

1) for Veetec

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	0
Number of Online Controls	0	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Rainfall Model	FSR	Ratio R	0.400
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	20.000	Cv (Winter)	0.840

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Margin for Flood Risk Warning (mm) 300.0      DVD Status OFF
      Analysis Timestep    Fine Inertia Status OFF
      DTS Status           ON
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Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 960, 1440
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 0

									Water
PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Level (m)
E1.000	E3	30 Winter	30	+0%	1/15 Summer	30/15 Summer			30.203
E1.001	E4	15 Winter	30	+0%	1/15 Summer	30/15 Summer			30.100
E2.000	E6	30 Winter	30	+0%	1/15 Summer	30/15 Summer			30.169
E2.001	E7	30 Winter	30	+0%	1/15 Summer	30/15 Summer			30.137
E2.002	E8	15 Winter	30	+0%	1/15 Summer	30/15 Summer			30.121
E1.002	E5	15 Summer	30	+0%	1/15 Summer				29.933

PN	Surcharged		Flooded		Half Drain	Pipe	Status	Level Exceeded
	US/MH Name	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)		
E1.000	E3	0.463	12.643	0.82		18.2	FLOOD	17
E1.001	E4	0.720	0.161	0.50		18.2	FLOOD	9
E2.000	E6	0.539	8.674	1.33		11.7	FLOOD	18
E2.001	E7	0.537	7.029	1.15		15.6	FLOOD	18
E2.002	E8	0.651	1.369	0.79		16.6	FLOOD	11
E1.002	E5	1.893	0.000	5.69		27.6	SURCHARGED	

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Page 1

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Checked by



XP Solutions

Network 2020.1.3

1 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Tudor Works

Simulation Criteria

Areal Reduction Factor 1.000Additional Flow - % of Total Flow 0.000

Hot Start (mins) 0MADD Factor * 10m³/ha Storage 2.000

Hot Start Level (mm) 0Inlet Coefficient 0.800

Manhole Headloss Coeff (Global) 0.500Flow per Person per Day (l/per/day) 0.000

Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0Number of Storage Structures 0

Number of Online Controls 0Number of Time/Area Diagrams 0

Number of Offline Controls 0Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall ModelFSRRatio R 0.400

Region England and Wales Cv (Summer) 0.750

M5-60 (mm)20.000 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0DVD Status OFF

Analysis Timestep FineInertia Status OFF

DTS StatusON

Profile(s)Summer and Winter

Duration(s) (mins) 15, 30, 60, 120, 240, 360, 480, 960, 1440

Return Period(s) (years)1, 30, 100

Climate Change (%)0, 0, 0

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S1.000	S1 30 Winter		1	+0%	1/15 Summer	30/15 Summer			29.586
S1.001	S2 30 Winter		1	+0%	1/15 Summer	30/15 Summer			29.573
S1.002	S2 15 Winter		1	+0%	1/15 Summer	30/15 Summer			29.532
S1.003	S3 15 Winter		1	+0%	1/15 Summer	30/15 Summer			29.014
S2.000	S5 15 Winter		1	+0%	1/15 Summer	30/15 Summer			29.325
S1.004	S5 15 Winter		1	+0%	1/15 Summer				28.354

Surcharged Flooded

PNUS/MH NameDepth (m)Volume (m³)Flow / Cap.Overflow (l/s)Half Drain Time (mins)Pipe Flow (l/s)StatusLevel Exceeded

S1.000S10.4160.0000.59

S1.001S20.5230.0000.77

S1.002S20.7120.0000.95

S1.003S30.8740.0001.31

S2.000S50.3850.0000.94

S1.004S50.6340.0001.94

8.310.716.121.122.840.9

FLOOD RISKFLOOD RISKFLOOD RISKSURCHARGEDSURCHARGEDSURCHARGED

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1) for Tudor Works

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 0

Number of Online Controls 0 Number of Time/Area Diagrams 0

Number of Offline Controls 0 Number of Real Time Controls 0

Rainfall Model	FSR	Ratio R	0.400
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	20.000	Cv (Winter)	0.840

Rainfall Model	FSR	Ratio R 0.400
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Region England and Wales Cv (Summer) 0.750

M5-60 (mm) 20.000 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF

Analysis Timestep Fine Inertia Status OFF

DTS Status ON

Summer and Winter

Duration(s) (mins) 15, 30, 60, 120, 240, 360, 480, 960, 1440

Return Period(s) (years) 1, 30, 100

Climate Change (%) 0, 0, 0

PN	US/MH Name	Storm	Return Period	Climate Change	First (X)		First (Y)		First (Z)		Overflow Act.	Water Level (m)
					Surcharge		Flood		Overflow			
S1.000	S1	15 Winter	30	+0%	1/15	Summer	30/15	Summer				29.724
S1.001	S2	60 Winter	30	+0%	1/15	Summer	30/15	Summer				29.658
S1.002	S2	30 Winter	30	+0%	1/15	Summer	30/15	Summer				29.649
S1.003	S3	15 Winter	30	+0%	1/15	Summer	30/15	Summer				29.810
S2.000	S5	30 Winter	30	+0%	1/15	Summer	30/15	Summer				29.738
S1.004	S5	15 Winter	30	+0%	1/15	Summer						28.713

