

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	1	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	17.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.400	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	✓

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
1	0.000	5.00	52.132	1350	385536.211	398288.271	1.049
2	0.000	5.00	51.853	1350	385480.661	398241.639	1.230
3	0.019	5.00	51.416	600	385447.414	398217.809	0.821
4	0.027	5.00	51.523	600	385462.065	398229.666	1.116
7	0.082	5.00	51.852	1350	385495.721	398224.330	1.584
8	0.023	5.00	51.857	1350	385475.057	398212.715	1.739
9	0.031	5.00	50.912	600	385452.439	398194.150	1.087
10	0.022	5.00	50.504	600	385437.205	398181.742	0.875
11	0.028	5.00	50.427	600	385417.008	398168.200	1.041
12	0.035	5.00	50.502	600	385417.309	398192.030	1.886
13	0.063	5.00	49.463	600	385362.514	398154.586	1.069
14	0.020	5.00	49.335	600	385344.958	398142.220	1.011
15	0.022	5.00	49.216	600	385354.290	398129.140	0.946
16	0.013	5.00	49.342	600	385368.346	398135.373	1.123
17	0.015	5.00	49.921	600	385380.926	398143.687	1.753
18	0.053	5.00	49.994	1200	385391.272	398150.780	1.867
18_OUT			49.697	1200	385394.509	398145.223	1.626
POND UU			51.350		385476.135	398222.851	1.100
4a			51.637	600	385470.627	398218.244	1.437
14a			49.258	600	385346.874	398139.535	0.958
PERMAVOID UU		5.00	49.223		385345.110	398138.421	0.913
POND UU 2		5.00	51.350		385474.531	398224.392	1.050

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.007	18	18_OUT	8.331	0.600	48.127	48.071	0.056	150.0	300	8.25	36.7
1.006	11	18	31.077	0.600	49.386	48.127	1.259	24.7	225	7.81	37.7
4.005	17	18	12.544	0.600	48.168	48.127	0.041	306.0	300	8.15	36.9
4.004	16	17	15.080	0.600	48.219	48.168	0.051	295.7	300	7.91	37.5
4.003	15	16	15.430	0.600	48.270	48.219	0.051	302.5	300	7.64	38.2

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
1.007	1.281	90.6	45.0	1.567	1.326	0.453	0.0
1.006	2.644	105.1	23.7	0.816	1.642	0.232	0.0
4.005	0.893	63.1	16.8	1.453	1.567	0.168	0.0
4.004	0.909	64.3	15.5	0.823	1.453	0.153	0.0
4.003	0.898	63.5	14.5	0.646	0.823	0.140	0.0

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
4.002a	14a	15	12.769	0.600	48.300	48.270	0.030	425.6	300	7.35	38.9
6.000	PERMAVOID UU	14a	2.086	0.600	48.310	48.300	0.010	208.6	300	5.03	46.5
4.002	14	14a	15.921	0.600	48.324	48.300	0.024	663.4	300	7.07	39.7
4.001	13	14	21.474	0.600	48.394	48.324	0.070	306.8	300	6.63	41.0
4.000	12	13	66.453	0.600	48.616	48.394	0.222	299.3	300	6.23	42.2
1.005	10	11	24.317	0.600	49.629	49.386	0.243	100.1	225	7.61	38.2
1.004	9	10	19.647	0.600	49.825	49.629	0.196	100.2	225	7.30	39.1
1.003	8	9	29.262	0.600	50.118	49.825	0.293	99.9	225	7.05	39.7
1.003_1	4a	8	7.085	0.600	50.200	50.118	0.082	86.4	225	6.68	40.8
3.000	7	8	7.474	0.600	50.268	50.193	0.075	99.7	150	5.12	46.2
1.002	4	4a	14.275	0.600	50.407	50.200	0.207	69.0	225	6.60	41.1
5.000	POND UU	4a	7.181	0.600	50.250	50.200	0.050	143.6	225	5.13	46.2
1.001	2	4	22.104	0.600	50.623	50.407	0.216	102.3	225	6.45	41.5
2.000	3	4	18.848	0.600	50.595	50.407	0.188	100.3	225	5.24	45.7
1.000	1	2	72.375	0.600	51.083	50.623	0.460	157.3	225	6.16	42.5
3.000_1	POND UU 2	POND UU	2.224	0.600	50.300	50.250	0.050	44.5	225	5.02	46.6

