

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	2	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)	20.000	Minimum Backdrop Height (m)	0.000
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)
S01	0.026	5.00	29.630	1200	449706.426	111934.396	1.300
S02	0.004	5.00	29.240	1200	449705.248	111958.272	1.290
S03	0.100	5.00	28.660	1200	449735.826	111959.782	1.510
S04	0.040	5.00	27.440	1200	449781.427	111952.939	1.425
S05	0.078	5.00	28.230	1200	449758.724	111979.316	2.530
S06	0.015	5.00	27.750	1200	449730.581	112010.954	1.425
S07	0.039	5.00	28.250	1800	449754.679	111984.017	2.600
S08	0.045	5.00	27.640	1200	449785.011	112011.098	2.440
S09			27.590	1200	449791.114	112008.031	2.470
S10	0.076	5.00	26.700	1200	449817.003	111978.311	2.200
S11	0.038	5.00	29.170	1200	449724.460	111893.041	1.310
S12	0.052	5.00	28.250	1200	449752.900	111907.050	1.310
S13			27.600	1200	449774.388	111913.827	1.290
S14	0.038	5.00	26.430	1350	449810.581	111919.663	1.310
S15	0.085	5.00	25.680	1200	449833.957	111925.999	1.380
S16	0.211	5.00	24.910	1200	449855.234	111934.034	1.900
S17	0.028	5.00	24.210	1200	449878.066	111950.064	1.410
S18	0.019	5.00	23.560	2100	449895.415	111970.129	1.860
S19	0.050	5.00	23.190	1200	449903.030	111982.896	1.790
S20	0.016	5.00	24.050	1200	449856.470	112048.960	1.300
S21	0.039	5.00	24.220	1200	449857.581	112017.182	2.630
S22	0.059	5.00	23.530	1200	449871.967	112029.347	2.330
S23	0.045	5.00	22.970	2100	449890.930	112023.537	1.970
S24	0.081	5.00	22.280	2100	449914.978	112016.304	1.480
S25			22.100	2100	449934.402	112010.461	1.400
S26			19.600	1200	449964.317	112087.079	1.350
S27			19.600	1200	449966.385	112097.259	1.450
S28	0.016	5.00	28.470	1200	449701.492	112001.511	1.340
S29			28.260	1200	449705.125	112014.003	1.350
S30	0.058	5.00	27.870	1200	449723.271	112030.153	1.350
S31	0.037	5.00	26.430	1200	449751.022	112054.292	1.305
S32	0.069	5.00	26.900	1200	449763.187	112040.169	1.900
S33	0.058	5.00	27.590	1200	449784.112	112015.218	2.840
S34			27.200	1200	449795.193	112020.071	2.550
S35	0.015	5.00	26.430	1200	449809.047	112032.184	1.930
S36	0.110	5.00	24.990	1200	449844.780	112017.768	1.300
S37	0.107	5.00	25.650	1200	449800.019	112070.181	1.750
S38	0.045	5.00	25.690	1800	449822.482	112043.492	2.295
S39	0.055	5.00	24.320	1200	449846.929	112064.682	1.715
S40	0.080	5.00	23.020	1200	449856.755	112094.208	1.705
S41	0.075	5.00	22.200	1200	449862.811	112116.846	1.705

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S42	0.026	5.00	24.370	1200	449784.383	112082.658	1.290
S43	0.106	5.00	22.260	1800	449820.934	112130.509	2.260
S44	0.073	5.00	21.930	2100	449856.769	112130.515	2.730
S45	0.013	5.00	21.910	1200	449918.170	112030.818	1.370
S46		5.00	21.860	1200	449902.335	112066.827	1.960
S47	0.098	5.00	20.890	1200	449926.766	112060.358	1.330
S48	0.061	5.00	20.020	1500	449937.413	112098.188	1.320
S49		5.00	21.520	1200	449881.109	112121.893	1.300
S50	0.071	5.00	20.170	1500	449927.113	112108.565	1.270
S51			19.950	1500	449937.081	112102.513	1.350
S52	0.031	5.00	19.800	1800	449942.128	112105.526	1.350
S53			19.800	1800	449953.081	112101.344	1.400
S54			18.800	2100	449968.110	112100.571	1.400
S55			17.400	2100	449985.610	112107.579	1.350
S56			16.550	1200	450028.127	112095.301	0.900
HW1	0.044		23.988	1	449876.831	111936.242	2.088
HW2		5.00	23.988	1	449887.134	111944.742	2.088
HW3	0.027		19.600	1	449944.632	112021.525	1.300
HW4		5.00	19.600	1	449963.245	112081.804	1.300
HW5	0.049		19.650	1	449864.049	112140.996	1.000
HW6		5.00	19.650	1	449878.671	112133.732	1.000
HW7	0.112		19.600	1	449899.179	112127.749	1.000
HW8		5.00	19.600	1	449935.300	112114.811	1.000
HW9			16.000	450	450043.212	112103.563	0.440
ATT1			27.600		449766.727	111966.829	1.770
ATT2			27.950		449742.667	111994.837	2.000
ATT3			24.000		449862.705	112021.528	2.600
ATT4			25.300		449825.853	112038.847	1.855
ATT5			25.680		449818.205	112047.831	2.195
ATT6			21.400		449913.814	112063.883	1.700

