2018 Innovyze

Summary Wizard of 5760 minute 1 year Summer I+0% for Storm

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 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	0.358
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Pipe			Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)	
S1.000	S1	77	98.500	-0.100	0.000	0.00		0.0	OK
S1.001	S2	104	98.473	-0.300	0.000	0.00		0.0	OK
S2.000	S3	104	99.451	-0.099	0.000	0.00		0.0	OK
S1.002	S3	104	98.457	-0.299	0.000	0.00		0.0	OK
S3.000	S5	104	99.853	-0.099	0.000	0.00		0.0	OK
S3.001	S6	104	99.502	-0.148	0.000	0.00		0.0	OK
S1.003	S4	104	98.446	-0.298	0.000	0.00		0.1	OK
S4.000	S8	104	99.970	-0.149	0.000	0.00		0.0	OK
S4.001	S9	104	99.303	-0.147	0.000	0.00		0.1	OK
S1.004	S5	104	98.400	-0.294	0.000	0.00		0.2	OK
S5.000	S6	104	99.596	-0.099	0.000	0.00		0.0	OK
S5.001	S7	104	99.178	-0.097	0.000	0.01		0.0	OK
S1.005	S6	104	98.383	-0.272	0.000	0.00		0.3	OK
S1.006	S9	104	98.383	-0.262	0.000	0.00		0.3	OK

Bell Munro Consulting Ltd		Page 17
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 7200 minute 1 year Summer I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

				Water	Surcharged	Flooded		Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(l/s)	Status
S1.000	S1	78	98.500	-0.100	0.000	0.00		0.0	OK
S1.001	S2	108	98.473	-0.300	0.000	0.00		0.0	OK
S2.000	S3	108	99.451	-0.099	0.000	0.00		0.0	OK
S1.002	S3	108	98.457	-0.299	0.000	0.00		0.0	OK
S3.000	S5	108	99.853	-0.099	0.000	0.00		0.0	OK
S3.001	S6	108	99.502	-0.148	0.000	0.00		0.0	OK
S1.003	S4	108	98.445	-0.299	0.000	0.00		0.1	OK
S4.000	S8	108	99.969	-0.150	0.000	0.00		0.0	OK
S4.001	S9	108	99.302	-0.148	0.000	0.00		0.1	OK
S1.004	S5	108	98.399	-0.295	0.000	0.00		0.2	OK
S5.000	S6	108	99.596	-0.099	0.000	0.00		0.0	OK
S5.001	S7	108	99.178	-0.097	0.000	0.01		0.0	OK
S1.005	S6	108	98.381	-0.274	0.000	0.00		0.2	OK
S1.006	S9	108	98.381	-0.264	0.000	0.00		0.2	OK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 20
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Inlet 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	0.358
Region England and Wales	Cv (Summer)	0.750	
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water		Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)			
S1.000	S1	25	98.624	0.024	0.000	0.36	2.1	SURCHARGED*			
S1.001	S2	14	98.911	0.138	0.000	0.04	2.1	SURCHARGED			
S2.000	S3	5	99.487	-0.063	0.000	0.29	1.8	OK			
S1.002	S3	14	98.927	0.171	0.000	0.04	2.2	SURCHARGED			
S3.000	S5	5	99.877	-0.075	0.000	0.15	1.3	OK			
S3.001	S6	6	99.547	-0.103	0.000	0.21	3.7	OK			
S1.003	S4	14	98.941	0.197	0.000	0.04	2.3	SURCHARGED			
S4.000	S8	5	99.997	-0.122	0.000	0.08	1.9	OK			
S4.001	S9	6	99.359	-0.091	0.000	0.32	6.0	OK			
S1.004	S5	13	98.957	0.263	0.000	0.07	4.2	SURCHARGED			
S5.000	S6	5	99.623	-0.072	0.000	0.17	1.9	OK			
S5.001	S7	6	99.232	-0.043	0.000	0.61	3.6	OK			
S1.005	S6	13	98.958	0.303	0.000	0.11	6.1	SURCHARGED			
S1.006	S9	13	98.958	0.313	0.000	0.05	2.7	SURCHARGED			

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 23
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales	Cv (Summer)	0.750	
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Flow (l/s)	
S1.000	S1	24	98.624	0.024	0.000	0.22	1.3	SURCHARGED*
S1.001	S2	23	98.659	-0.114	0.000	0.03	1.3	OK
S2.000	S3	21	99.470	-0.080	0.000	0.09	0.6	OK
S1.002	S3	22	98.679	-0.077	0.000	0.03	1.4	OK
S3.000	S5	21	99.866	-0.086	0.000	0.05	0.4	OK
S3.001	S6	18	99.528	-0.122	0.000	0.08	1.4	OK
S1.003	S4	22	98.686	-0.058	0.000	0.03	1.6	OK
S4.000	S8	21	99.985	-0.134	0.000	0.02	0.6	OK
S4.001	S9	18	99.335	-0.115	0.000	0.12	2.3	OK
S1.004	S5	22	98.697	0.003	0.000	0.04	2.4	SURCHARGED
S5.000	S6	21	99.610	-0.085	0.000	0.05	0.6	OK
S5.001	S7	18	99.207	-0.068	0.000	0.22	1.3	OK
S1.005	S6	22	98.697	0.042	0.000	0.05	3.0	SURCHARGED
S1.006	S9	22	98.696	0.051	0.000	0.05	2.7	SURCHARGED

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 24
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales	Cv (Summer)	0.750	
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water		Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)			
S1.000	S1	27	98.601	0.001	0.000	0.21		1.2		SURCHARGED*	
S1.001	S2	26	98.639	-0.134	0.000	0.03		1.2		OK	
S2.000	S3	25	99.468	-0.082	0.000	0.07		0.5		OK	
S1.002	S3	24	98.652	-0.104	0.000	0.03		1.3		OK	
S3.000	S5	25	99.864	-0.088	0.000	0.04		0.3		OK	
S3.001	S6	23	99.525	-0.125	0.000	0.06		1.1		OK	
S1.003	S4	25	98.657	-0.087	0.000	0.03		1.5		OK	
S4.000	S8	25	99.983	-0.136	0.000	0.02		0.5		OK	
S4.001	S9	23	99.332	-0.118	0.000	0.10		1.8		OK	
S1.004	S5	25	98.662	-0.032	0.000	0.04		2.3		OK	
S5.000	S6	25	99.608	-0.087	0.000	0.04		0.5		OK	
S5.001	S7	24	99.203	-0.072	0.000	0.18		1.1		OK	
S1.005	S6	25	98.662	0.007	0.000	0.05		2.9		SURCHARGED	
S1.006	S9	25	98.661	0.016	0.000	0.05		2.7		SURCHARGED	