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
4.002a	0.756	53.4	12.5	0.658	0.646	0.118	0.0
6.000	1.084	76.7	0.0	0.613	0.658	0.000	0.0
4.002	0.603	42.6	12.7	0.711	0.658	0.118	0.0
4.001	0.892	63.1	10.9	0.769	0.711	0.098	0.0
4.000	0.903	63.9	4.0	1.586	0.769	0.035	0.0
1.005	1.307	52.0	21.1	0.650	0.816	0.204	0.0
1.004	1.306	51.9	19.3	0.862	0.650	0.182	0.0
1.003	1.308	52.0	16.3	1.514	0.862	0.151	0.0
1.003_1	1.407	56.0	5.1	1.212	1.514	0.046	0.0
3.000	1.006	17.8	10.3	1.434	1.514	0.082	0.0
1.002	1.577	62.7	5.1	0.891	1.212	0.046	0.0
5.000	1.089	43.3	0.0	0.875	1.212	0.000	0.0
1.001	1.292	51.4	0.0	1.005	0.891	0.000	0.0
2.000	1.305	51.9	2.4	0.596	0.891	0.019	0.0
1.000	1.040	41.3	0.0	0.824	1.005	0.000	0.0
3.000_1	1.966	78.2	0.0	0.825	0.875	0.000	0.0

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.007	8.331	150.0	300	Circular	49.994	48.127	1.567	49.697	48.071	1.326
1.006	31.077	24.7	225	Circular	50.427	49.386	0.816	49.994	48.127	1.642
4.005	12.544	306.0	300	Circular	49.921	48.168	1.453	49.994	48.127	1.567
4.004	15.080	295.7	300	Circular	49.342	48.219	0.823	49.921	48.168	1.453

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.007	18	1200	Manhole	Adoptable	18_OUT	1200	Manhole	Adoptable
1.006	11	600	Manhole	Adoptable	18	1200	Manhole	Adoptable
4.005	17	600	Manhole	Adoptable	18	1200	Manhole	Adoptable
4.004	16	600	Manhole	Adoptable	17	600	Manhole	Adoptable

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
4.003	15.430	302.5	300	Circular	49.216	48.270	0.646	49.342	48.219	0.823
4.002a	12.769	425.6	300	Circular	49.258	48.300	0.658	49.216	48.270	0.646
6.000	2.086	208.6	300	Circular	49.223	48.310	0.613	49.258	48.300	0.658
4.002	15.921	663.4	300	Circular	49.335	48.324	0.711	49.258	48.300	0.658
4.001	21.474	306.8	300	Circular	49.463	48.394	0.769	49.335	48.324	0.711
4.000	66.453	299.3	300	Circular	50.502	48.616	1.586	49.463	48.394	0.769
1.005	24.317	100.1	225	Circular	50.504	49.629	0.650	50.427	49.386	0.816
1.004	19.647	100.2	225	Circular	50.912	49.825	0.862	50.504	49.629	0.650
1.003	29.262	99.9	225	Circular	51.857	50.118	1.514	50.912	49.825	0.862
1.003_1	7.085	86.4	225	Circular	51.637	50.200	1.212	51.857	50.118	1.514
3.000	7.474	99.7	150	Circular	51.852	50.268	1.434	51.857	50.193	1.514
1.002	14.275	69.0	225	Circular	51.523	50.407	0.891	51.637	50.200	1.212
5.000	7.181	143.6	225	Circular	51.350	50.250	0.875	51.637	50.200	1.212
1.001	22.104	102.3	225	Circular	51.853	50.623	1.005	51.523	50.407	0.891
2.000	18.848	100.3	225	Circular	51.416	50.595	0.596	51.523	50.407	0.891
1.000	72.375	157.3	225	Circular	52.132	51.083	0.824	51.853	50.623	1.005
3.000_1	2.224	44.5	225	Circular	51.350	50.300	0.825	51.350	50.250	0.875