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
Rainfall Events	Singular	Skip Steady State	x
FSR Region	England and Wales	Drain Down Time (mins)	10080
M5-60 (mm)	20.000	Additional Storage (m ³ /ha)	0.0
Ratio-R	0.400	Starting Level (m)	
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 %)
2	0	0	0
30	0	0	0
100	40	0	0

Node S07 Online Orifice Control

Flap Valve	x	Design Depth (m)	1.500	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	10.0		
Invert Level (m)	25.650	Diameter (m)	0.062		

Node S10 Online Orifice Control

Flap Valve	x	Design Depth (m)	1.300	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	60.0		
Invert Level (m)	24.500	Diameter (m)	0.168		

Node S14 Online Orifice Control

Flap Valve	x	Design Depth (m)	1.300	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	33.0		
Invert Level (m)	25.120	Diameter (m)	0.119		

Node S19 Online Orifice Control

Flap Valve	x	Design Depth (m)	1.300	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	40.0		
Invert Level (m)	21.400	Diameter (m)	0.131		

Node S23 Online Orifice Control

Flap Valve	x	Design Depth (m)	1.300	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	12.0		
Invert Level (m)	21.000	Diameter (m)	0.071		

Node S25 Online Orifice Control

Flap Valve	x	Design Depth (m)	1.300	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	45.0		
Invert Level (m)	20.700	Diameter (m)	0.139		

Node S38 Online Orifice Control

Flap Valve	x	Design Depth (m)	1.600	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	12.5		
Invert Level (m)	23.395	Diameter (m)	0.069		

Node S39 Online Orifice Control

Flap Valve	x	Design Depth (m)	1.300	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	20.0		
Invert Level (m)	22.605	Diameter (m)	0.092		

Node S40 Online Orifice Control

Flap Valve	x	Design Depth (m)	1.300	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	28.0		
Invert Level (m)	21.315	Diameter (m)	0.109		

Node S44 Online Orifice Control

Flap Valve	x	Design Depth (m)	1.500	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	40.0		
Invert Level (m)	19.200	Diameter (m)	0.126		

Node S47 Online Orifice Control

Flap Valve	x	Design Depth (m)	1.300	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	5.0		
Invert Level (m)	19.560	Diameter (m)	0.046		

Node S51 Online Orifice Control

Flap Valve	x	Design Depth (m)	1.300	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	25.0		
Invert Level (m)	18.600	Diameter (m)	0.103		

Node S18 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage		
Replaces Downstream Link	x	Sump Available	✓		
Invert Level (m)	21.700	Product Number	CTL-SHE-0278-4500-1300-4500		
Design Depth (m)	1.300	Min Outlet Diameter (m)	0.300		
Design Flow (l/s)	45.0	Min Node Diameter (mm)	2100		

Node S27 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage		
Replaces Downstream Link	x	Sump Available	✓		
Invert Level (m)	18.150	Product Number	CTL-SHE-0101-5000-1300-5000		
Design Depth (m)	1.300	Min Outlet Diameter (m)	0.150		
Design Flow (l/s)	5.0	Min Node Diameter (mm)	1200		

Node S52 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage		
Replaces Downstream Link	x	Sump Available	✓		
Invert Level (m)	18.450	Product Number	CTL-SHE-0227-2800-1200-2800		
Design Depth (m)	1.200	Min Outlet Diameter (m)	0.300		
Design Flow (l/s)	28.0	Min Node Diameter (mm)	1800		

Node S54 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage		
Replaces Downstream Link	x	Sump Available	✓		
Invert Level (m)	17.400	Product Number	CTL-SHE-0240-3200-1300-3200		
Design Depth (m)	1.300	Min Outlet Diameter (m)	0.300		
Design Flow (l/s)	32.0	Min Node Diameter (mm)	2100		

Node HW2 Pond Storage Structure

Invert Level (m)	21.900	Time to half empty (mins)	128	Analyse flow through structure	x
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Inlets
HW1

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	124.2	2.085	124.2	2.086	0.0

Node HW4 Pond Storage Structure

Invert Level (m) 18.300 | Time to half empty (mins) 1845 | Analyse flow through structure x

Inlets HW3

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	771.7	1.300	769.9	1.301	0.0

Node HW6 Pond Storage Structure

Invert Level (m) 18.650 | Time to half empty (mins) 212 | Analyse flow through structure x

Inlets HW5

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	155.7	1.000	155.7	1.001	0.0

Node HW8 Pond Storage Structure

Invert Level (m) 18.600 | Time to half empty (mins) 224 | Analyse flow through structure x

Inlets HW7

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	298.7	1.000	298.4	1.001	0.0

Node ATT1 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	25.830	Depth (m)	0.800
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	124	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	4.000	Number Required	1
Porosity	0.95	Pit Length (m)	15.000		

Node ATT2 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	25.950	Depth (m)	0.800
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	102	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	4.000	Number Required	1
Porosity	0.95	Pit Length (m)	15.000		

Node ATT4 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	23.445	Depth (m)	1.200
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	236	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.95	Pit Length (m)	18.000		

Node ATT5 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	23.485	Depth (m)	1.200
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	228	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.95	Pit Length (m)	18.000		

Node ATT3 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	21.400	Depth (m)	0.800
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	57	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	4.000	Number Required	1
Porosity	0.95	Pit Length (m)	10.000		

Node ATT6 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	19.700	Depth (m)	0.800
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	90	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	4.000	Number Required	1
Porosity	0.95	Pit Length (m)	16.000		

Node S01 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	28.930	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	16.000		

