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11 Bridgewater Road Worsley Manchester, M28 3JE	12454 - Gorebrook Works Hydraulic Calculations Showing Surface Water See 12454-20G	
Date 28/06/2022	Designed by A.Mulligan	
File 12454 - Gorebrook Hydraulic A...	Checked by A.Mulligan	
Innovyze	Network 2019.1	

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)	2	PIMP (%)	95
M5-60 (mm)	18.000	Add Flow / Climate Change (%)	0
Ratio R	0.360	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.	1.000	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Network Design Table for Storm

- Indicates pipe length does not match coordinates

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	9.500#	0.600	15.8	0.022	5.00	0.0	0.600	o	150	Pipe/Conduit	
S1.001	18.000#	0.100	180.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.002	17.800#	0.100	178.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S2.000	30.000#	0.200	150.0	0.048	5.00	0.0	0.600	o	300	Pipe/Conduit	
S1.003	22.500#	0.120	187.5	0.018	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.004	18.000#	0.100	180.0	0.019	0.00	0.0	0.600	o	300	Pipe/Conduit	
S3.000	6.000#	0.035	171.4	0.005	5.00	0.0	0.600	o	150	Pipe/Conduit	
S4.000	5.000#	0.001	5000.0	0.000	5.00	0.0	0.600	o	300	Pipe/Conduit	
S1.005	10.000#	0.080	125.0	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	5.06	50.000	0.022	0.0	0.0	0.0	2.54	45.0	3.9
S1.001	50.00	5.32	49.250	0.022	0.0	0.0	0.0	1.17	82.6	3.9
S1.002	50.00	5.57	49.150	0.022	0.0	0.0	0.0	1.18	83.1	3.9
S2.000	50.00	5.39	49.250	0.048	0.0	0.0	0.0	1.28	90.6	8.6
S1.003	50.00	5.90	49.050	0.087	0.0	0.0	0.0	1.14	80.9	15.8
S1.004	50.00	6.16	48.930	0.106	0.0	0.0	0.0	1.17	82.6	19.2
S3.000	50.00	5.13	50.150	0.005	0.0	0.0	0.0	0.76	13.5	0.9
S4.000	50.00	5.39	48.850	0.000	0.0	0.0	0.0	0.21	15.1	0.0
S1.005	50.00	6.27	48.830	0.111	0.0	0.0	0.0	1.40	99.3	20.1

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)
SRE1	50.650	0.650	Open Manhole	450	S1.000	50.000	150				
SS1	50.650	1.400	Open Manhole	1500	S1.001	49.250	300	S1.000	49.400	150	
SS2	50.650	1.500	Open Manhole	1500	S1.002	49.150	300	S1.001	49.150	300	
SRE2	50.600	1.350	Open Manhole	450	S2.000	49.250	300				
SS3	50.600	1.550	Open Manhole	1500	S1.003	49.050	300	S1.002	49.050	300	
								S2.000	49.050	300	
SS4	50.600	1.670	Open Manhole	1500	S1.004	48.930	300	S1.003	48.930	300	
SRE3	50.600	0.450	Open Manhole	450	S3.000	50.150	150				
STANK	50.500	1.650	Open Manhole	1500	S4.000	48.850	300				
SS5 HYDROBRAKE	50.600	1.770	Open Manhole	1500	S1.005	48.830	300	S1.004	48.830	300	
								S3.000	50.115	150	1135
								S4.000	48.849	300	19
S	51.600	2.850	Open Manhole	0		OUTFALL		S1.005	48.750	300	

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
SRE1	167.763	86.816	167.763	86.816	Required	
SS1	221.313	86.816	221.313	86.816	Required	
SRE2	171.269	63.866	171.269	63.866	Required	
SS3	221.313	64.184	221.313	64.184	Required	
SRE3	169.675	44.422	169.675	44.422	Required	
STANK	192.306	30.716	192.306	30.716	Required	
SS5 HYDROBRAKE	221.313	44.741	221.313	44.741	Required	
S	231.194	37.091			No Entry	

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PIPELINE SCHEDULES for Storm