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 25
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Flow (l/s)	
S1.000	S1	30	98.575	-0.025	0.000	0.19	1.1	OK
S1.001	S2	27	98.623	-0.150	0.000	0.02	1.1	OK
S2.000	S3	30	99.466	-0.084	0.000	0.06	0.4	OK
S1.002	S3	27	98.632	-0.124	0.000	0.02	1.2	OK
S3.000	S5	30	99.863	-0.089	0.000	0.03	0.3	OK
S3.001	S6	29	99.522	-0.128	0.000	0.05	0.9	OK
S1.003	S4	27	98.635	-0.109	0.000	0.02	1.4	OK
S4.000	S8	30	99.980	-0.139	0.000	0.02	0.4	OK
S4.001	S9	29	99.328	-0.122	0.000	0.08	1.5	OK
S1.004	S5	27	98.637	-0.057	0.000	0.04	2.1	OK
S5.000	S6	30	99.607	-0.088	0.000	0.04	0.4	OK
S5.001	S7	29	99.200	-0.075	0.000	0.15	0.9	OK
S1.005	S6	27	98.636	-0.019	0.000	0.05	2.9	OK
S1.006	S9	27	98.635	-0.010	0.000	0.05	2.7	OK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 26
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Summer and Winter
Return Period(s) (years)	1, 30, 100	
Climate Change (%)	0, 0, 40	

PN	US/MH Name	Storm Rank	Water Surcharged			Flooded		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)	
S1.000	S1	34	98.533	-0.067	0.000	0.09	0.5	OK	
S1.001	S2	32	98.602	-0.171	0.000	0.01	0.6	OK	
S2.000	S3	37	99.463	-0.087	0.000	0.04	0.3	OK	
S1.002	S3	32	98.604	-0.152	0.000	0.01	0.7	OK	
S3.000	S5	37	99.862	-0.090	0.000	0.02	0.2	OK	
S3.001	S6	37	99.519	-0.131	0.000	0.04	0.7	OK	
S1.003	S4	32	98.604	-0.140	0.000	0.02	1.0	OK	
S4.000	S8	37	99.977	-0.142	0.000	0.01	0.3	OK	
S4.001	S9	37	99.324	-0.126	0.000	0.06	1.1	OK	
S1.004	S5	32	98.604	-0.090	0.000	0.04	2.0	OK	
S5.000	S6	37	99.606	-0.089	0.000	0.03	0.3	OK	
S5.001	S7	37	99.197	-0.078	0.000	0.11	0.6	OK	
S1.005	S6	32	98.603	-0.052	0.000	0.05	2.7	OK	
S1.006	S9	32	98.602	-0.043	0.000	0.05	2.7	OK	

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 27
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 480 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water			Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)				
S1.000	S1	36	98.514	-0.086	0.000	0.03			0.2		OK	
S1.001	S2	41	98.558	-0.215	0.000	0.00			0.2		OK	
S2.000	S3	41	99.462	-0.088	0.000	0.04			0.2		OK	
S1.002	S3	41	98.559	-0.197	0.000	0.01			0.4		OK	
S3.000	S5	41	99.860	-0.092	0.000	0.02			0.2		OK	
S3.001	S6	41	99.517	-0.133	0.000	0.03			0.5		OK	
S1.003	S4	41	98.559	-0.185	0.000	0.01			0.7		OK	
S4.000	S8	41	99.976	-0.143	0.000	0.01			0.2		OK	
S4.001	S9	41	99.321	-0.129	0.000	0.05			0.9		OK	
S1.004	S5	41	98.558	-0.136	0.000	0.03			1.9		OK	
S5.000	S6	41	99.605	-0.090	0.000	0.02			0.2		OK	
S5.001	S7	41	99.195	-0.080	0.000	0.09			0.5		OK	
S1.005	S6	41	98.557	-0.098	0.000	0.05			2.5		OK	
S1.006	S9	41	98.557	-0.088	0.000	0.04			2.5		OK	

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 28
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 600 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

				Water	Surcharged	Flooded		Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(l/s)	Status
S1.000	S1	44	98.503	-0.097	0.000	0.00		0.0	OK
S1.001	S2	44	98.530	-0.243	0.000	0.00		0.1	OK
S2.000	S3	46	99.461	-0.089	0.000	0.03		0.2	OK
S1.002	S3	44	98.530	-0.226	0.000	0.00		0.3	OK
S3.000	S5	46	99.859	-0.093	0.000	0.02		0.1	OK
S3.001	S6	46	99.516	-0.134	0.000	0.03		0.5	OK
S1.003	S4	44	98.530	-0.214	0.000	0.01		0.6	OK
S4.000	S8	46	99.975	-0.144	0.000	0.01		0.2	OK
S4.001	S9	46	99.319	-0.131	0.000	0.04		0.8	OK
S1.004	S5	44	98.530	-0.164	0.000	0.03		1.8	OK
S5.000	S6	46	99.603	-0.092	0.000	0.02		0.2	OK
S5.001	S7	46	99.193	-0.082	0.000	0.07		0.4	OK
S1.005	S6	44	98.529	-0.126	0.000	0.04		2.3	OK
S1.006	S9	44	98.528	-0.117	0.000	0.04		2.3	OK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 30
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 960 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Summer and Winter
Return Period(s) (years)	1, 30, 100	
Climate Change (%)	0, 0, 40	