Node S03 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	27.960	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	2
Porosity	0.30	Pit Length (m)	20.500		

Node S05 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	27.530	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	21.000	Number Required	2
Porosity	0.30	Pit Length (m)	5.000		

Node S04 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	26.740	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	14	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	25.000	Number Required	1
Porosity	0.30	Pit Length (m)	5.000		

Node S07 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	27.550	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	22.000		

Node S06 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	27.050	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	14	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	20.000		

Node S08 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	26.940	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	25.000		

Node S12 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	27.550	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	3	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	15.000		

Node S14 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	25.730	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	6	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	25.000		

Node S16 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	24.210	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	6	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	2
Porosity	0.30	Pit Length (m)	29.000		

Node S17 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	23.510	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	5.000		

Node S18 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	22.860	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	12	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	12.000		

Node S19 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	22.490	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	32	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	13.000		

Node S21 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	23.520	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	15.000		

Node S22 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	22.830	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	0	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	22.500		

Node S23 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	22.270	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	11	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	15.000		

Node S24 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	21.580	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	50	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	3
Porosity	0.30	Pit Length (m)	12.000		

Node S29 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	27.560	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	8.000		

Node S32 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	26.200	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	2
Porosity	0.30	Pit Length (m)	8.500		

Node S38 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	24.990	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	2
Porosity	0.30	Pit Length (m)	12.500		

Node S36 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	24.290	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	60	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	2
Porosity	0.30	Pit Length (m)	20.500		

Node S37 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	24.950	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	0	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	2
Porosity	0.30	Pit Length (m)	21.000		

Node S39 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	23.620	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	0	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	2
Porosity	0.30	Pit Length (m)	15.000		

Node S40 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	22.320	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	20	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	2
Porosity	0.30	Pit Length (m)	22.500		

Node S41 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	21.500	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	10	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	2
Porosity	0.30	Pit Length (m)	17.500		

Node S43 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	21.560	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	9	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	24.000		

Node S44 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	21.230	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	8	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	15.000		

Node S47 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	20.190	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	10	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	5.000		

Node S48 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	19.320	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	15	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	10.000		

Node S50 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	19.470	Depth (m)	0.300
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	15	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	5.000	Number Required	1
Porosity	0.30	Pit Length (m)	28.000		

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.09%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S01	10	28.378	0.048	4.7	0.0539	0.0000	OK
15 minute winter	S02	11	27.995	0.045	5.4	0.0514	0.0000	OK
15 minute winter	S03	10	27.218	0.068	23.3	0.0774	0.0000	OK
60 minute winter	S04	56	26.090	0.075	3.7	0.0847	0.0000	OK
60 minute winter	S05	55	26.089	0.389	19.3	0.4402	0.0000	SURCHARGED
15 minute summer	S06	9	26.358	0.033	2.6	0.0371	0.0000	OK
60 minute winter	S07	55	26.089	0.439	14.4	1.1161	0.0000	SURCHARGED
15 minute winter	S08	10	25.279	0.079	12.7	0.0889	0.0000	OK
15 minute winter	S09	11	25.186	0.066	12.5	0.0750	0.0000	OK
15 minute winter	S10	11	24.770	0.270	26.1	0.3057	0.0000	SURCHARGED
15 minute winter	S11	10	27.908	0.048	6.9	0.0547	0.0000	OK
15 minute winter	S12	10	27.023	0.083	16.3	0.0935	0.0000	OK
15 minute winter	S13	11	26.385	0.075	16.0	0.0844	0.0000	OK
15 minute winter	S14	12	25.686	0.566	22.6	0.8105	0.0000	SURCHARGED
15 minute winter	S15	11	24.380	0.080	34.1	0.0905	0.0000	OK
15 minute winter	S16	10	23.176	0.166	95.5	0.1878	0.0000	OK
15 minute winter	S17	10	22.838	0.038	5.1	0.0428	0.0000	OK
30 minute winter	S18	22	22.022	0.322	19.0	1.1137	0.0000	SURCHARGED
30 minute winter	S19	22	21.868	0.468	22.5	0.5296	0.0000	SURCHARGED
15 minute winter	S20	10	22.773	0.023	2.9	0.0261	0.0000	OK
15 minute winter	S21	10	21.640	0.050	7.1	0.0571	0.0000	OK
30 minute winter	S22	27	21.550	0.350	12.3	0.3961	0.0000	SURCHARGED
30 minute winter	S23	27	21.549	0.549	12.3	1.9017	0.0000	SURCHARGED
60 minute winter	S24	42	21.350	0.550	32.3	1.9054	0.0000	SURCHARGED
60 minute winter	S25	42	21.330	0.630	30.4	2.1815	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 winter	S01	SPN1.000	S02	4.7	1.011	0.208	0.1103	
15 minute winter	S02	SPN1.001	S03	5.3	1.194	0.194	0.1362	
15 minute winter	S03	SPN1.002	S05	23.2	0.778	0.202	0.7518	
60 minute winter	S04	SPN2.000	ATT1	3.7	0.801	0.074	0.5188	
60 minute winter	S05	SPN1.003	S07	11.4	0.451	0.245	0.2467	
15 minute summer	S06	SPN3.000	ATT2	2.7	1.343	0.038	0.1139	
60 minute winter	S07	SPN1.004	S08	5.0	0.833	0.092	0.2987	
15 minute winter	S08	SPN1.005	S09	12.5	1.136	0.221	0.0752	
15 minute winter	S09	SPN1.006	S10	12.5	0.557	0.191	0.9760	
15 minute winter	S10	SPN1.007	S16	25.3	1.230	0.304	1.3068	
15 minute winter	S11	SPN4.000	S12	6.8	0.923	0.224	0.2353	
15 minute winter	S12	SPN4.001	S13	16.0	1.723	0.538	0.2098	
15 minute winter	S13	SPN4.002	S14	16.0	1.058	0.496	0.4830	
15 minute winter	S14	SPN4.003	S15	20.4	1.841	0.651	0.2679	
15 minute winter	S15	SPN4.004	S16	34.0	1.656	0.273	0.4969	
15 minute winter	S16	SPN1.008	HW1	96.8	3.393	0.819	0.7392	
15 minute winter	S17	SPN5.000	S18	5.0	0.831	0.139	0.2796	
30 minute winter	S18	SPN1.010	S19	19.8	0.503	0.125	0.8314	
30 minute winter	S19	SPN1.011	S24	22.4	0.975	0.154	1.5118	
15 minute winter	S20	SPN6.000	S22	2.9	0.350	0.022	0.5237	
15 minute winter	S21	SPN7.000	ATT3	7.0	1.090	0.103	0.0434	
30 minute winter	S22	SPN7.002	S23	7.0	0.558	0.170	0.7888	
30 minute winter	S23	SPN7.003	S24	6.7	0.399	0.068	1.7684	
60 minute winter	S24	SPN1.012	S25	30.4	0.528	0.391	1.4284	
60 minute winter	S25	SPN1.013	HW3	30.2	4.393	0.068	0.3138	