Upstream Manhole

- Indicates pipe length does not match coordinates

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S1.000	o	150	SRE1	50.650	50.000	0.500	Open Manhole	450
S1.001	o	300	SS1	50.650	49.250	1.100	Open Manhole	1500
S1.002	o	300	SS2	50.650	49.150	1.200	Open Manhole	1500
S2.000	o	300	SRE2	50.600	49.250	1.050	Open Manhole	450
S1.003	o	300	SS3	50.600	49.050	1.250	Open Manhole	1500
S1.004	o	300	SS4	50.600	48.930	1.370	Open Manhole	1500
S3.000	o	150	SRE3	50.600	50.150	0.300	Open Manhole	450
S4.000	o	300	STANK	50.500	48.850	1.350	Open Manhole	1500
S1.005	o	300	SS5 HYDROBRAKE	50.600	48.830	1.470	Open Manhole	1500

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)
S1.000	9.500#	15.8	SS1	50.650	49.400	1.100	Open Manhole	1500
S1.001	18.000#	180.0	SS2	50.650	49.150	1.200	Open Manhole	1500
S1.002	17.800#	178.0	SS3	50.600	49.050	1.250	Open Manhole	1500
S2.000	30.000#	150.0	SS3	50.600	49.050	1.250	Open Manhole	1500
S1.003	22.500#	187.5	SS4	50.600	48.930	1.370	Open Manhole	1500
S1.004	18.000#	180.0	SS5 HYDROBRAKE	50.600	48.830	1.470	Open Manhole	1500
S3.000	6.000#	171.4	SS5 HYDROBRAKE	50.600	50.115	0.335	Open Manhole	1500
S4.000	5.000#	5000.0	SS5 HYDROBRAKE	50.600	48.849	1.451	Open Manhole	1500
S1.005	10.000#	125.0	S	51.600	48.750	2.550	Open Manhole	0

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Setting Out Information - True Coordinates (Storm)

- Indicates pipe length does not match coordinates

PN	USMH Name	Dia/Len (mm)	Width (mm)	US Easting (m)	US Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Layout (North)
S1.000	SRE1	450		167.763 #	86.816 #	167.763	86.816	
S1.001	SS1	1500		221.313 #	86.816 #	221.313	86.816	
S1.002	SS2	1500						
S2.000	SRE2	450		171.269 #	63.866 #	171.269	63.866	
S1.003	SS3	1500		221.313 #	64.184 #	221.313	64.184	
S1.004	SS4	1500						
S3.000	SRE3	450		169.675 #	44.422 #	169.675	44.422	
S4.000	STANK	1500		192.306 #	30.716 #	192.306	30.716	
S1.005	SS5 HYDROBRAKE	1500		221.313 #	44.741 #	221.313	44.741	

- Indicates pipe length does not match coordinates

PN	DSMH Name	Dia/Len (mm)	Width (mm)	DS Easting (m)	DS Northing (m)	Layout (North)
S1.005	S	0		231.194 #	37.091 #	

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Area Summary for Storm

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
1.000	-	-	95	0.023	0.022	0.022
1.001	-	-	95	0.000	0.000	0.000
1.002	-	-	95	0.000	0.000	0.000
2.000	-	-	95	0.050	0.048	0.048
1.003	-	-	95	0.019	0.018	0.018
1.004	-	-	95	0.020	0.019	0.019
3.000	-	-	95	0.005	0.005	0.005
4.000	-	-	95	0.000	0.000	0.000
1.005	-	-	95	0.000	0.000	0.000
				Total	Total	Total
				0.117	0.111	0.111

Surcharged Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
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S1.005 S 51.600 48.750 0.000 0 0

Datum (m) 48.750 Offset (mins) 0

Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)
15	0.380	30	0.380	45	0.380	60	0.380

Simulation Criteria for Storm

Volumetric Runoff Coeff	1.000	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	2.000
Hot Start (mins)	0	Inlet Coeffiecient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1
Number of Input Hydrographs	0	Number of Offline Controls	0
Number of Online Controls	1	Number of Storage Structures	1
		Number of Time/Area Diagrams	0
		Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	2	Cv (Summer)	1.000
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Storm Duration (mins)	30
Ratio R	0.360		

