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Date 28/03/2025 11:04	Designed by AlexM	
File 24185- STC MAIN CAMPUS.MDX	Checked by	
Innovyze	Network 2020.1.3	

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for SW

Pipe Sizes Circular Manhole Sizes Adoptable

FSR Rainfall Model - England and Wales

Return Period (years)	100	PIMP (%)	100
M5-60 (mm)	17.300	Add Flow / Climate Change (%)	100
Ratio R	0.346	Minimum Backdrop Height (m)	0.800
Maximum Rainfall (mm/hr)	50	Maximum Backdrop Height (m)	0.000
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)	1.01
Volumetric Runoff Coeff.	0.750	Min Slope for Optimisation (1:X)	1000

Designed with Level Soffits

Network Design Table for SW

« - Indicates pipe capacity < flow

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
1.000	14.140	0.837	16.9	0.008	5.00	0.0	0.600	o	150	Pipe/Conduit	
2.000	9.295	0.093	100.0	0.008	5.00	0.0	0.600	o	150	Pipe/Conduit	
1.001	25.333	0.169	150.0	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
1.002	44.350	0.261	170.0	0.203	0.00	0.0	0.600	o	300	Pipe/Conduit	
3.000	28.030	0.187	149.9	0.014	5.00	0.0	0.600	o	150	Pipe/Conduit	
3.001	38.907	0.229	170.0	0.153	0.00	0.0	0.600	o	300	Pipe/Conduit	
4.000	2.124	0.012	177.0	0.064	5.00	0.0	0.600	o	225	Pipe/Conduit	
4.001	11.313	0.067	168.9	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
1.003	10.547	0.035	301.3	0.007	0.00	0.0	0.600	o	450	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.000	50.00	5.10	8.735	0.008	0.0	0.0	1.0	2.46	43.5	2.1
2.000	50.00	5.15	8.810	0.008	0.0	0.0	1.1	1.00	17.8	2.2
1.001	50.00	5.67	7.823	0.016	0.0	0.0	2.1	0.82	14.5	4.2
1.002	50.00	6.28	7.579	0.219	0.0	0.0	29.6	1.20	85.0	59.3
3.000	50.00	5.57	7.847	0.014	0.0	0.0	1.8	0.82	14.5	3.7
3.001	50.00	6.11	7.660	0.166	0.0	0.0	22.5	1.20	85.0	45.1
4.000	50.00	5.04	6.710	0.064	0.0	0.0	8.7	0.98	39.0	17.4
4.001	50.00	5.22	6.700	0.064	0.0	0.0	8.7	1.00	39.9	17.4
1.003	50.00	6.44	6.408	0.457	0.0	0.0	61.8	1.17	185.4	123.7

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Network Design Table for SW

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
5.000	7.219	0.107	67.6	0.005	5.00	0.0	0.600	o	150	Pipe/Conduit	
1.004	29.803	0.099	300.0	0.147	0.00	0.0	0.600	o	450	Pipe/Conduit	
6.000	36.916	0.217	170.0	0.087	5.00	0.0	0.600	o	225	Pipe/Conduit	
6.001	6.300	0.335	18.8	0.005	0.00	0.0	0.600	o	225	Pipe/Conduit	
1.005	36.631	0.092	398.2	0.010	0.00	0.0	0.600	o	500	Pipe/Conduit	
1.006	7.451	0.020	372.6	0.000	0.00	0.0	0.600	o	500	Pipe/Conduit	
7.000	7.828	0.020	391.4	0.074	5.00	0.0	0.600	o	500	Pipe/Conduit	
1.007	4.741	0.028	169.3	0.000	0.00	0.0	0.600	o	225	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)
5.000	50.00	5.10	6.782	0.005	0.0	0.0	0.6	1.22	21.6	1.2
1.004	50.00	6.86	6.373	0.608	0.0	0.0	82.4	1.17	185.8	164.8
6.000	50.00	5.62	7.050	0.087	0.0	0.0	11.8	1.00	39.8	23.7
6.001	50.00	5.65	6.833	0.093	0.0	0.0	12.5	3.03	120.6	25.1
1.005	50.00	7.42	6.223	0.711	0.0	0.0	96.3	1.08	212.5	192.6
1.006	50.00	7.54	6.131	0.711	0.0	0.0	96.3	1.12	219.8	192.6
7.000	50.00	5.12	4.478	0.074	0.0	0.0	10.0	1.09	214.4	19.9
1.007	50.00	7.61	4.733	0.785	0.0	0.0	106.3	1.00	39.8«	212.5