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.09%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S26	456	18.551	0.301	8.7	0.3406	0.0000	SURCHARGED
480 minute winter	S27	456	18.550	0.400	7.3	0.4521	0.0000	SURCHARGED
15 minute winter	S28	10	27.167	0.037	2.9	0.0415	0.0000	OK
15 minute winter	S29	11	26.946	0.036	2.9	0.0404	0.0000	OK
15 minute winter	S30	10	26.587	0.067	13.4	0.0756	0.0000	OK
15 minute winter	S31	10	25.224	0.099	19.7	0.1118	0.0000	OK
15 minute winter	S32	10	25.121	0.121	32.0	0.1364	0.0000	OK
15 minute winter	S33	11	24.900	0.150	41.8	0.1702	0.0000	OK
15 minute winter	S34	11	24.797	0.147	42.2	0.1663	0.0000	OK
15 minute winter	S35	11	24.581	0.081	44.9	0.0912	0.0000	OK
15 minute winter	S36	10	23.779	0.089	20.0	0.1010	0.0000	OK
15 minute winter	S37	9	23.981	0.081	19.5	0.0911	0.0000	OK
120 minute winter	S38	100	23.775	0.380	17.1	0.9670	0.0000	SURCHARGED
15 minute winter	S39	13	23.017	0.412	13.8	0.4662	0.0000	SURCHARGED
15 minute winter	S40	13	21.988	0.673	23.4	0.7608	0.0000	SURCHARGED
15 minute winter	S41	11	20.556	0.061	30.4	0.0692	0.0000	OK
15 minute winter	S42	10	23.110	0.030	4.7	0.0344	0.0000	OK
15 minute winter	S43	15	20.523	0.523	23.8	1.3312	0.0000	SURCHARGED
15 minute winter	S44	14	20.538	1.338	58.7	4.6351	0.0000	SURCHARGED
15 minute winter	S45	10	20.565	0.025	2.4	0.0278	0.0000	OK
15 minute summer	S46	1	19.900	0.000	0.0	0.0000	0.0000	OK
60 minute winter	S47	50	19.827	0.267	10.3	0.3015	0.0000	SURCHARGED
15 minute winter	S48	13	19.158	0.458	13.2	0.8089	0.0000	SURCHARGED
15 minute summer	S49	1	20.220	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S50	13	19.180	0.280	12.9	0.4954	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)
480 minute winter	S26	SPN1.015	S27	7.3	0.277	0.144	0.4131	
480 minute winter	S27	SPN1.016	S54	5.0	2.022	0.022	0.0651	
15 minute winter	S28	SPN8.000	S29	2.9	0.879	0.123	0.0423	
15 minute winter	S29	SPN8.001	S30	2.8	0.529	0.124	0.1309	
15 minute winter	S30	SPN8.002	S31	13.0	1.745	0.394	0.2749	
15 minute winter	S31	SPN8.003	S32	19.5	0.839	0.215	0.4352	
15 minute winter	S32	SPN8.004	S33	31.8	1.030	0.327	1.0064	
15 minute winter	S33	SPN8.005	S34	42.2	1.210	0.418	0.4216	
15 minute winter	S34	SPN8.006	S35	42.3	1.726	0.422	0.4561	
15 minute winter	S35	SPN8.007	S38	44.9	1.358	0.160	0.6498	
15 minute winter	S36	SPN9.000	ATT4	19.9	1.453	0.193	0.8590	
15 minute winter	S37	SPN10.000	ATT5	19.6	1.796	0.147	0.6998	
120 minute winter	S38	SPN8.008	S39	5.8	0.367	0.033	1.0452	
15 minute winter	S39	SPN8.009	S40	10.7	0.419	0.047	1.1954	
15 minute winter	S40	SPN8.010	S41	19.3	1.926	0.093	0.2430	
15 minute winter	S41	SPN8.011	S44	30.3	0.881	0.092	0.6031	
15 minute winter	S42	SPN11.000	S43	4.6	1.424	0.039	1.2843	
15 minute winter	S43	SPN11.001	S44	21.3	0.545	0.128	2.5235	
15 minute winter	S44	SPN8.012	HW5	37.2	2.621	0.161	0.3164	
15 minute winter	S45	SPN12.000	S47	2.3	0.093	0.025	0.6477	
15 minute summer	S46	SPN13.000	ATT6	0.0	0.000	0.000	0.0844	
60 minute winter	S47	SPN12.001	S48	2.2	0.822	0.028	0.8305	
15 minute winter	S48	SPN12.002	S51	10.0	0.625	0.126	0.1725	
15 minute summer	S49	SPN14.000	S50	0.0	0.000	0.000	0.4216	
15 minute winter	S50	SPN14.001	S51	10.7	0.901	0.432	0.2053	