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
4.003	15	600	Manhole	Adoptable	16	600	Manhole	Adoptable
4.002a	14a	600	Manhole	Adoptable	15	600	Manhole	Adoptable
6.000	PERMAVOID UU		Junction		14a	600	Manhole	Adoptable
4.002	14	600	Manhole	Adoptable	14a	600	Manhole	Adoptable
4.001	13	600	Manhole	Adoptable	14	600	Manhole	Adoptable
4.000	12	600	Manhole	Adoptable	13	600	Manhole	Adoptable
1.005	10	600	Manhole	Adoptable	11	600	Manhole	Adoptable
1.004	9	600	Manhole	Adoptable	10	600	Manhole	Adoptable
1.003	8	1350	Manhole	Adoptable	9	600	Manhole	Adoptable
1.003_1	4a	600	Manhole	Adoptable	8	1350	Manhole	Adoptable
3.000	7	1350	Manhole	Adoptable	8	1350	Manhole	Adoptable
1.002	4	600	Manhole	Adoptable	4a	600	Manhole	Adoptable
5.000	POND UU		Junction		4a	600	Manhole	Adoptable
1.001	2	1350	Manhole	Adoptable	4	600	Manhole	Adoptable
2.000	3	600	Manhole	Adoptable	4	600	Manhole	Adoptable
1.000	1	1350	Manhole	Adoptable	2	1350	Manhole	Adoptable
3.000_1	POND UU 2		Junction		POND UU		Junction	

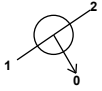
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
1	385536.211	398288.271	52.132	1.049	1350				
						0	1.000	51.083	225
2	385480.661	398241.639	51.853	1.230	1350				
						1	1.000	50.623	225
						0	1.001	50.623	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
3	385447.414	398217.809	51.416	0.821	600				
						0	2.000	50.595	225
4	385462.065	398229.666	51.523	1.116	600				
						1	2.000	50.407	225
						2	1.001	50.407	225
						0	1.002	50.407	225
7	385495.721	398224.330	51.852	1.584	1350				
						0	3.000	50.268	150
8	385475.057	398212.715	51.857	1.739	1350				
						1	3.000	50.193	150
						2	1.003_1	50.118	225
						0	1.003	50.118	225
9	385452.439	398194.150	50.912	1.087	600				
						1	1.003	49.825	225
						0	1.004	49.825	225
10	385437.205	398181.742	50.504	0.875	600				
						1	1.004	49.629	225
						0	1.005	49.629	225
11	385417.008	398168.200	50.427	1.041	600				
						1	1.005	49.386	225
						0	1.006	49.386	225
12	385417.309	398192.030	50.502	1.886	600				
						0	4.000	48.616	300
13	385362.514	398154.586	49.463	1.069	600				
						1	4.000	48.394	300
						0	4.001	48.394	300
14	385344.958	398142.220	49.335	1.011	600				
						1	4.001	48.324	300
						0	4.002	48.324	300
15	385354.290	398129.140	49.216	0.946	600				
						1	4.002a	48.270	300
						0	4.003	48.270	300
16	385368.346	398135.373	49.342	1.123	600				
						1	4.003	48.219	300
						0	4.004	48.219	300
17	385380.926	398143.687	49.921	1.753	600				
						1	4.004	48.168	300
						0	4.005	48.168	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
18	385391.272	398150.780	49.994	1.867	1200		1 4.005 2 1.006	48.127 48.127	300 225
18_OUT	385394.509	398145.223	49.697	1.626	1200		0 1.007 1 1.007	48.127 48.071	300 300
POND UU	385476.135	398222.851	51.350	1.100			1 3.000_1 0 5.000	50.250 50.250	225 225
4a	385470.627	398218.244	51.637	1.437	600		1 5.000 2 1.002	50.200 50.200	225 225
14a	385346.874	398139.535	49.258	0.958	600		0 1.003_1 1 6.000 2 4.002	50.200 48.300 48.300	225 300 300
PERMAVOID UU	385345.110	398138.421	49.223	0.913			0 4.002a	48.300	300
POND UU 2	385474.531	398224.392	51.350	1.050			0 6.000 0 3.000_1	48.310 50.300	300 225