PN	US/MH Name	Storm Rank	Water			Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)				
S1.000	S1	75	98.500	-0.100	0.000	0.00	0.0	OK				
S1.001	S2	54	98.476	-0.297	0.000	0.00	0.1	OK				
S2.000	S3	54	99.460	-0.090	0.000	0.02	0.1	OK				
S1.002	S3	54	98.473	-0.283	0.000	0.00	0.2	OK				
S3.000	S5	54	99.857	-0.095	0.000	0.01	0.1	OK				
S3.001	S6	54	99.513	-0.137	0.000	0.02	0.3	OK				
S1.003	S4	54	98.472	-0.272	0.000	0.01	0.5	OK				
S4.000	S8	54	99.973	-0.146	0.000	0.01	0.1	OK				
S4.001	S9	54	99.317	-0.133	0.000	0.03	0.5	OK				
S1.004	S5	54	98.465	-0.229	0.000	0.02	1.4	OK				
S5.000	S6	54	99.601	-0.094	0.000	0.01	0.1	OK				
S5.001	S7	54	99.189	-0.086	0.000	0.05	0.3	OK				
S1.005	S6	54	98.464	-0.191	0.000	0.03	1.8	OK				
S1.006	S9	54	98.463	-0.182	0.000	0.03	1.8	OK				

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 31
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 1440 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

				Water	Surcharged	Flooded		Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(l/s)	Status
S1.000	S1	82	98.500	-0.100	0.000	0.00		0.0	OK
S1.001	S2	63	98.474	-0.299	0.000	0.00		0.0	OK
S2.000	S3	63	99.457	-0.093	0.000	0.02		0.1	OK
S1.002	S3	63	98.462	-0.294	0.000	0.00		0.1	OK
S3.000	S5	63	99.856	-0.096	0.000	0.01		0.1	OK
S3.001	S6	63	99.510	-0.140	0.000	0.01		0.2	OK
S1.003	S4	63	98.458	-0.286	0.000	0.01		0.4	OK
S4.000	S8	63	99.972	-0.147	0.000	0.00		0.1	OK
S4.001	S9	63	99.315	-0.135	0.000	0.02		0.4	OK
S1.004	S5	63	98.442	-0.252	0.000	0.02		1.0	OK
S5.000	S6	63	99.599	-0.096	0.000	0.01		0.1	OK
S5.001	S7	63	99.187	-0.088	0.000	0.04		0.2	OK
S1.005	S6	63	98.439	-0.216	0.000	0.02		1.3	OK
S1.006	S9	63	98.439	-0.206	0.000	0.02		1.3	OK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 32
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 2160 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Summer and Winter
Return Period(s) (years)	1, 30, 100	
Climate Change (%)	0, 0, 40	

PN	US/MH Name	Storm Rank	Water			Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)				
S1.000	S1	83	98.500	-0.100	0.000	0.00	0.0	OK				
S1.001	S2	71	98.474	-0.299	0.000	0.00	0.0	OK				
S2.000	S3	71	99.456	-0.094	0.000	0.01	0.1	OK				
S1.002	S3	71	98.459	-0.297	0.000	0.00	0.1	OK				
S3.000	S5	71	99.855	-0.097	0.000	0.01	0.1	OK				
S3.001	S6	71	99.507	-0.143	0.000	0.01	0.2	OK				
S1.003	S4	71	98.452	-0.292	0.000	0.00	0.3	OK				
S4.000	S8	71	99.971	-0.148	0.000	0.00	0.1	OK				
S4.001	S9	71	99.311	-0.139	0.000	0.02	0.3	OK				
S1.004	S5	71	98.428	-0.266	0.000	0.01	0.8	OK				
S5.000	S6	71	99.598	-0.097	0.000	0.01	0.1	OK				
S5.001	S7	71	99.186	-0.089	0.000	0.03	0.2	OK				
S1.005	S6	71	98.422	-0.233	0.000	0.02	1.0	OK				
S1.006	S9	71	98.422	-0.223	0.000	0.02	1.0	OK				

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 33
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 2880 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Summer and Winter
Return Period(s) (years)	1, 30, 100	
Climate Change (%)	0, 0, 40	

PN	US/MH Name	Storm Rank	Water			Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)				
S1.000	S1	81	98.500	-0.100	0.000	0.00	0.0	OK				
S1.001	S2	76	98.474	-0.299	0.000	0.00	0.0	OK				
S2.000	S3	76	99.455	-0.095	0.000	0.01	0.1	OK				
S1.002	S3	76	98.458	-0.298	0.000	0.00	0.1	OK				
S3.000	S5	76	99.854	-0.098	0.000	0.00	0.0	OK				
S3.001	S6	76	99.506	-0.144	0.000	0.01	0.1	OK				
S1.003	S4	76	98.450	-0.294	0.000	0.00	0.2	OK				
S4.000	S8	76	99.971	-0.148	0.000	0.00	0.1	OK				
S4.001	S9	76	99.309	-0.141	0.000	0.01	0.2	OK				
S1.004	S5	76	98.422	-0.272	0.000	0.01	0.6	OK				
S5.000	S6	76	99.598	-0.097	0.000	0.01	0.1	OK				
S5.001	S7	76	99.185	-0.090	0.000	0.02	0.1	OK				
S1.005	S6	76	98.412	-0.243	0.000	0.01	0.8	OK				
S1.006	S9	76	98.412	-0.233	0.000	0.01	0.8	OK				

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 35
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 5760 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

				Water	Surcharged	Flooded		Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(l/s)	Status
S1.000	S1	80	98.500	-0.100	0.000	0.00		0.0	OK
S1.001	S2	91	98.473	-0.300	0.000	0.00		0.0	OK
S2.000	S3	91	99.453	-0.097	0.000	0.01		0.0	OK
S1.002	S3	91	98.457	-0.299	0.000	0.00		0.0	OK
S3.000	S5	91	99.853	-0.099	0.000	0.00		0.0	OK
S3.001	S6	91	99.503	-0.147	0.000	0.00		0.1	OK
S1.003	S4	91	98.447	-0.297	0.000	0.00		0.1	OK
S4.000	S8	91	99.970	-0.149	0.000	0.00		0.0	OK
S4.001	S9	91	99.305	-0.145	0.000	0.01		0.1	OK
S1.004	S5	91	98.408	-0.286	0.000	0.01		0.4	OK
S5.000	S6	91	99.597	-0.098	0.000	0.00		0.0	OK
S5.001	S7	91	99.181	-0.094	0.000	0.01		0.1	OK
S1.005	S6	91	98.395	-0.260	0.000	0.01		0.5	OK
S1.006	S9	91	98.395	-0.250	0.000	0.01		0.5	OK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 36
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 7200 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Summer and Winter
Return Period(s) (years)	1, 30, 100	
Climate Change (%)	0, 0, 40	