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.09%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S51	13	19.156	0.556	17.8	0.9819	0.0000	SURCHARGED
120 minute winter	S52	96	18.757	0.307	21.8	0.7818	0.0000	SURCHARGED
120 minute winter	S53	96	18.456	0.056	21.8	0.1414	0.0000	OK
120 minute winter	S54	98	17.676	0.276	26.6	0.9555	0.0000	OK
120 minute winter	S55	98	16.152	0.102	26.6	0.3529	0.0000	OK
120 minute winter	S56	98	15.776	0.126	26.6	0.1420	0.0000	OK
60 minute winter	HW1	49	22.341	0.441	58.4	0.0000	0.0000	OK
60 minute winter	HW2	50	22.321	0.421	35.7	53.5191	0.0000	SURCHARGED
480 minute winter	HW3	456	18.558	0.258	20.5	0.0000	0.0000	OK
480 minute winter	HW4	456	18.552	0.252	12.6	196.6380	0.0000	SURCHARGED
60 minute winter	HW5	49	18.831	0.181	35.7	0.0000	0.0000	OK
60 minute winter	HW6	49	18.811	0.161	31.3	26.6320	0.0000	OK
120 minute winter	HW7	96	18.782	0.182	28.9	0.0000	0.0000	OK
120 minute winter	HW8	96	18.769	0.169	20.1	52.5369	0.0000	OK
120 minute winter	HW9	98	15.678	0.118	26.6	0.0000	0.0000	OK
60 minute winter	ATT1	55	26.089	0.259	17.6	14.7770	0.0000	SURCHARGED
60 minute winter	ATT2	56	26.089	0.139	10.5	7.8990	0.0000	OK
30 minute winter	ATT3	27	21.550	0.150	13.4	5.7187	0.0000	OK
120 minute winter	ATT4	100	23.775	0.330	12.0	28.2151	0.0000	SURCHARGED
120 minute winter	ATT5	102	23.775	0.290	12.2	24.7882	0.0000	OK
60 minute winter	ATT6	50	19.827	0.127	8.0	7.7049	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 winter	S51	SPN12.003	S52	15.1	0.812	0.257	0.1399	
120 minute winter	S52	SPN8.015	S53	21.8	1.340	0.302	0.1958	
120 minute winter	S53	SPN8.016	S54	21.8	0.976	0.076	0.5774	
120 minute winter	S54	SPN1.017	S55	26.6	1.737	0.089	0.2930	
120 minute winter	S55	SPN1.018	S56	26.6	1.087	0.252	1.0842	
120 minute winter	S56	SPN1.019	HW9	26.6	0.994	0.332	0.4601	434.5
60 minute winter	HW2	SPN1.009	S18	18.9	1.072	1.230	0.4701	
480 minute winter	HW4	SPN1.014	S26	8.7	0.721	0.173	0.2141	
60 minute winter	HW6	SPN8.013	HW7	28.0	1.081	0.524	0.8180	
120 minute winter	HW8	SPN8.014	S52	17.9	0.480	0.302	0.4140	
60 minute winter	ATT1	SPN2.001	S05	-14.3	-0.420	-0.295	0.5898	
60 minute winter	ATT2	SPN3.001	S07	-9.3	-0.314	-0.131	0.5288	
30 minute winter	ATT3	SPN7.001	S22	-8.0	0.339	-0.120	0.4120	
120 minute winter	ATT4	SPN9.001	S38	12.6	0.426	0.121	0.4041	
120 minute winter	ATT5	SPN10.001	S38	13.8	0.518	0.102	0.4269	
60 minute winter	ATT6	SPN13.001	S47	-8.0	-0.320	-0.151	0.4215	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.09%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S01	10	28.398	0.068	9.0	0.0769	0.0000	OK
15 minute winter	S02	11	28.014	0.064	10.3	0.0729	0.0000	OK
15 minute winter	S03	10	27.247	0.097	44.5	0.1093	0.0000	OK
120 minute winter	S04	98	26.363	0.348	4.3	0.3933	0.0000	SURCHARGED
120 minute winter	S05	98	26.363	0.663	22.4	0.7494	0.0000	SURCHARGED
15 minute winter	S06	10	26.366	0.041	5.2	0.0462	0.0000	OK
120 minute winter	S07	98	26.361	0.711	17.7	1.8106	0.0000	SURCHARGED
