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Date 13/01/2023 15:13 File SA2.MDX		Designed by C Hoskins Checked by S Wright	
Innovyze		Network 2017.1.2	

PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.000	o	150	1	100.050	99.250	0.650	Open Manhole	1200
1.001	o	150	2	99.800	98.850	0.800	Open Manhole	1200
2.000	o	150	3	100.800	98.581	2.069	Open Manhole	1200
1.002	o	150	5	100.800	98.548	2.102	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.000	24.000	60.0	2	99.800	98.850	0.800	Open Manhole	1200
1.001	18.100	60.0	5	100.800	98.548	2.102	Open Manhole	1200
2.000	5.000	150.0	5	100.800	98.548	2.102	Open Manhole	1200
1.002	5.000	151.5	SA2	101.680	98.515	3.015	Open Manhole	1200

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
1.002	SA2	101.680	98.515	98.515	1200	0

Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	2.000
Hot Start (mins)	0	Inlet Coefficient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
Number of Online Controls 1 Number of Storage Structures 2 Number of Real Time Controls 0

Synthetic Rainfall Details

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Innovyze Network 2017.1.2																						
<u>Synthetic Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>2</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>2013</td> </tr> <tr> <td>Site Location</td> <td>GB 577291 164528 TQ 77291 64528</td> </tr> <tr> <td>Data Type</td> <td>Point</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Storm Duration (mins)</td> <td>30</td> </tr> </table>			Rainfall Model	FEH	Return Period (years)	2	FEH Rainfall Version	2013	Site Location	GB 577291 164528 TQ 77291 64528	Data Type	Point	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Storm Duration (mins)	30
Rainfall Model	FEH																					
Return Period (years)	2																					
FEH Rainfall Version	2013																					
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Innovyze	Network 2017.1.2	
Online Controls for Storm Weir Manhole: 5, DS/PN: 1.002, Volume (m³): 0.4 Discharge Coef 0.544 Width (m) 0.300 Invert Level (m) 100.800		
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Storage Structures for Storm

Cellular Storage Manhole: 3, DS/PN: 2.000

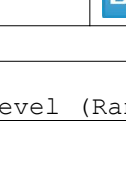
Invert Level (m) 98.581 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00000

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	22.5	22.5	1.201	0.0	45.3
1.200	22.5	45.3			

Deep Bore Soakaway Manhole: 5, DS/PN: 1.002

Chamber Invert Level (m) 88.548 Infiltration Coefficient Base (m/hr) 0.17000
Chamber Diameter/Length (m) 1.200 Safety Factor 2.0
Borehole Diameter (m) 0.150
Borehole Depth (m) 10.000

Depth (m)	Side Infil. Coef. (m/hr)	Depth (m)	Side Infil. Coef. (m/hr)
0.000	0.00000	9.000	0.17000

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2 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

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

Number of Input Hydrographs	0	Number of Offline Controls	0	Number of Time/Area Diagrams	0
Number of Online Controls	1	Number of Storage Structures	2	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH
FEH Rainfall Version	2013
Site Location	GB 577291 164528 TQ 77291 64528
Data Type	Point
Cv (Summer)	0.750
Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 960, 1440
Return Period(s) (years)	2, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surge	First (Y) Flood	First (Z) Overflow	Overflow Act.
1.000	1	15 Winter	2	+0%	100/360 Winter			
1.001	2	1440 Winter	2	+0%	30/240 Winter	100/1440 Winter		
2.000	3	1440 Winter	2	+0%	2/120 Summer			
1.002	5	1440 Winter	2	+0%	2/15 Summer			

PN	US/MH Name	Water Surcharged Flooded			Pipe		Status	Level Exceeded
		Level (m)	Depth (m)	Volume (m³)	Flow / Overflow (l/s)	Flow (l/s)		
1.000	1	99.288	-0.112	0.000	0.14	3.1	OK	
1.001	2	98.914	-0.086	0.000	0.01	0.3	OK	1

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2 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for
Storm