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PIPELINE SCHEDULES for SW

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	IC01	10.350	8.735	1.465	Open Manhole	450
2.000	o	150	IC02	10.350	8.810	1.390	Open Manhole	450
1.001	o	150	MH1	10.350	7.823	2.302	Open Manhole	1200
1.002	o	300	MH2	8.622	7.579	0.743	Open Manhole	1200
3.000	o	150	IC3	8.897	7.847	0.825	Open Manhole	1200
3.001	o	300	MH3	8.583	7.660	0.623	Open Manhole	1200
4.000	o	225	Rain Garden	7.819	6.710	0.959	Open Manhole	450
4.001	o	225	IC4	7.819	6.700	-0.031	Open Manhole	450
1.003	o	450	MH4	8.339	6.408	1.481	Open Manhole	1200
5.000	o	150	IC05	7.832	6.782	0.900	Open Manhole	450
1.004	o	450	MH5	7.987	6.373	1.164	Open Manhole	1350
6.000	o	225	MH6	8.475	7.050	1.275	Open Manhole	1200
6.001	o	225	MH7	7.319	6.833	0.336	Open Manhole	1200
1.005	o	500	MH8	7.865	6.223	1.192	Open Manhole	1800
1.006	o	500	MH9	7.246	6.131	0.665	Open Manhole	1800

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	14.140	16.9	MH1	10.350	7.898	2.302	Open Manhole	1200
2.000	9.295	100.0	MH1	10.350	8.717	1.483	Open Manhole	1200
1.001	25.333	150.0	MH2	8.622	7.654	0.743	Open Manhole	1200
1.002	44.350	170.0	MH4	8.339	7.318	0.721	Open Manhole	1200
3.000	28.030	149.9	MH3	8.583	7.660	0.698	Open Manhole	1200
3.001	38.907	170.0	MH4	8.339	7.431	0.608	Open Manhole	1200
4.000	2.124	177.0	IC4	7.819	6.698	0.971	Open Manhole	450
4.001	11.313	168.9	MH4	8.339	6.633	0.556	Open Manhole	1200
1.003	10.547	301.3	MH5	7.987	6.373	1.164	Open Manhole	1350
5.000	7.219	67.6	MH5	7.987	6.675	1.162	Open Manhole	1350
1.004	29.803	300.0	MH8	7.865	6.274	1.141	Open Manhole	1800
6.000	36.916	170.0	MH7	7.319	6.833	0.336	Open Manhole	1200
6.001	6.300	18.8	MH8	7.865	6.498	1.217	Open Manhole	1800
1.005	36.631	398.2	MH9	7.246	6.131	0.665	Open Manhole	1800
1.006	7.451	372.6	MH11	7.226	6.111	0.665	Open Manhole	1800

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Online Controls for SW

Hydro-Brake® Optimum Manhole: MH11, DS/PN: 1.007, Volume (m³): 8.6

Unit Reference	MD-SHE-0083-3700-1600-3700
Design Head (m)	1.600
Design Flow (l/s)	3.7
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	83
Invert Level (m)	4.733
Minimum Outlet Pipe Diameter (mm)	100
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.600	3.7	Kick-Flo®	0.737	2.6
Flush-Flo™	0.362	3.2	Mean Flow over Head Range	-	3.0

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

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	2.4	1.200	3.2	3.000	5.0	7.000	7.4
0.200	3.0	1.400	3.5	3.500	5.3	7.500	7.6
0.300	3.2	1.600	3.7	4.000	5.7	8.000	7.9
0.400	3.2	1.800	3.9	4.500	6.0	8.500	8.1
0.500	3.2	2.000	4.1	5.000	6.3	9.000	8.3
0.600	3.0	2.200	4.3	5.500	6.6	9.500	8.5
0.800	2.7	2.400	4.5	6.000	6.9		
1.000	3.0	2.600	4.6	6.500	7.1		

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Storage Structures for SW

Bio-Retention Area Manhole: Rain Garden, DS/PN: 4.000

Invert Level (m)	6.450	Infiltration Coefficient Side (m/hr)	0.00000
Porosity	0.35	Safety Factor	2.0
Infiltration Coefficient Base (m/hr)	0.00000		

Depth (m)	Area (m ²)	Perimeter (m)	Depth (m)	Area (m ²)	Perimeter (m)	Depth (m)	Area (m ²)	Perimeter (m)
0.000	65.0	25.066	0.300	100.0	25.066	0.301	0.0	25.066

Complex Manhole: MH10 (TANK), DS/PN: 7.000

Cellular Storage

Invert Level (m)	4.837	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	330.0	0.0	1.601	0.0	0.0
1.600	330.0	0.0			

Porous Car Park

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	10.0
Membrane Percolation (mm/hr)	1	Length (m)	30.0
Max Percolation (l/s)	0.1	Slope (1:X)	300.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	6.978	Membrane Depth (mm)	300