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
FSR Region	England and Wales	Skip Steady State	x
M5-60 (mm)	17.000	Drain Down Time (mins)	240
Ratio-R	0.400	Additional Storage (m³/ha)	20.0
Summer CV	0.750	Check Discharge Rate(s)	x
Winter CV	0.840	Check Discharge Volume	x

Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
30	0	0	0
100	40	0	0

Node 18 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Downstream Link	1.007	Sump Available	✓
Replaces Downstream Link	✓	Product Number	CTL-SHE-0100-5000-1350-5000
Invert Level (m)	48.127	Min Outlet Diameter (m)	0.150
Design Depth (m)	1.350	Min Node Diameter (mm)	1200
Design Flow (l/s)	5.0		

Node 8 Online Orifice Control

Flap Valve	x	Design Depth (m)	1.300	Discharge Coefficient	0.600
Replaces Downstream Link	✓	Design Flow (l/s)	1.5		
Invert Level (m)	50.118	Diameter (m)	0.025		

Node 2 Online Orifice Control

Flap Valve	x	Design Depth (m)	0.800	Discharge Coefficient	0.600
Replaces Downstream Link	✓	Design Flow (l/s)	1.2		
Invert Level (m)	50.623	Diameter (m)	0.025		

Node 12 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	50.157
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	0

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	120.0	0.0	0.250	120.0	0.0	0.251	0.0	0.0

Node 13 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	49.118
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	0

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	204.0	0.0	0.250	204.0	0.0	0.251	0.0	0.0

Node 14 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	48.990
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	0

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	64.0	0.0	0.250	64.0	0.0	0.251	0.0	0.0

Node 15 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	48.871
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	0

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	218.0	0.0	0.250	218.0	0.0	0.251	0.0	0.0

Node 18 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	49.649
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	97.0	0.0	0.250	97.0	0.0	0.251	0.0	0.0

Node 11 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	50.082
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	50.0	0.0	0.250	50.0	0.0	0.251	0.0	0.0

Node 10 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	50.149
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	40.0	0.0	0.250	40.0	0.0	0.251	0.0	0.0

Node 9 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	50.567
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	97.0	0.0	0.250	97.0	0.0	0.251	0.0	0.0

Node 8 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	51.512
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	232.0	0.0	0.250	232.0	0.0	0.251	0.0	0.0

Node 3 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	51.071
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	46.0	0.0	0.250	46.0	0.0	0.251	0.0	0.0

Node 4 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	51.178
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	89.0	0.0	0.250	89.0	0.0	0.251	0.0	0.0

Node POND UU Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	50.250
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	10.0	0.0	1.000	100.6	0.0

Node 14 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	48.990
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	64.0	0.0	0.250	64.0	0.0	0.251	0.0	0.0

Node 1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	51.787
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	120.0	0.0	0.250	120.0	0.0	0.251	0.0	0.0

Node 2 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	51.508
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	0

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	459.0	0.0	0.250	459.0	0.0	0.251	0.0	0.0

Node PERMAVOID UU Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	48.310
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	200.0	0.0	0.600	200.0	0.0	0.601	0.0	0.0

Node POND UU 2 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	50.300
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	10.0	0.0	1.000	105.0	0.0