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Flow (l/s)	
S1.000	S1	94	98.500	-0.100	0.000	0.00	0.0	OK
S1.001	S2	95	98.473	-0.300	0.000	0.00	0.0	OK
S2.000	S3	95	99.452	-0.098	0.000	0.00	0.0	OK
S1.002	S3	95	98.457	-0.299	0.000	0.00	0.0	OK
S3.000	S5	95	99.853	-0.099	0.000	0.00	0.0	OK
S3.001	S6	95	99.503	-0.147	0.000	0.00	0.1	OK
S1.003	S4	95	98.447	-0.297	0.000	0.00	0.1	OK
S4.000	S8	95	99.970	-0.149	0.000	0.00	0.0	OK
S4.001	S9	95	99.304	-0.146	0.000	0.01	0.1	OK
S1.004	S5	95	98.405	-0.289	0.000	0.01	0.3	OK
S5.000	S6	95	99.596	-0.099	0.000	0.00	0.0	OK
S5.001	S7	95	99.180	-0.095	0.000	0.01	0.1	OK
S1.005	S6	95	98.391	-0.264	0.000	0.01	0.4	OK
S1.006	S9	95	98.391	-0.254	0.000	0.01	0.4	OK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 37
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 8640 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Summer and Winter
Return Period(s) (years)	1, 30, 100	
Climate Change (%)	0, 0, 40	

PN	US/MH Name	Storm Rank	Water			Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)				
S1.000	S1	108	98.500	-0.100	0.000	0.00	0.0	OK				
S1.001	S2	98	98.473	-0.300	0.000	0.00	0.0	OK				
S2.000	S3	98	99.452	-0.098	0.000	0.00	0.0	OK				
S1.002	S3	98	98.457	-0.299	0.000	0.00	0.0	OK				
S3.000	S5	98	99.853	-0.099	0.000	0.00	0.0	OK				
S3.001	S6	98	99.503	-0.147	0.000	0.00	0.1	OK				
S1.003	S4	98	98.446	-0.298	0.000	0.00	0.1	OK				
S4.000	S8	98	99.970	-0.149	0.000	0.00	0.0	OK				
S4.001	S9	98	99.304	-0.146	0.000	0.01	0.1	OK				
S1.004	S5	98	98.403	-0.291	0.000	0.00	0.3	OK				
S5.000	S6	98	99.596	-0.099	0.000	0.00	0.0	OK				
S5.001	S7	98	99.180	-0.095	0.000	0.01	0.1	OK				
S1.005	S6	98	98.388	-0.267	0.000	0.01	0.3	OK				
S1.006	S9	98	98.388	-0.257	0.000	0.01	0.3	OK				

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 38
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 10080 minute 30 year Summer I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Flow (l/s)	
S1.000	S1	109	98.500	-0.100	0.000	0.00	0.0	OK
S1.001	S2	101	98.473	-0.300	0.000	0.00	0.0	OK
S2.000	S3	101	99.452	-0.098	0.000	0.00	0.0	OK
S1.002	S3	101	98.457	-0.299	0.000	0.00	0.0	OK
S3.000	S5	101	99.853	-0.099	0.000	0.00	0.0	OK
S3.001	S6	101	99.502	-0.148	0.000	0.00	0.1	OK
S1.003	S4	101	98.446	-0.298	0.000	0.00	0.1	OK
S4.000	S8	101	99.970	-0.149	0.000	0.00	0.0	OK
S4.001	S9	101	99.303	-0.147	0.000	0.00	0.1	OK
S1.004	S5	101	98.402	-0.292	0.000	0.00	0.2	OK
S5.000	S6	101	99.596	-0.099	0.000	0.00	0.0	OK
S5.001	S7	101	99.179	-0.096	0.000	0.01	0.1	OK
S1.005	S6	101	98.386	-0.269	0.000	0.01	0.3	OK
S1.006	S9	101	98.386	-0.259	0.000	0.01	0.3	OK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 39
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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	0.358
Region England and Wales	Cv (Summer)	0.750	
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)

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

Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water	Surcharged	Flooded	Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Flow (l/s)	
S1.000	S1	12	98.788	0.188	0.000	0.54	3.1	SURCHARGED*
S1.001	S2	2	99.419	0.646	0.000	0.06	3.0	SURCHARGED
S2.000	S3	1	99.502	-0.048	0.000	0.53	3.2	OK
S1.002	S3	2	99.444	0.688	0.000	0.05	2.8	SURCHARGED
S3.000	S5	1	99.887	-0.065	0.000	0.26	2.3	OK
S3.001	S6	1	99.565	-0.085	0.000	0.38	6.6	OK
S1.003	S4	2	99.465	0.721	0.000	0.05	2.8	SURCHARGED
S4.000	S8	1	100.006	-0.113	0.000	0.14	3.4	OK
S4.001	S9	2	99.528	0.078	0.000	0.59	10.8	SURCHARGED
S1.004	S5	2	99.490	0.796	0.000	0.11	6.1	SURCHARGED
S5.000	S6	1	99.633	-0.062	0.000	0.31	3.4	OK
S5.001	S7	2	99.523	0.248	0.000	1.00	5.9	FLOOD RISK
S1.005	S6	2	99.495	0.840	0.000	0.18	9.8	SURCHARGED
S1.006	S9	2	99.494	0.849	0.000	0.05	2.9	FLOOD RISK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 41
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX	Designed by Robert Checked by	
XP Solutions Network 2018.1		

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 0.358
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 18.000 Cv (Winter) 0.840