15 minute winter	S08	10	25.305	0.105	20.9	0.1182	0.0000	OK
15 minute winter	S09	12	25.208	0.088	20.5	0.1000	0.0000	OK
15 minute winter	S10	11	25.162	0.662	46.5	0.7489	0.0000	SURCHARGED
15 minute winter	S11	10	27.928	0.068	13.1	0.0774	0.0000	OK
15 minute winter	S12	12	27.253	0.313	31.0	0.3545	0.0000	SURCHARGED
15 minute winter	S13	12	26.684	0.374	27.5	0.4226	0.0000	SURCHARGED
15 minute winter	S14	15	25.847	0.727	37.6	5.4403	0.0000	SURCHARGED
15 minute winter	S15	11	24.448	0.148	51.2	0.1669	0.0000	OK
15 minute winter	S16	12	24.218	1.208	162.0	2.1023	0.0000	SURCHARGED
15 minute winter	S17	10	22.853	0.053	9.7	0.0596	0.0000	OK
60 minute winter	S18	43	22.388	0.688	24.1	2.3842	0.0000	SURCHARGED
60 minute winter	S19	42	22.207	0.807	27.2	0.9132	0.0000	SURCHARGED
15 minute winter	S20	10	22.781	0.031	5.5	0.0355	0.0000	OK
60 minute winter	S21	51	21.899	0.309	6.9	0.3490	0.0000	SURCHARGED
60 minute winter	S22	51	21.898	0.698	15.6	0.7899	0.0000	SURCHARGED
60 minute winter	S23	51	21.897	0.897	8.9	3.1074	0.0000	SURCHARGED
60 minute winter	S24	46	21.624	0.824	42.8	5.2597	0.0000	SURCHARGED
60 minute winter	S25	46	21.594	0.894	37.0	3.0974	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 winter	S01	SPN1.000	S02	8.9	1.191	0.397	0.1787	
15 minute winter	S02	SPN1.001	S03	10.1	1.421	0.369	0.2181	
15 minute winter	S03	SPN1.002	S05	44.3	1.359	0.387	0.8435	
120 minute winter	S04	SPN2.000	ATT1	3.8	0.782	0.076	0.8043	
120 minute winter	S05	SPN1.003	S07	13.5	0.420	0.290	0.2467	
15 minute winter	S06	SPN3.000	ATT2	5.1	1.384	0.072	0.4225	
120 minute winter	S07	SPN1.004	S08	6.5	0.892	0.119	0.3453	
15 minute winter	S08	SPN1.005	S09	20.5	1.289	0.364	0.1092	
15 minute winter	S09	SPN1.006	S10	20.2	0.641	0.309	1.0688	
15 minute winter	S10	SPN1.007	S16	42.1	1.304	0.505	1.9399	
15 minute winter	S11	SPN4.000	S12	13.0	1.037	0.427	0.4032	
15 minute winter	S12	SPN4.001	S13	27.5	1.828	0.922	0.3967	
15 minute winter	S13	SPN4.002	S14	25.6	1.452	0.795	0.6454	
15 minute winter	S14	SPN4.003	S15	23.4	1.891	0.747	0.2993	
15 minute winter	S15	SPN4.004	S16	49.2	2.036	0.395	0.7661	
15 minute winter	S16	SPN1.008	HW1	140.0	3.526	1.184	0.8634	
15 minute winter	S17	SPN5.000	S18	9.6	0.842	0.264	0.3067	
60 minute winter	S18	SPN1.010	S19	25.0	0.503	0.158	1.0469	
60 minute winter	S19	SPN1.011	S24	26.8	1.000	0.185	2.3332	
15 minute winter	S20	SPN6.000	S22	5.5	0.358	0.042	0.5389	
60 minute winter	S21	SPN7.000	ATT3	7.3	1.028	0.108	0.2672	
60 minute winter	S22	SPN7.002	S23	5.6	0.558	0.136	0.7888	
60 minute winter	S23	SPN7.003	S24	6.2	0.405	0.062	1.7684	
60 minute winter	S24	SPN1.012	S25	37.0	0.580	0.475	1.4284	
60 minute winter	S25	SPN1.013	HW3	36.6	4.446	0.082	0.5696	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.09%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	S26	720	18.832	0.582	7.3	0.6578	0.0000	SURCHARGED
720 minute winter	S27	720	18.830	0.680	6.6	0.7695	0.0000	SURCHARGED
15 minute winter	S28	10	27.182	0.052	5.5	0.0583	0.0000	OK