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

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 FSR M5-60 (mm) 17.300 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.346 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 240, 360, 480, 960, 1440
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 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)
1.000	IC01	15 Winter	1	+0%					8.750
2.000	IC02	15 Winter	1	+0%					8.832
1.001	MH1	15 Winter	1	+0%	100/15 Summer				7.860
1.002	MH2	15 Winter	1	+0%	100/15 Summer				7.682
3.000	IC3	15 Winter	1	+0%	100/15 Summer				7.881
3.001	MH3	15 Winter	1	+0%	100/15 Summer				7.757
4.000	Rain Garden	480 Winter	1	+0%	100/15 Summer				6.731
4.001	IC4	480 Winter	1	+0%	100/15 Summer				6.719
1.003	MH4	15 Winter	1	+0%	30/15 Summer				6.601
5.000	IC05	15 Winter	1	+0%	100/15 Summer				6.799
1.004	MH5	15 Winter	1	+0%	30/15 Summer				6.567
6.000	MH6	15 Winter	1	+0%	100/15 Summer				7.127
6.001	MH7	15 Winter	1	+0%	100/15 Summer				6.886
1.005	MH8	15 Winter	1	+0%	100/15 Summer				6.448
1.006	MH9	15 Winter	1	+0%	100/15 Summer				6.376
7.000	MH10 (TANK)	360 Winter	1	+0%	1/60 Winter				5.046
1.007	MH11	360 Winter	1	+0%	1/30 Winter				5.053

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)		
1.000	IC01	-0.135	0.000	0.02			0.9		OK
2.000	IC02	-0.128	0.000	0.05			0.9		OK
1.001	MH1	-0.113	0.000	0.13			1.8		OK
1.002	MH2	-0.197	0.000	0.26			21.5		OK
3.000	IC3	-0.116	0.000	0.12			1.5		OK

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

PN	US/MH Name	Surcharged Flooded		Flow / Overflow		Half Drain	Pipe	Status	Level Exceeded
		Depth (m)	Volume (m ³)	Cap.	(l/s)	Time (mins)	Flow (l/s)		
3.001	MH3	-0.203	0.000	0.23			16.3	OK	
4.000	Rain Garden	-0.204	0.000	0.02			0.6	OK	
4.001	IC4	-0.206	0.000	0.02			0.6	OK	
1.003	MH4	-0.257	0.000	0.38			38.3	OK	
5.000	IC05	-0.133	0.000	0.03			0.5	OK	
1.004	MH5	-0.256	0.000	0.38			51.8	OK	
6.000	MH6	-0.148	0.000	0.25			9.8	OK	
6.001	MH7	-0.171	0.000	0.13			10.3	OK	
1.005	MH8	-0.275	0.000	0.35			59.6	OK	
1.006	MH9	-0.255	0.000	0.48			58.5	OK	
7.000	MH10 (TANK)	0.068	0.000	0.02		237	3.5	SURCHARGED	
1.007	MH11	0.095	0.000	0.11			3.2	SURCHARGED	

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

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 FSR M5-60 (mm) 17.300 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.346 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 240, 360, 480, 960, 1440
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

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

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
1.000	IC01	15 Winter	30	+0%					8.757
2.000	IC02	15 Winter	30	+0%					8.846
1.001	MH1	15 Winter	30	+0%	100/15 Summer				7.883
1.002	MH2	15 Winter	30	+0%	100/15 Summer				7.779
3.000	IC3	15 Winter	30	+0%	100/15 Summer				7.902
3.001	MH3	15 Winter	30	+0%	100/15 Summer				7.842
4.000	Rain Garden	60 Winter	30	+0%	100/15 Summer				6.799
4.001	IC4	15 Winter	30	+0%	100/15 Summer				6.802
1.003	MH4	15 Winter	30	+0%	30/15 Summer				6.880
5.000	IC05	15 Summer	30	+0%	100/15 Summer				6.840
1.004	MH5	15 Summer	30	+0%	30/15 Summer				6.834
6.000	MH6	15 Winter	30	+0%	100/15 Summer				7.180
6.001	MH7	15 Winter	30	+0%	100/15 Summer				6.920
1.005	MH8	15 Summer	30	+0%	100/15 Summer				6.723
1.006	MH9	15 Winter	30	+0%	100/15 Summer				6.631
7.000	MH10 (TANK)	480 Winter	30	+0%	1/60 Winter				5.561
1.007	MH11	480 Winter	30	+0%	1/30 Winter				5.575

PN	US/MH Name	Depth (m)	Surcharged Volume (m³)	Flooded Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
1.000	IC01	-0.128	0.000	0.05			2.2	OK	
2.000	IC02	-0.114	0.000	0.13			2.2	OK	