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

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) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded			Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(l/s)	Status
S1.000	S1	5	98.912	0.312	0.000	0.59		3.4	SURCHARGED*
S1.001	S2	5	99.151	0.378	0.000	0.07		3.4	SURCHARGED
S2.000	S3	6	99.486	-0.064	0.000	0.28		1.7	OK
S1.002	S3	5	99.168	0.412	0.000	0.06		3.3	SURCHARGED
S3.000	S5	6	99.876	-0.076	0.000	0.14		1.2	OK
S3.001	S6	5	99.550	-0.100	0.000	0.24		4.1	OK
S1.003	S4	5	99.183	0.439	0.000	0.06		3.3	SURCHARGED
S4.000	S8	6	99.996	-0.123	0.000	0.07		1.8	OK
S4.001	S9	5	99.363	-0.087	0.000	0.37		6.8	OK
S1.004	S5	5	99.201	0.507	0.000	0.06		3.2	SURCHARGED
S5.000	S6	6	99.622	-0.073	0.000	0.16		1.8	OK
S5.001	S7	5	99.235	-0.040	0.000	0.66		3.9	OK
S1.005	S6	5	99.203	0.548	0.000	0.08		4.3	SURCHARGED
S1.006	S9	5	99.203	0.558	0.000	0.05		2.7	SURCHARGED

Bell Munro Consulting Ltd		Page 43
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX	Designed by Robert Checked by	
XP Solutions Network 2018.1		

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 0.358
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 18.000 Cv (Winter) 0.840

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

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) 1, 30, 100
 Climate Change (%) 0, 0, 40

			Water	Surcharged	Flooded				Pipe
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(l/s)	Status
S1.000	S1	7	98.883	0.283	0.000	1.09		6.2	SURCHARGED*
S1.001	S2	11	98.973	0.200	0.000	0.12		6.0	SURCHARGED
S2.000	S3	13	99.474	-0.076	0.000	0.14		0.8	OK
S1.002	S3	11	98.982	0.226	0.000	0.11		5.6	SURCHARGED
S3.000	S5	13	99.869	-0.083	0.000	0.07		0.6	OK
S3.001	S6	13	99.534	-0.116	0.000	0.12		2.0	OK
S1.003	S4	11	98.990	0.246	0.000	0.08		4.9	SURCHARGED
S4.000	S8	13	99.987	-0.132	0.000	0.04		0.9	OK
S4.001	S9	13	99.343	-0.107	0.000	0.18		3.4	OK
S1.004	S5	11	99.000	0.306	0.000	0.08		4.4	SURCHARGED
S5.000	S6	13	99.614	-0.081	0.000	0.08		0.9	OK
S5.001	S7	13	99.214	-0.061	0.000	0.33		1.9	OK
S1.005	S6	11	99.006	0.351	0.000	0.08		4.5	SURCHARGED
S1.006	S9	11	99.008	0.363	0.000	0.05		2.7	SURCHARGED

Bell Munro Consulting Ltd		Page 45
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales	Cv (Summer)	0.750	
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water		Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)			
S1.000	S1	13	98.770	0.170	0.000	0.28		1.6	SURCHARGED*		
S1.001	S2	17	98.798	0.025	0.000	0.04		1.7	SURCHARGED		
S2.000	S3	23	99.469	-0.081	0.000	0.08		0.5	OK		
S1.002	S3	17	98.801	0.045	0.000	0.03		1.8	SURCHARGED		
S3.000	S5	23	99.865	-0.087	0.000	0.04		0.4	OK		
S3.001	S6	22	99.526	-0.124	0.000	0.07		1.2	OK		
S1.003	S4	17	98.804	0.060	0.000	0.03		2.0	SURCHARGED		
S4.000	S8	23	99.984	-0.135	0.000	0.02		0.5	OK		
S4.001	S9	22	99.333	-0.117	0.000	0.11		2.0	OK		
S1.004	S5	17	98.807	0.113	0.000	0.05		2.7	SURCHARGED		
S5.000	S6	23	99.609	-0.086	0.000	0.05		0.5	OK		
S5.001	S7	22	99.205	-0.070	0.000	0.19		1.1	OK		
S1.005	S6	17	98.807	0.152	0.000	0.05		2.9	SURCHARGED		
S1.006	S9	17	98.807	0.162	0.000	0.05		2.7	SURCHARGED		

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 46
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 480 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	0.358
Region England and Wales	Cv (Summer)	0.750	
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water		Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)			
S1.000	S1	15	98.689	0.089	0.000	0.23			1.3	SURCHARGED*	
S1.001	S2	20	98.701	-0.072	0.000	0.03			1.4	OK	
S2.000	S3	27	99.467	-0.083	0.000	0.07			0.4	OK	
S1.002	S3	21	98.700	-0.056	0.000	0.03			1.5	OK	
S3.000	S5	27	99.864	-0.088	0.000	0.03			0.3	OK	
S3.001	S6	27	99.523	-0.127	0.000	0.06			1.0	OK	
S1.003	S4	21	98.700	-0.044	0.000	0.03			1.7	OK	
S4.000	S8	27	99.981	-0.138	0.000	0.02			0.4	OK	
S4.001	S9	27	99.330	-0.120	0.000	0.09			1.6	OK	
S1.004	S5	21	98.701	0.007	0.000	0.04			2.3	SURCHARGED	
S5.000	S6	27	99.607	-0.088	0.000	0.04			0.4	OK	
S5.001	S7	27	99.201	-0.074	0.000	0.16			0.9	OK	
S1.005	S6	21	98.707	0.052	0.000	0.06			3.1	SURCHARGED	
S1.006	S9	21	98.707	0.062	0.000	0.05			2.7	SURCHARGED	

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 47
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 600 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water		Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)			
S1.000	S1	20	98.646	0.046	0.000	0.20		1.1	SURCHARGED*		
S1.001	S2	24	98.649	-0.124	0.000	0.02		1.2	OK		
S2.000	S3	32	99.465	-0.085	0.000	0.05		0.3	OK		
S1.002	S3	26	98.649	-0.107	0.000	0.02		1.3	OK		
S3.000	S5	32	99.863	-0.089	0.000	0.03		0.2	OK		
S3.001	S6	32	99.521	-0.129	0.000	0.05		0.8	OK		
S1.003	S4	26	98.649	-0.095	0.000	0.03		1.5	OK		
S4.000	S8	32	99.979	-0.140	0.000	0.01		0.4	OK		
S4.001	S9	32	99.327	-0.123	0.000	0.07		1.4	OK		
S1.004	S5	26	98.649	-0.045	0.000	0.04		2.2	OK		
S5.000	S6	32	99.607	-0.088	0.000	0.03		0.4	OK		
S5.001	S7	32	99.199	-0.076	0.000	0.13		0.8	OK		
S1.005	S6	26	98.648	-0.007	0.000	0.05		2.7	OK		
S1.006	S9	26	98.647	0.002	0.000	0.05		2.7	SURCHARGED		