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.01%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	1	51.083	0.000	0.0	0.0000	0.0000	OK
15 minute summer	2	1	50.623	0.000	0.0	0.0000	0.0000	OK
15 minute winter	3	10	50.627	0.032	2.3	0.0237	0.0000	OK
120 minute winter	4	118	50.502	0.095	1.7	0.0730	0.0000	OK
120 minute winter	7	116	50.502	0.234	3.1	0.5782	0.0000	SURCHARGED
120 minute winter	8	118	50.502	0.384	3.8	0.6518	0.0000	SURCHARGED
15 minute winter	9	10	49.869	0.044	4.4	0.0372	0.0000	OK
15 minute winter	10	10	49.686	0.057	6.9	0.0451	0.0000	OK
15 minute winter	11	11	49.433	0.047	10.1	0.0383	0.0000	OK
15 minute winter	12	11	48.666	0.050	4.2	0.0327	0.0000	OK
15 minute winter	13	11	48.478	0.084	11.3	0.1224	0.0000	OK
15 minute winter	14	12	48.445	0.121	13.2	0.0821	0.0000	OK
15 minute winter	15	12	48.444	0.174	14.0	0.1303	0.0000	OK
15 minute winter	16	12	48.450	0.231	11.7	0.1186	0.0000	OK
15 minute winter	17	12	48.452	0.284	12.0	0.1288	0.0000	OK
15 minute winter	18	12	48.454	0.327	16.2	0.5550	0.0000	SURCHARGED
15 minute summer	18_OUT	1	48.071	0.000	5.0	0.0000	0.0000	OK
120 minute winter	POND UU	118	50.502	0.252	4.9	5.4065	0.0000	SURCHARGED
120 minute winter	4a	118	50.502	0.302	4.6	0.0856	0.0000	SURCHARGED
15 minute winter	14a	12	48.426	0.126	26.2	0.0355	0.0000	OK
60 minute winter	PERMAVOID UU	51	48.372	0.062	13.9	11.7525	0.0000	OK
120 minute winter	POND UU 2	118	50.502	0.202	2.7	3.9669	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.000	2	0.0	0.000	0.000	0.0000	
15 minute summer	2	Orifice	4	0.0				
15 minute winter	3	2.000	4	2.2	0.509	0.043	0.0837	
120 minute winter	4	1.002	4a	1.7	0.411	0.027	0.3980	
120 minute winter	7	3.000	8	2.9	0.437	0.162	0.1316	
120 minute winter	8	Orifice	9	0.8				
15 minute winter	9	1.004	10	4.3	0.650	0.083	0.1310	
15 minute winter	10	1.005	11	6.8	0.985	0.131	0.1687	
15 minute winter	11	1.006	18	10.0	0.407	0.095	0.7103	
15 minute winter	12	4.000	13	3.9	0.338	0.062	0.7890	
15 minute winter	13	4.001	14	11.0	0.550	0.174	0.4521	
15 minute winter	14	4.002	14a	12.4	0.646	0.292	0.4344	
15 minute winter	15	4.003	16	-11.8	0.461	-0.186	0.7758	
15 minute winter	16	4.004	17	-10.5	0.344	-0.164	0.9584	
15 minute winter	17	4.005	18	-10.3	0.166	-0.163	0.8743	
15 minute winter	18	Hydro-Brake®	18_OUT	5.0				23.3
120 minute winter	POND UU	5.000	4a	-4.4	-0.133	-0.103	0.2856	
120 minute winter	4a	1.003_1	8	-2.9	0.078	-0.052	0.2818	
15 minute winter	14a	4.002a	15	-13.7	0.413	-0.257	0.4492	
60 minute winter	PERMAVOID UU	6.000	14a	-13.9	-1.459	-0.182	0.0249	
120 minute winter	POND UU 2	3.000_1	POND UU	4.9	0.495	0.063	0.0861	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.01%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	1	51.083	0.000	0.0	0.0000	0.0000	OK