		Water	Surcharged	Flooded		Pipe			
PN	US/MH Name	Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)	Status	Level Exceeded
2.000	3	98.913	0.182	0.000	0.01		0.2	SURCHARGED	
1.002	5	98.918	0.220	0.000	0.00		0.0	SURCHARGED	

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm

Simulation Criteria

Areal Reduction Factor 1.000

Hot Start (mins) 0

Hot Start Level (mm) 0

Manhole Headloss Coeff (Global) 0.500

Foul Sewage per hectare (l/s) 0.000

Additional Flow - % of Total Flow 0.000

MADD Factor * 10m³/ha Storage 2.000

Inlet Coefficient 0.800

Flow per Person per Day (l/per/day) 0.000

Number of Input Hydrographs 0

Number of Offline Controls 0

Number of Time/Area Diagrams 0

Number of Online Controls 1

Number of Storage Structures 2

Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FEH

FEH Rainfall Version 2013

Site Location GB 577291 164528 TQ 77291 64528

Data Type Point

Cv (Summer) 0.750

Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0

Analysis Timestep 2.5 Second Increment (Extended)

DTS Status ON

DVD Status ON

Inertia Status ON

Profile(s) Summer and Winter

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

Return Period(s) (years) 2, 30, 100

Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surge	First (Y) Flood	First (Z) Overflow	Overflow Act.
1.000	1	15 Winter	30	+0%	100/360 Winter			
1.001	2	1440 Winter	30	+0%	30/240 Winter	100/1440 Winter		
2.000	3	1440 Winter	30	+0%	2/120 Summer			
1.002	5	1440 Winter	30	+0%	2/15 Summer			

PN	US/MH Name	Water		Surcharged		Flooded		Pipe		Level Exceeded
		Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)	Status		
1.000	1	99.309	-0.091	0.000	0.32		7.1	OK		
1.001	2	99.233	0.233	0.000	0.02		0.5	SURCHARGED	1	

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm

		Water	Surcharged	Flooded		Pipe			
PN	US/MH Name	Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)	Status	Level Exceeded
2.000	3	99.232	0.501	0.000	0.02		0.2	SURCHARGED	
1.002	5	99.236	0.538	0.000	0.00		0.0	SURCHARGED	

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

Simulation Criteria

Areal Reduction Factor 1.000

Hot Start (mins) 0

Hot Start Level (mm) 0

Manhole Headloss Coeff (Global) 0.500

Foul Sewage per hectare (l/s) 0.000

Additional Flow - % of Total Flow 0.000

MADD Factor * 10m³/ha Storage 2.000

Inlet Coefficient 0.800

Flow per Person per Day (l/per/day) 0.000

Number of Input Hydrographs 0

Number of Offline Controls 0

Number of Time/Area Diagrams 0

Number of Online Controls 1

Number of Storage Structures 2

Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FEH

FEH Rainfall Version 2013

Site Location GB 577291 164528 TQ 77291 64528

Data Type Point

Cv (Summer) 0.750

Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0

Analysis Timestep 2.5 Second Increment (Extended)

DTS Status ON

DVD Status ON

Inertia Status ON

Profile(s) Summer and Winter

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

Return Period(s) (years) 2, 30, 100

Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surge	First (Y) Flood	First (Z) Overflow	Overflow Act.
1.000	1	1440 Winter	100	+40%	100/360 Winter			
1.001	2	1440 Winter	100	+40%	30/240 Winter	100/1440 Winter		
2.000	3	1440 Winter	100	+40%	2/120 Summer			
1.002	5	1440 Winter	100	+40%	2/15 Summer			

PN	US/MH Name	Water Surcharged			Flooded		Pipe		Level Exceeded
		Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)	Status	
1.000	1	99.802	0.402	0.000	0.03		0.7	FLOOD RISK	
1.001	2	99.802	0.802	1.743	0.04		0.9	FLOOD	1

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

		Water	Surcharged	Flooded		Pipe			
PN	US/MH Name	Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)	Status	Level Exceeded
2.000	3	99.802	1.071	0.000	0.03		0.3	SURCHARGED	
1.002	5	99.803	1.105	0.000	0.00		0.0	SURCHARGED	