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 48
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 720 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	0.358
Region England and Wales	Cv (Summer)	0.750	
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water		Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)			
S1.000	S1	26	98.606	0.006	0.000	0.15		0.9		SURCHARGED*	
S1.001	S2	29	98.610	-0.163	0.000	0.02		0.9		OK	
S2.000	S3	35	99.464	-0.086	0.000	0.05		0.3		OK	
S1.002	S3	29	98.614	-0.142	0.000	0.02		1.0		OK	
S3.000	S5	35	99.862	-0.090	0.000	0.02		0.2		OK	
S3.001	S6	34	99.520	-0.130	0.000	0.04		0.7		OK	
S1.003	S4	29	98.615	-0.129	0.000	0.02		1.3		OK	
S4.000	S8	35	99.978	-0.141	0.000	0.01		0.3		OK	
S4.001	S9	34	99.324	-0.126	0.000	0.06		1.2		OK	
S1.004	S5	29	98.616	-0.078	0.000	0.04		2.1		OK	
S5.000	S6	35	99.606	-0.089	0.000	0.03		0.3		OK	
S5.001	S7	34	99.197	-0.078	0.000	0.11		0.7		OK	
S1.005	S6	29	98.615	-0.040	0.000	0.05		2.7		OK	
S1.006	S9	29	98.614	-0.031	0.000	0.05		2.7		OK	

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 49
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 960 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

				Water	Surcharged	Flooded		Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(l/s)	Status
S1.000	S1	33	98.545	-0.055	0.000	0.07		0.4	OK
S1.001	S2	35	98.597	-0.176	0.000	0.01		0.5	OK
S2.000	S3	40	99.463	-0.087	0.000	0.04		0.2	OK
S1.002	S3	35	98.598	-0.158	0.000	0.01		0.6	OK
S3.000	S5	40	99.861	-0.091	0.000	0.02		0.2	OK
S3.001	S6	40	99.518	-0.132	0.000	0.03		0.6	OK
S1.003	S4	35	98.598	-0.146	0.000	0.02		0.9	OK
S4.000	S8	40	99.976	-0.143	0.000	0.01		0.2	OK
S4.001	S9	40	99.322	-0.128	0.000	0.05		0.9	OK
S1.004	S5	35	98.597	-0.097	0.000	0.03		2.0	OK
S5.000	S6	40	99.605	-0.090	0.000	0.02		0.2	OK
S5.001	S7	40	99.195	-0.080	0.000	0.09		0.5	OK
S1.005	S6	35	98.596	-0.059	0.000	0.05		2.7	OK
S1.006	S9	35	98.596	-0.049	0.000	0.05		2.6	OK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 50
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 1440 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water			Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)				
S1.000	S1	45	98.502	-0.098	0.000	0.00	0.0	OK				
S1.001	S2	46	98.523	-0.250	0.000	0.00	0.1	OK				
S2.000	S3	48	99.461	-0.089	0.000	0.03	0.2	OK				
S1.002	S3	46	98.523	-0.233	0.000	0.00	0.2	OK				
S3.000	S5	48	99.859	-0.093	0.000	0.01	0.1	OK				
S3.001	S6	48	99.516	-0.134	0.000	0.02	0.4	OK				
S1.003	S4	46	98.523	-0.221	0.000	0.01	0.6	OK				
S4.000	S8	48	99.974	-0.145	0.000	0.01	0.2	OK				
S4.001	S9	48	99.319	-0.131	0.000	0.04	0.7	OK				
S1.004	S5	46	98.523	-0.171	0.000	0.03	1.8	OK				
S5.000	S6	48	99.603	-0.092	0.000	0.02	0.2	OK				
S5.001	S7	48	99.192	-0.083	0.000	0.07	0.4	OK				
S1.005	S6	46	98.521	-0.134	0.000	0.04	2.3	OK				
S1.006	S9	46	98.521	-0.124	0.000	0.04	2.3	OK				

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 55
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX	Designed by Robert Checked by	
XP Solutions Network 2018.1		

Summary Wizard of 7200 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	0.358
Region England and Wales	Cv (Summer)	0.750	
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water			Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)				
S1.000	S1	114	98.500	-0.100	0.000	0.00	0.0	OK				
S1.001	S2	80	98.474	-0.299	0.000	0.00	0.0	OK				
S2.000	S3	80	99.454	-0.096	0.000	0.01	0.0	OK				
S1.002	S3	80	98.458	-0.298	0.000	0.00	0.1	OK				
S3.000	S5	80	99.854	-0.098	0.000	0.00	0.0	OK				
S3.001	S6	80	99.505	-0.145	0.000	0.01	0.1	OK				
S1.003	S4	80	98.449	-0.295	0.000	0.00	0.2	OK				
S4.000	S8	80	99.971	-0.148	0.000	0.00	0.1	OK				
S4.001	S9	80	99.308	-0.142	0.000	0.01	0.2	OK				
S1.004	S5	80	98.416	-0.278	0.000	0.01	0.5	OK				
S5.000	S6	80	99.597	-0.098	0.000	0.00	0.1	OK				
S5.001	S7	80	99.184	-0.091	0.000	0.02	0.1	OK				
S1.005	S6	80	98.406	-0.249	0.000	0.01	0.7	OK				
S1.006	S9	80	98.406	-0.239	0.000	0.01	0.7	OK				