240 minute winter	2	236	50.749	0.126	0.2	0.1806	0.0000	OK
240 minute winter	3	232	50.749	0.154	1.1	0.1149	0.0000	OK
240 minute winter	4	232	50.749	0.342	2.6	0.2621	0.0000	SURCHARGED
240 minute winter	7	232	50.749	0.481	4.5	1.1874	0.0000	SURCHARGED
240 minute winter	8	232	50.749	0.631	5.6	1.0705	0.0000	SURCHARGED
15 minute winter	9	10	49.891	0.066	9.8	0.0565	0.0000	OK
15 minute winter	10	10	49.719	0.090	16.1	0.0706	0.0000	OK
15 minute winter	11	10	49.458	0.072	24.0	0.0595	0.0000	OK
15 minute winter	12	11	48.694	0.078	10.2	0.0513	0.0000	OK
15 minute winter	13	11	48.552	0.158	27.9	0.2313	0.0000	OK
120 minute winter	14	116	48.542	0.218	10.8	0.1480	0.0000	OK
15 minute winter	15	11	48.558	0.288	47.8	0.2153	0.0000	OK
15 minute winter	16	11	48.588	0.369	41.7	0.1899	0.0000	SURCHARGED
15 minute winter	17	11	48.614	0.446	37.9	0.2025	0.0000	SURCHARGED
15 minute winter	18	11	48.632	0.505	39.2	0.8573	0.0000	SURCHARGED
15 minute summer	18_OUT	1	48.071	0.000	5.0	0.0000	0.0000	OK
240 minute winter	POND UU	232	50.749	0.499	6.7	16.2815	0.0000	SURCHARGED
240 minute winter	4a	232	50.749	0.549	6.8	0.1554	0.0000	SURCHARGED
120 minute winter	14a	116	48.542	0.242	21.9	0.0686	0.0000	OK
120 minute winter	PERMAVOID UU	116	48.542	0.232	21.5	44.1466	0.0000	OK
240 minute winter	POND UU 2	232	50.749	0.449	3.2	14.0773	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.000	2	0.0	0.000	0.000	0.0000	
240 minute winter	2	Orifice	4	0.1				
240 minute winter	3	2.000	4	1.1	0.344	0.021	0.6481	
240 minute winter	4	1.002	4a	2.3	0.397	0.036	0.5677	
240 minute winter	7	3.000	8	4.3	0.415	0.242	0.1316	
240 minute winter	8	Orifice	9	1.0				
15 minute winter	9	1.004	10	9.7	0.795	0.187	0.2409	
15 minute winter	10	1.005	11	15.8	1.233	0.305	0.3137	
15 minute winter	11	1.006	18	23.8	0.786	0.226	0.7893	
15 minute winter	12	4.000	13	9.8	0.405	0.153	1.7379	
15 minute winter	13	4.001	14	26.0	0.609	0.413	0.9551	
120 minute winter	14	4.002	14a	10.3	0.445	0.241	0.9227	
15 minute winter	15	4.003	16	-41.8	-0.593	-0.658	1.0793	
15 minute winter	16	4.004	17	-38.1	-0.541	-0.593	1.0619	
15 minute winter	17	4.005	18	-33.8	-0.480	-0.536	0.8833	
15 minute winter	18	Hydro-Brake®	18_OUT	5.0				50.1
240 minute winter	POND UU	5.000	4a	-6.7	-0.169	-0.155	0.2856	
240 minute winter	4a	1.003_1	8	-4.6	-0.115	-0.081	0.2818	
120 minute winter	14a	4.002a	15	-11.7	0.374	-0.219	0.8183	
120 minute winter	PERMAVOID UU	6.000	14a	-21.5	-1.270	-0.280	0.1247	
240 minute winter	POND UU 2	3.000_1	POND UU	-3.2	-0.084	-0.041	0.0885	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.01%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	1	51.083	0.000	0.0	0.0000	0.0000	OK