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

PN	US/MH Name	Surcharged Flooded		Flow / Overflow Cap. (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
		Depth (m)	Volume (m³)					
1.001	MH1	-0.090	0.000	0.32		4.3	OK	
1.002	MH2	-0.100	0.000	0.77		63.9	OK	
3.000	IC3	-0.095	0.000	0.28		3.7	OK	
3.001	MH3	-0.118	0.000	0.67		48.2	OK	
4.000	Rain Garden	-0.136	0.000	0.28		8.4	OK	
4.001	IC4	-0.123	0.000	0.05		1.8	OK	
1.003	MH4	0.022	0.000	1.12		112.2	SURCHARGED	
5.000	IC05	-0.092	0.000	0.07		1.2	OK	
1.004	MH5	0.011	0.000	1.07		145.6	SURCHARGED	
6.000	MH6	-0.095	0.000	0.61		23.9	OK	
6.001	MH7	-0.138	0.000	0.32		25.4	OK	
1.005	MH8	0.000	0.000	0.90		151.5	OK	
1.006	MH9	0.000	0.000	1.26		153.5	OK	
7.000	MH10 (TANK)	0.583	0.000	0.02		3.7	SURCHARGED	
1.007	MH11	0.617	0.000	0.11		3.2	SURCHARGED	

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

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 FSR M5-60 (mm) 17.300 Cv (Summer) 0.750
 Region England and Wales Ratio R 0.346 Cv (Winter) 0.840

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

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 240, 360, 480, 960, 1440
 Return Period(s) (years) 1, 30, 100
 Climate Change (%) 0, 0, 40

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

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surchage	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
1.000	IC01	15 Winter	100	+40%					8.765
2.000	IC02	15 Winter	100	+40%					8.859
1.001	MH1	15 Winter	100	+40%	100/15 Summer				8.133
1.002	MH2	15 Winter	100	+40%	100/15 Summer				8.084
3.000	IC3	15 Winter	100	+40%	100/15 Summer				8.089
3.001	MH3	15 Winter	100	+40%	100/15 Summer				8.045
4.000	Rain Garden	15 Winter	100	+40%	100/15 Summer				7.700
4.001	IC4	15 Winter	100	+40%	100/15 Summer				7.631
1.003	MH4	15 Winter	100	+40%	30/15 Summer				7.559
5.000	IC05	15 Winter	100	+40%	100/15 Summer				7.418
1.004	MH5	15 Winter	100	+40%	30/15 Summer				7.412
6.000	MH6	15 Winter	100	+40%	100/15 Summer				7.322
6.001	MH7	15 Winter	100	+40%	100/15 Summer				7.153
1.005	MH8	15 Winter	100	+40%	100/15 Summer				7.058
1.006	MH9	15 Winter	100	+40%	100/15 Summer				6.765
7.000	MH10 (TANK)	960 Winter	100	+40%	1/60 Winter				6.375
1.007	MH11	960 Winter	100	+40%	1/30 Winter				6.375

PN	US/MH Name	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
1.000	IC01	-0.120	0.000	0.09			3.9	OK	
2.000	IC02	-0.101	0.000	0.23			4.0	OK	

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Innovyze	Network 2020.1.3	

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

PN	US/MH Name	Surcharged Flooded		Flow / Overflow Cap. (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
		Depth (m)	Volume (m³)					
1.001	MH1	0.159	0.000	0.70		9.3	SURCHARGED	
1.002	MH2	0.205	0.000	1.32		110.2	SURCHARGED	
3.000	IC3	0.092	0.000	0.59		7.7	SURCHARGED	
3.001	MH3	0.085	0.000	1.17		84.1	SURCHARGED	
4.000	Rain Garden	0.765	0.000	1.01		30.2	FLOOD RISK	
4.001	IC4	0.706	0.000	0.86		29.0	FLOOD RISK	
1.003	MH4	0.701	0.000	2.11		210.2	SURCHARGED	
5.000	IC05	0.486	0.000	0.11		2.1	SURCHARGED	
1.004	MH5	0.589	0.000	1.91		260.7	SURCHARGED	
6.000	MH6	0.047	0.000	1.09		42.5	SURCHARGED	
6.001	MH7	0.096	0.000	0.48		38.3	FLOOD RISK	
1.005	MH8	0.335	0.000	1.75		294.5	SURCHARGED	
1.006	MH9	0.134	0.000	2.42		294.2	SURCHARGED	
7.000	MH10 (TANK)	1.397	0.000	0.02		4.0	SURCHARGED	
1.007	MH11	1.417	0.000	0.13		3.7	SURCHARGED	