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 57
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 10080 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water Surcharged			Flooded		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)	
S1.000	S1	110	98.500	-0.100	0.000	0.00	0.0	OK	
S1.001	S2	87	98.474	-0.299	0.000	0.00	0.0	OK	
S2.000	S3	87	99.453	-0.097	0.000	0.01	0.0	OK	
S1.002	S3	87	98.457	-0.299	0.000	0.00	0.1	OK	
S3.000	S5	87	99.853	-0.099	0.000	0.00	0.0	OK	
S3.001	S6	87	99.504	-0.146	0.000	0.01	0.1	OK	
S1.003	S4	87	98.448	-0.296	0.000	0.00	0.1	OK	
S4.000	S8	87	99.970	-0.149	0.000	0.00	0.0	OK	
S4.001	S9	87	99.306	-0.144	0.000	0.01	0.2	OK	
S1.004	S5	87	98.410	-0.284	0.000	0.01	0.4	OK	
S5.000	S6	87	99.597	-0.098	0.000	0.00	0.0	OK	
S5.001	S7	87	99.182	-0.093	0.000	0.01	0.1	OK	
S1.005	S6	87	98.397	-0.258	0.000	0.01	0.5	OK	
S1.006	S9	87	98.397	-0.248	0.000	0.01	0.5	OK	

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 58
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales	Cv (Summer)	0.750	
M5-60 (mm)	18.000 Cv (Winter)	0.840	

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water			Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)				
S1.000	S1	38	98.509	-0.091	0.000	0.02			0.1		OK	
S1.001	S2	34	98.599	-0.174	0.000	0.01			0.3		OK	
S2.000	S3	18	99.472	-0.078	0.000	0.11			0.7		OK	
S1.002	S3	34	98.599	-0.157	0.000	0.01			0.4		OK	
S3.000	S5	18	99.867	-0.085	0.000	0.05			0.5		OK	
S3.001	S6	21	99.526	-0.124	0.000	0.07			1.2		OK	
S1.003	S4	34	98.600	-0.144	0.000	0.02			1.2		OK	
S4.000	S8	18	99.986	-0.133	0.000	0.03			0.7		OK	
S4.001	S9	21	99.333	-0.117	0.000	0.11			2.0		OK	
S1.004	S5	34	98.600	-0.094	0.000	0.05			2.8		OK	
S5.000	S6	18	99.611	-0.084	0.000	0.06			0.7		OK	
S5.001	S7	20	99.206	-0.069	0.000	0.21			1.2		OK	
S1.005	S6	34	98.599	-0.056	0.000	0.05			3.0		OK	
S1.006	S9	34	98.598	-0.047	0.000	0.05			2.7		OK	

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 59
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales	Cv (Summer)	0.750	
M5-60 (mm)	18.000 Cv (Winter)	0.840	

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

				Water	Surcharged	Flooded		Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(l/s)	Status
S1.000	S1	37	98.512	-0.088	0.000	0.03		0.2	OK
S1.001	S2	33	98.600	-0.173	0.000	0.01		0.3	OK
S2.000	S3	24	99.468	-0.082	0.000	0.07		0.5	OK
S1.002	S3	33	98.601	-0.155	0.000	0.01		0.5	OK
S3.000	S5	24	99.864	-0.088	0.000	0.04		0.3	OK
S3.001	S6	26	99.523	-0.127	0.000	0.06		1.0	OK
S1.003	S4	33	98.602	-0.142	0.000	0.02		0.9	OK
S4.000	S8	24	99.983	-0.136	0.000	0.02		0.5	OK
S4.001	S9	26	99.330	-0.120	0.000	0.09		1.6	OK
S1.004	S5	33	98.602	-0.092	0.000	0.04		2.4	OK
S5.000	S6	24	99.608	-0.087	0.000	0.04		0.5	OK
S5.001	S7	26	99.202	-0.073	0.000	0.16		1.0	OK
S1.005	S6	33	98.601	-0.054	0.000	0.05		2.9	OK
S1.006	S9	33	98.600	-0.045	0.000	0.05		2.7	OK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 60
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales	Cv (Summer)	0.750	
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water Surcharged			Flooded		Pipe	Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)		
S1.000	S1	40	98.508	-0.092	0.000	0.02	0.1	OK	
S1.001	S2	40	98.566	-0.207	0.000	0.00	0.2	OK	
S2.000	S3	33	99.464	-0.086	0.000	0.05	0.3	OK	
S1.002	S3	40	98.567	-0.189	0.000	0.01	0.4	OK	
S3.000	S5	33	99.862	-0.090	0.000	0.02	0.2	OK	
S3.001	S6	35	99.519	-0.131	0.000	0.04	0.7	OK	
S1.003	S4	40	98.567	-0.177	0.000	0.01	0.7	OK	
S4.000	S8	33	99.978	-0.141	0.000	0.01	0.3	OK	
S4.001	S9	35	99.324	-0.126	0.000	0.06	1.2	OK	
S1.004	S5	40	98.567	-0.127	0.000	0.04	2.1	OK	
S5.000	S6	33	99.606	-0.089	0.000	0.03	0.3	OK	
S5.001	S7	35	99.197	-0.078	0.000	0.11	0.7	OK	
S1.005	S6	40	98.566	-0.089	0.000	0.05	2.7	OK	
S1.006	S9	40	98.565	-0.080	0.000	0.05	2.6	OK	

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 62
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

				Water	Surcharged	Flooded		Pipe	
	US/MH	Storm	Level	Depth	Volume	Flow /	Overflow	Flow	
PN	Name	Rank	(m)	(m)	(m³)	Cap.	(l/s)	(l/s)	Status
S1.000	S1	111	98.500	-0.100	0.000	0.00		0.0	OK
S1.001	S2	52	98.478	-0.295	0.000	0.00		0.1	OK
S2.000	S3	52	99.460	-0.090	0.000	0.02		0.1	OK
S1.002	S3	52	98.477	-0.279	0.000	0.00		0.2	OK
S3.000	S5	52	99.858	-0.094	0.000	0.01		0.1	OK
S3.001	S6	52	99.515	-0.135	0.000	0.02		0.4	OK
S1.003	S4	52	98.476	-0.268	0.000	0.01		0.6	OK
S4.000	S8	52	99.973	-0.146	0.000	0.01		0.2	OK
S4.001	S9	52	99.317	-0.133	0.000	0.03		0.6	OK
S1.004	S5	52	98.472	-0.222	0.000	0.03		1.5	OK
S5.000	S6	52	99.602	-0.093	0.000	0.01		0.2	OK
S5.001	S7	52	99.190	-0.085	0.000	0.06		0.3	OK
S1.005	S6	52	98.471	-0.184	0.000	0.04		2.0	OK
S1.006	S9	52	98.470	-0.175	0.000	0.03		1.9	OK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 63
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