15 minute winter	S29	10	26.960	0.050	5.5	0.0562	0.0000	OK
15 minute winter	S30	10	26.621	0.101	25.4	0.1138	0.0000	OK
15 minute winter	S31	10	25.271	0.145	37.5	0.1646	0.0000	OK
15 minute winter	S32	10	25.179	0.179	61.0	0.2020	0.0000	OK
15 minute winter	S33	11	24.986	0.236	80.0	0.2666	0.0000	OK
15 minute winter	S34	11	24.868	0.218	80.2	0.2463	0.0000	OK
15 minute winter	S35	11	24.613	0.113	85.4	0.1275	0.0000	OK
120 minute winter	S36	116	24.122	0.432	11.9	0.4887	0.0000	SURCHARGED
120 minute winter	S37	116	24.122	0.222	11.6	0.2512	0.0000	OK
120 minute winter	S38	116	24.122	0.727	32.3	1.8504	0.0000	SURCHARGED
15 minute winter	S39	14	23.479	0.874	23.9	0.9883	0.0000	SURCHARGED
30 minute winter	S40	24	22.365	1.050	35.7	4.2322	0.0000	SURCHARGED
30 minute winter	S41	24	21.491	0.996	44.0	1.1267	0.0000	SURCHARGED
15 minute winter	S42	10	23.122	0.042	9.0	0.0473	0.0000	OK
30 minute winter	S43	24	21.479	1.479	36.7	3.7652	0.0000	SURCHARGED
30 minute winter	S44	24	21.475	2.275	83.6	13.4061	0.0000	SURCHARGED
15 minute winter	S45	10	20.573	0.033	4.5	0.0377	0.0000	OK
60 minute winter	S46	59	20.004	0.104	0.8	0.1171	0.0000	OK
60 minute winter	S47	58	20.003	0.443	19.6	0.5014	0.0000	SURCHARGED
15 minute winter	S48	14	19.470	0.770	23.5	3.6169	0.0000	SURCHARGED
15 minute summer	S49	1	20.220	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S50	14	19.504	0.604	24.6	2.5363	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)
720 minute winter	S26	SPN1.015	S27	6.6	0.273	0.129	0.4131	
720 minute winter	S27	SPN1.016	S54	5.0	2.033	0.022	0.0778	
15 minute winter	S28	SPN8.000	S29	5.5	1.044	0.235	0.0679	
15 minute winter	S29	SPN8.001	S30	5.3	0.609	0.237	0.2143	
15 minute winter	S30	SPN8.002	S31	24.7	2.021	0.748	0.4516	
15 minute winter	S31	SPN8.003	S32	37.1	0.964	0.409	0.7232	
15 minute winter	S32	SPN8.004	S33	60.5	1.169	0.622	1.6728	
15 minute winter	S33	SPN8.005	S34	80.2	1.403	0.794	0.6907	
15 minute winter	S34	SPN8.006	S35	80.5	2.024	0.803	0.7266	
15 minute winter	S35	SPN8.007	S38	85.4	1.650	0.305	0.8305	
120 minute winter	S36	SPN9.000	ATT4	11.1	0.973	0.108	1.9949	
120 minute winter	S37	SPN10.000	ATT5	11.6	1.140	0.087	1.8202	
120 minute winter	S38	SPN8.008	S39	8.2	0.367	0.047	1.2428	
15 minute winter	S39	SPN8.009	S40	16.1	0.454	0.071	1.2283	
30 minute winter	S40	SPN8.010	S41	25.6	1.721	0.123	1.3567	
30 minute winter	S41	SPN8.011	S44	42.1	0.877	0.128	1.0524	
15 minute winter	S42	SPN11.000	S43	8.9	1.442	0.076	1.3503	
30 minute winter	S43	SPN11.001	S44	23.1	0.544	0.139	2.5235	
30 minute winter	S44	SPN8.012	HW5	49.0	2.445	0.211	0.5123	
15 minute winter	S45	SPN12.000	S47	4.4	0.170	0.048	0.6679	
60 minute winter	S46	SPN13.000	ATT6	-0.8	-0.040	-0.011	0.3413	
60 minute winter	S47	SPN12.001	S48	2.8	0.818	0.037	0.8414	
15 minute winter	S48	SPN12.002	S51	15.7	0.682	0.198	0.1725	
15 minute summer	S49	SPN14.000	S50	0.0	0.000	0.000	0.4216	
15 minute winter	S50	SPN14.001	S51	15.0	0.919	0.607	0.2053	