PN	US/MH Name	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Half Drain	Pipe	Status	Level Exceeded
		Depth (m)	Volume (m³)			Time (mins)	Flow (l/s)		
S1.000	S1	0.554	4.387	0.85			12.0	FLOOD	15
S1.001	S2	0.608	27.576	1.37			19.2	FLOOD	23
S1.002	S2	0.829	19.424	1.14			19.2	FLOOD	20
S1.003	S3	1.670	0.463	1.66			26.8	FLOOD	7
S2.000	S5	0.798	18.167	1.03			25.0	FLOOD	17
S1.004	S5	0.993	0.000	2.31			48.6	SURCHARGED	

100 year Return Period Summary of Critical Results by Maximum Level (Rank
1) for Tudor Works

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 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	0
Number of Online Controls	0	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	0.400
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	20.000	Cv (Winter)	0.840

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

```

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 960, 1440
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 0

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water
									Level (m)
S1.000	S1	30 Winter	100	+0%	1/15 Summer	30/15 Summer			29.728
S1.001	S2	60 Winter	100	+0%	1/15 Summer	30/15 Summer			29.672
S1.002	S2	30 Winter	100	+0%	1/15 Summer	30/15 Summer			29.663
S1.003	S3	15 Winter	100	+0%	1/15 Summer	30/15 Summer			29.812
S2.000	S5	30 Winter	100	+0%	1/15 Summer	30/15 Summer			29.753
S1.004	S5	15 Winter	100	+0%	1/15 Summer				28.716

PN	Surcharged		Flooded		Half Drain	Pipe	Status	Level Exceeded
	US/MH Name	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)		
S1.000	S1	0.558	8.369	0.85		12.0	FLOOD	15
S1.001	S2	0.622	42.518	1.38		19.2	FLOOD	23
S1.002	S2	0.843	33.068	1.10		18.6	FLOOD	20
S1.003	S3	1.672	2.224	1.67		26.9	FLOOD	7
S2.000	S5	0.813	32.926	1.04		25.1	FLOOD	17
S1.004	S5	0.996	0.000	2.31		48.7	SURCHARGED	

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The Arup Campus Blyth Gate Solihull B90 8AE																																																															
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<table><tr><td colspan="2"></td><td colspan="2">Surcharged Flooded</td><td colspan="2"></td><td colspan="2">Half Drain Pipe</td><td colspan="2"></td></tr><tr><td>PN</td><td>US/MH Name</td><td>Depth (m)</td><td>Volume (m³)</td><td>Flow / Cap.</td><td>Overflow (l/s)</td><td>Time (mins)</td><td>Flow (l/s)</td><td>Status</td><td>Level Exceeded</td></tr><tr><td>E1.000</td><td>E1</td><td>-0.211</td><td>0.000</td><td>0.19</td><td></td><td></td><td>27.8</td><td>OK</td><td></td></tr><tr><td>E1.001</td><td>E2</td><td>-0.146</td><td>0.000</td><td>0.51</td><td></td><td></td><td>52.8</td><td>OK</td><td></td></tr><tr><td>E1.002</td><td>E3</td><td>-0.015</td><td>0.000</td><td>1.00</td><td></td><td></td><td>49.4</td><td>OK</td><td></td></tr></table>											Surcharged Flooded				Half Drain Pipe				PN	US/MH Name	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Status	Level Exceeded	E1.000	E1	-0.211	0.000	0.19			27.8	OK		E1.001	E2	-0.146	0.000	0.51			52.8	OK		E1.002	E3	-0.015	0.000	1.00			49.4	OK						
		Surcharged Flooded				Half Drain Pipe																																																									
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E1.000	E1	-0.211	0.000	0.19			27.8	OK																																																							
E1.001	E2	-0.146	0.000	0.51			52.8	OK																																																							
E1.002	E3	-0.015	0.000	1.00			49.4	OK																																																							
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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	0
Number of Online Controls	0	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Rainfall Model	FSR	Ratio R	0.400
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	20.000	Cv (Winter)	0.840

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 960, 1440
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 0

PN	US/MH	Surcharged	Flooded	Half Drain		Pipe	Status	Level Exceeded
	Name	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Time (mins)	Flow (l/s)		
E1.000	E1	-0.151	0.000	0.46		68.5	OK	
E1.001	E2	0.461	0.000	1.26		130.5	SURCHARGED	
E1.002	E3	0.250	0.000	2.63		130.1	SURCHARGED	