360 minute winter	2	352	51.020	0.397	0.4	0.5678	0.0000	SURCHARGED
360 minute winter	3	352	51.020	0.425	1.4	0.3163	0.0000	SURCHARGED
360 minute winter	4	352	51.020	0.613	3.3	0.4693	0.0000	SURCHARGED
15 minute winter	7	11	51.311	1.043	43.1	2.5740	0.0000	SURCHARGED
360 minute winter	8	352	51.020	0.902	7.6	1.5294	0.0000	SURCHARGED
15 minute winter	9	10	49.917	0.092	17.3	0.0785	0.0000	OK
15 minute winter	10	10	49.755	0.126	28.8	0.0990	0.0000	OK
15 minute winter	11	11	49.493	0.107	43.1	0.0878	0.0000	OK
240 minute winter	12	236	48.878	0.262	3.6	0.1713	0.0000	OK
180 minute winter	13	184	48.876	0.482	12.3	0.7050	0.0000	SURCHARGED
180 minute winter	14	184	48.877	0.553	12.7	0.3746	0.0000	SURCHARGED
180 minute winter	15	180	48.876	0.606	18.5	0.7986	0.0000	SURCHARGED
180 minute winter	16	176	48.876	0.657	15.8	0.3376	0.0000	SURCHARGED
15 minute winter	17	11	48.901	0.733	71.7	0.3329	0.0000	SURCHARGED
15 minute winter	18	11	48.966	0.839	69.6	1.4259	0.0000	SURCHARGED
15 minute summer	18_OUT	1	48.071	0.000	5.0	0.0000	0.0000	OK
360 minute winter	POND UU	352	51.020	0.770	9.1	34.5427	0.0000	SURCHARGED
360 minute winter	4a	352	51.020	0.820	9.2	0.2320	0.0000	SURCHARGED
180 minute winter	14a	180	48.876	0.576	30.3	0.1629	0.0000	SURCHARGED
180 minute winter	PERMAVOID UU	180	48.876	0.566	30.0	107.5102	0.0000	SURCHARGED
360 minute winter	POND UU 2	352	51.020	0.720	4.5	31.8074	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	1	1.000	2	0.0	0.000	0.000	0.3989	
360 minute winter	2	Orifice	4	0.0				
360 minute winter	3	2.000	4	1.3	0.307	0.026	0.7496	
360 minute winter	4	1.002	4a	2.8	0.391	0.045	0.5677	
15 minute winter	7	3.000	8	37.7	2.141	2.119	0.1316	
360 minute winter	8	Orifice	9	1.2				
15 minute winter	9	1.004	10	17.2	0.901	0.331	0.3744	
15 minute winter	10	1.005	11	28.4	1.393	0.546	0.4970	
15 minute winter	11	1.006	18	42.4	1.261	0.403	0.9070	
240 minute winter	12	4.000	13	3.6	0.298	0.056	4.5077	
180 minute winter	13	4.001	14	10.2	0.442	0.161	1.5122	
180 minute winter	14	4.002	14a	12.1	0.413	0.284	1.1211	
180 minute winter	15	4.003	16	-15.7	0.374	-0.247	1.0866	
180 minute winter	16	4.004	17	-14.2	0.297	-0.221	1.0619	
15 minute winter	17	4.005	18	-64.3	-0.913	-1.018	0.8833	
15 minute winter	18	Hydro-Brake®	18_OUT	5.0				74.5
360 minute winter	POND UU	5.000	4a	-9.1	-0.228	-0.210	0.2856	
360 minute winter	4a	1.003_1	8	-6.4	-0.161	-0.114	0.2818	
180 minute winter	14a	4.002a	15	-18.3	0.331	-0.343	0.8992	
180 minute winter	PERMAVOID UU	6.000	14a	-30.0	-0.921	-0.391	0.1469	
360 minute winter	POND UU 2	3.000_1	POND UU	-4.5	-0.119	-0.057	0.0885	