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Online Controls for Storm

Hydro-Brake® Optimum Manhole: SS5 HYDROBRAKE, DS/PN: S1.005, Volume (m³): 4.6

Unit Reference	MD-SHE-0098-5000-1500-5000
Design Head (m)	1.500
Design Flow (l/s)	5.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	98
Invert Level (m)	48.830
Minimum Outlet Pipe Diameter (mm)	150
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.500	5.0	Kick-Flo®	0.878	3.9
Flush-Flo™	0.431	4.9	Mean Flow over Head Range	-	4.3

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

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	3.2	0.800	4.3	2.000	5.7	4.000	7.9	7.000	10.3
0.200	4.4	1.000	4.1	2.200	6.0	4.500	8.4	7.500	10.7
0.300	4.8	1.200	4.5	2.400	6.2	5.000	8.8	8.000	11.0
0.400	4.9	1.400	4.8	2.600	6.5	5.500	9.2	8.500	11.3
0.500	4.9	1.600	5.1	3.000	6.9	6.000	9.6	9.000	11.6
0.600	4.8	1.800	5.4	3.500	7.4	6.500	10.0	9.500	11.9

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Storage Structures for Storm

Tank or Pond Manhole: STANK, DS/PN: S4.000

Invert Level (m) 48.850

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	70.0	0.600	70.0	0.601	0.0

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1 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 1 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.360 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 1440
 Return Period(s) (years) 1, 2, 30, 100
 Climate Change (%) 0, 0, 0, 40

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	SRE1	15 Winter	1	+0%					50.025
S1.001	SS1	15 Winter	1	+0%	100/600 Winter				49.287
S1.002	SS2	15 Winter	1	+0%	100/600 Winter				49.187
S2.000	SRE2	15 Winter	1	+0%					49.302
S1.003	SS3	15 Winter	1	+0%	100/120 Winter				49.124
S1.004	SS4	15 Winter	1	+0%	100/15 Summer				49.050
S3.000	SRE3	15 Winter	1	+0%		100/600 Winter			50.172
S4.000	STANK	60 Winter	1	+0%	30/60 Winter				48.982
S1.005	SS5 HYDROBRAKE	15 Winter	1	+0%	30/15 Summer	100/600 Winter			49.039

PN	US/MH Name	Surcharged		Flooded		Pipe		Level Exceeded
		Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)	Status	
S1.000	SRE1	-0.125	0.000	0.07		2.6	OK	
S1.001	SS1	-0.263	0.000	0.04		2.6	OK	
S1.002	SS2	-0.263	0.000	0.04		2.6	OK	
S2.000	SRE2	-0.248	0.000	0.07		5.6	OK	
S1.003	SS3	-0.226	0.000	0.14		9.9	OK	
S1.004	SS4	-0.180	0.000	0.15		10.7	OK	
S3.000	SRE3	-0.128	0.000	0.05		0.6	OK	
S4.000	STANK	-0.168	0.000	0.13		5.9	OK	
S1.005	SS5 HYDROBRAKE	-0.091	0.000	0.00		0.1	OK	

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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 1 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.360 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 1440
 Return Period(s) (years) 1, 2, 30, 100
 Climate Change (%) 0, 0, 0, 40

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	SRE1	15 Winter	2	+0%					50.030
S1.001	SS1	15 Winter	2	+0%	100/600 Winter				49.292
S1.002	SS2	15 Winter	2	+0%	100/600 Winter				49.192
S2.000	SRE2	15 Winter	2	+0%					49.311
S1.003	SS3	15 Winter	2	+0%	100/120 Winter				49.135
S1.004	SS4	15 Winter	2	+0%	100/15 Summer				49.082
S3.000	SRE3	15 Winter	2	+0%		100/600 Winter			50.175
S4.000	STANK	60 Winter	2	+0%	30/60 Winter				49.018
S1.005	SS5 HYDROBRAKE	15 Winter	2	+0%	30/15 Summer	100/600 Winter			49.070

PN	US/MH Name	Surcharged		Flooded		Pipe		Level Exceeded
		Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)	Status	
S1.000	SRE1	-0.120	0.000	0.09		3.4	OK	
S1.001	SS1	-0.258	0.000	0.05		3.4	OK	
S1.002	SS2	-0.258	0.000	0.05		3.3	OK	
S2.000	SRE2	-0.239	0.000	0.09		7.3	OK	
S1.003	SS3	-0.215	0.000	0.18		12.8	OK	
S1.004	SS4	-0.148	0.000	0.19		13.3	OK	
S3.000	SRE3	-0.125	0.000	0.07		0.7	OK	
S4.000	STANK	-0.132	0.000	0.08		3.8	OK	
S1.005	SS5 HYDROBRAKE	-0.060	0.000	0.01		0.5	OK	