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

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Summer and Winter
Return Period(s) (years)	1, 30, 100	
Climate Change (%)	0, 0, 40	

PN	US/MH Name	Storm Rank	Water			Surcharged		Flooded		Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Flow / Overflow (l/s)	Flow (l/s)				
S1.000	S1	98	98.500	-0.100	0.000	0.00	0.0	OK				
S1.001	S2	59	98.475	-0.298	0.000	0.00	0.1	OK				
S2.000	S3	59	99.459	-0.091	0.000	0.02	0.1	OK				
S1.002	S3	59	98.467	-0.289	0.000	0.00	0.2	OK				
S3.000	S5	59	99.857	-0.095	0.000	0.01	0.1	OK				
S3.001	S6	59	99.512	-0.138	0.000	0.02	0.3	OK				
S1.003	S4	59	98.466	-0.278	0.000	0.01	0.5	OK				
S4.000	S8	59	99.973	-0.146	0.000	0.01	0.1	OK				
S4.001	S9	59	99.316	-0.134	0.000	0.03	0.5	OK				
S1.004	S5	59	98.456	-0.238	0.000	0.02	1.3	OK				
S5.000	S6	59	99.600	-0.095	0.000	0.01	0.1	OK				
S5.001	S7	59	99.189	-0.086	0.000	0.05	0.3	OK				
S1.005	S6	59	98.455	-0.200	0.000	0.03	1.6	OK				
S1.006	S9	59	98.455	-0.190	0.000	0.03	1.6	OK				

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 65
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 480 minute 1 year Winter I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

Profile(s)

Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080	Summer and Winter
Return Period(s) (years)	1, 30, 100	
Climate Change (%)	0, 0, 40	

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Flow (l/s)	
S1.000	S1	97	98.500	-0.100	0.000	0.00	0.0	OK
S1.001	S2	68	98.474	-0.299	0.000	0.00	0.0	OK
S2.000	S3	68	99.456	-0.094	0.000	0.01	0.1	OK
S1.002	S3	68	98.459	-0.297	0.000	0.00	0.1	OK
S3.000	S5	68	99.855	-0.097	0.000	0.01	0.1	OK
S3.001	S6	68	99.507	-0.143	0.000	0.01	0.2	OK
S1.003	S4	68	98.453	-0.291	0.000	0.00	0.3	OK
S4.000	S8	68	99.971	-0.148	0.000	0.00	0.1	OK
S4.001	S9	68	99.312	-0.138	0.000	0.02	0.3	OK
S1.004	S5	68	98.429	-0.265	0.000	0.01	0.8	OK
S5.000	S6	68	99.598	-0.097	0.000	0.01	0.1	OK
S5.001	S7	68	99.186	-0.089	0.000	0.03	0.2	OK
S1.005	S6	68	98.424	-0.231	0.000	0.02	1.0	OK
S1.006	S9	68	98.423	-0.222	0.000	0.02	1.0	OK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 66
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 600 minute 1 year Winter I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

			Water	Surcharged	Flooded		Pipe	
PN	US/MH Name	Storm Rank	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s) Status
S1.000	S1	95	98.500	-0.100	0.000	0.00	0.0	OK
S1.001	S2	73	98.474	-0.299	0.000	0.00	0.0	OK
S2.000	S3	73	99.455	-0.095	0.000	0.01	0.1	OK
S1.002	S3	73	98.459	-0.297	0.000	0.00	0.1	OK
S3.000	S5	73	99.854	-0.098	0.000	0.01	0.0	OK
S3.001	S6	73	99.506	-0.144	0.000	0.01	0.2	OK
S1.003	S4	73	98.451	-0.293	0.000	0.00	0.2	OK
S4.000	S8	73	99.971	-0.148	0.000	0.00	0.1	OK
S4.001	S9	73	99.310	-0.140	0.000	0.01	0.3	OK
S1.004	S5	73	98.424	-0.270	0.000	0.01	0.7	OK
S5.000	S6	73	99.598	-0.097	0.000	0.01	0.1	OK
S5.001	S7	73	99.186	-0.089	0.000	0.03	0.1	OK
S1.005	S6	73	98.416	-0.239	0.000	0.02	0.9	OK
S1.006	S9	73	98.416	-0.229	0.000	0.02	0.9	OK

©1982-2018 Innovyze

Bell Munro Consulting Ltd		Page 69
Turing House 5 Archway Manchester M15 5RL		
Date 01/03/2022 11:55 File ERWOOD 2.MDX		
Designed by Robert Checked by		
XP Solutions		Network 2018.1

Summary Wizard of 1440 minute 1 year Winter I+0% for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of 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	0.358
Region England and Wales Cv (Summer)	0.750		
M5-60 (mm)	18.000	Cv (Winter)	0.840

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

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)	1, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm Rank	Water Surcharged Flooded			Pipe		Status
			Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Flow (l/s)	
S1.000	S1	104	98.500	-0.100	0.000	0.00	0.0	OK
S1.001	S2	90	98.473	-0.300	0.000	0.00	0.0	OK
S2.000	S3	90	99.453	-0.097	0.000	0.01	0.0	OK
S1.002	S3	90	98.457	-0.299	0.000	0.00	0.1	OK
S3.000	S5	90	99.853	-0.099	0.000	0.00	0.0	OK
S3.001	S6	90	99.503	-0.147	0.000	0.00	0.1	OK
S1.003	S4	90	98.447	-0.297	0.000	0.00	0.1	OK
S4.000	S8	90	99.970	-0.149	0.000	0.00	0.0	OK
S4.001	S9	90	99.305	-0.145	0.000	0.01	0.1	OK
S1.004	S5	90	98.408	-0.286	0.000	0.01	0.4	OK
S5.000	S6	90	99.597	-0.098	0.000	0.00	0.0	OK
S5.001	S7	90	99.181	-0.094	0.000	0.01	0.1	OK
S1.005	S6	90	98.395	-0.260	0.000	0.01	0.5	OK
S1.006	S9	90	98.395	-0.250	0.000	0.01	0.5	OK

©1982-2018 Innovyze