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

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

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.360 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 1440
 Return Period(s) (years) 1, 2, 30, 100
 Climate Change (%) 0, 0, 0, 40

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	SRE1	15 Winter	30	+0%					50.040
S1.001	SS1	15 Winter	30	+0%	100/600 Winter				49.311
S1.002	SS2	15 Winter	30	+0%	100/600 Winter				49.223
S2.000	SRE2	15 Winter	30	+0%					49.333
S1.003	SS3	15 Winter	30	+0%	100/120 Winter				49.204
S1.004	SS4	15 Winter	30	+0%	100/15 Summer				49.182
S3.000	SRE3	15 Winter	30	+0%		100/600 Winter			50.185
S4.000	STANK	60 Winter	30	+0%	30/60 Winter				49.151
S1.005	SS5 HYDROBRAKE	60 Winter	30	+0%	30/15 Summer	100/600 Winter			49.159

PN	US/MH Name	Surcharged		Flooded		Pipe		Status	Level Exceeded
		Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)			
S1.000	SRE1	-0.110	0.000	0.16		6.4		OK	
S1.001	SS1	-0.239	0.000	0.09		6.4		OK	
S1.002	SS2	-0.227	0.000	0.09		6.1		OK	
S2.000	SRE2	-0.217	0.000	0.17		13.8		OK	
S1.003	SS3	-0.146	0.000	0.30		21.6		OK	
S1.004	SS4	-0.048	0.000	0.34		24.2		OK	
S3.000	SRE3	-0.115	0.000	0.12		1.4		OK	
S4.000	STANK	0.001	0.000	0.09		4.1	SURCHARGED		
S1.005	SS5 HYDROBRAKE	0.029	0.000	0.07		4.8	SURCHARGED		

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11 Bridgewater Road Worsley Manchester, M28 3JE	12454 - Gorebrook Works Hydraulic Calculations Showing Surface Water See 12454-20G	
Date 28/06/2022	Designed by A.Mulligan	
File 12454 - Gorebrook Hydraulic A...	Checked by A.Mulligan	
Innovyze	Network 2019.1	

100 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 1 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.000 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.360 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 1440
 Return Period(s) (years) 1, 2, 30, 100
 Climate Change (%) 0, 0, 0, 40

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	SRE1	15 Winter	100	+40%					50.056
S1.001	SS1	600 Winter	100	+40%	100/600 Winter				49.586
S1.002	SS2	600 Winter	100	+40%	100/600 Winter				49.499
S2.000	SRE2	600 Winter	100	+40%					49.472
S1.003	SS3	120 Winter	100	+40%	100/120 Winter				49.393
S1.004	SS4	120 Winter	100	+40%	100/15 Summer				49.702
S3.000	SRE3	15 Winter	100	+40%		100/600 Winter			50.198
S4.000	STANK	120 Winter	100	+40%	30/60 Winter				49.352
S1.005	SS5 HYDROBRAKE	120 Winter	100	+40%	30/15 Summer	100/600 Winter			49.772

PN	US/MH Name	Surcharged		Flooded		Pipe		Level Exceeded
		Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)	Status	
S1.000	SRE1	-0.094	0.000	0.29		11.7	OK	
S1.001	SS1	0.036	0.000	0.05		3.4	SURCHARGED	
S1.002	SS2	0.049	0.000	0.05		3.5	SURCHARGED	
S2.000	SRE2	-0.078	0.000	0.06		4.7	OK	
S1.003	SS3	0.043	0.000	0.19		13.8	SURCHARGED	
S1.004	SS4	0.472	0.000	0.24		16.8	SURCHARGED	
S3.000	SRE3	-0.102	0.000	0.22		2.5	OK	
S4.000	STANK	0.202	0.000	0.16		7.6	SURCHARGED	
S1.005	SS5 HYDROBRAKE	0.642	0.000	0.07		4.8	SURCHARGED	