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.09%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S51	14	19.466	0.866	21.1	1.5309	0.0000	SURCHARGED
120 minute winter	S52	110	18.905	0.455	27.7	1.1580	0.0000	SURCHARGED
240 minute winter	S53	240	18.571	0.171	27.6	0.4344	0.0000	OK
240 minute winter	S54	240	18.566	1.166	32.6	4.0382	0.0000	FLOOD RISK
180 minute summer	S55	136	16.163	0.113	32.0	0.3911	0.0000	OK
360 minute winter	S56	248	15.790	0.140	32.0	0.1580	0.0000	OK
60 minute winter	HW1	59	22.867	0.967	105.1	0.0000	0.0000	OK
60 minute winter	HW2	59	22.840	0.940	58.6	118.4309	0.0000	SURCHARGED
720 minute winter	HW3	720	18.839	0.539	26.3	0.0000	0.0000	OK
720 minute winter	HW4	720	18.832	0.532	15.6	413.0483	0.0000	SURCHARGED
120 minute winter	HW5	100	18.981	0.331	45.8	0.0000	0.0000	OK
120 minute winter	HW6	104	18.960	0.310	39.6	49.8890	0.0000	SURCHARGED
120 minute winter	HW7	110	18.950	0.350	45.0	0.0000	0.0000	OK
120 minute winter	HW8	110	18.933	0.333	26.5	102.0751	0.0000	SURCHARGED
60 minute winter	HW9	76	15.690	0.130	32.0	0.0000	0.0000	OK
120 minute winter	ATT1	98	26.363	0.533	12.3	30.3665	0.0000	SURCHARGED
120 minute winter	ATT2	100	26.361	0.411	13.4	23.4526	0.0000	SURCHARGED
60 minute winter	ATT3	51	21.899	0.499	21.1	18.9450	0.0000	SURCHARGED
120 minute winter	ATT4	116	24.122	0.677	23.9	57.8923	0.0000	SURCHARGED
120 minute winter	ATT5	116	24.122	0.637	23.6	54.4733	0.0000	SURCHARGED
60 minute winter	ATT6	59	20.004	0.304	16.5	18.4542	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 winter	S51	SPN12.003	S52	19.3	0.845	0.328	0.2139	
120 minute winter	S52	SPN8.015	S53	27.7	1.439	0.383	0.3249	
240 minute winter	S53	SPN8.016	S54	27.6	0.565	0.096	0.8413	
240 minute winter	S54	SPN1.017	S55	32.0	1.819	0.107	0.3359	
180 minute summer	S55	SPN1.018	S56	32.0	1.136	0.303	1.2471	
360 minute winter	S56	SPN1.019	HW9	32.0	1.041	0.399	0.5281	1058.1
60 minute winter	HW2	SPN1.009	S18	24.1	1.372	1.574	0.4701	
720 minute winter	HW4	SPN1.014	S26	7.3	0.732	0.145	0.2141	
120 minute winter	HW6	SPN8.013	HW7	33.7	0.967	0.633	1.5044	
120 minute winter	HW8	SPN8.014	S52	24.4	0.613	0.411	0.4584	
120 minute winter	ATT1	SPN2.001	S05	-8.5	0.349	-0.175	0.5898	
120 minute winter	ATT2	SPN3.001	S07	-11.8	-0.319	-0.166	0.6430	
60 minute winter	ATT3	SPN7.001	S22	-14.2	-0.357	-0.212	0.4821	
120 minute winter	ATT4	SPN9.001	S38	-13.1	0.400	-0.126	0.4041	
120 minute winter	ATT5	SPN10.001	S38	-12.1	0.388	-0.089	0.4291	
60 minute winter	ATT6	SPN13.001	S47	-16.5	-0.450	-0.310	0.5338	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.09%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S01	10	28.429	0.099	16.3	0.1120	0.0000	OK
15 minute winter	S02	10	28.043	0.093	18.6	0.1049	0.0000	OK
15 minute winter	S03	11	27.331	0.181	81.3	0.2043	0.0000	OK
120 minute winter	S04	112	27.296	1.281	25.0	12.7363	0.0000	FLOOD RISK
120 minute winter	S05	112	27.296	1.596	41.4	1.8047	0.0000	SURCHARGED
120 minute winter	S06	114	27.293	0.968	17.1	8.4055	0.0000	SURCHARGED
120 minute winter	S07	114	27.293	1.643	37.8	4.1811	0.0000	SURCHARGED
15 minute winter	S08	13	26.157	0.957	34.8	1.0820	0.0000	SURCHARGED
15 minute winter	S09	13	26.133	1.013	29.2	1.1459	0.0000	SURCHARGED
15 minute winter	S10	12	26.056	1.556	58.9	1.7603	0.0000	SURCHARGED
15 minute winter	S11	11	28.229	0.369	23.9	0.4178	0.0000	SURCHARGED
15 minute winter	S12	14	27.774	0.834	53.2	5.9928	0.0000	SURCHARGED
30 minute winter	S13	26	27.148	0.838	30.1	0.9472	0.0000	SURCHARGED
30 minute winter	S14	26	26.392	1.272	46.4	13.1078	0.0000	FLOOD RISK
15 minute winter	S15	14	25.012	0.712	75.5	0.8057	0.0000	SURCHARGED
15 minute winter	S16	14	24.802	1.792	251.6	28.2138	0.0000	FLOOD RISK
120 minute winter	S17	112	23.042	0.242	5.6	0.2739	0.0000	SURCHARGED
120 minute winter	S18	112	23.041	1.341	31.4	7.9154	0.0000	SURCHARGED
120 minute winter	S19	110	22.817	1.417	36.6	7.4720	0.0000	SURCHARGED
60 minute winter	S20	54	22.863	0.113	5.2	0.1276	0.0000	OK
60 minute winter	S21	51	22.859	1.269	12.7	1.4353	0.0000	SURCHARGED
60 minute winter	S22	53	22.858	1.658	29.6	2.8515	0.0000	SURCHARGED
60 minute winter	S23	53	22.854	1.854	41.1	13.1954	0.0000	FLOOD RISK
120 minute winter	S24	88	22.039	1.239	53.1	20.5449	0.0000	FLOOD RISK
120 minute winter	S25	88	21.994	1.294	45.2	4.4836	0.0000	FLOOD RISK

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 winter	S01	SPN1.000	S02	16.1	1.358	0.719	0.2840	
15 minute winter	S02	SPN1.001	S03	18.5	1.591	0.673	0.3717	
15 minute winter	S03	SPN1.002	S05	78.9	2.044	0.688	1.1129	
120 minute winter	S04	SPN2.000	ATT1	-19.9	0.924	-0.401	0.8043	
120 minute winter	S05	SPN1.003	S07	31.4	0.788	0.673	0.2467	
120 minute winter	S06	SPN3.000	ATT2	-15.8	0.902	-0.223	0.8012	
120 minute winter	S07	SPN1.004	S08	10.1	0.998	0.184	0.4613	
15 minute winter	S08	SPN1.005	S09	29.2	1.335	0.518	0.2716	
15 minute winter	S09	SPN1.006	S10	31.8	0.811	0.486	1.5676	
15 minute winter	S10	SPN1.007	S16	53.7	1.387	0.645	2.3265	
15 minute winter	S11	SPN4.000	S12	21.6	1.225	0.709	0.5581	
15 minute winter	S12	SPN4.001	S13	29.9	1.820	1.004	0.3967	
30 minute winter	S13	SPN4.002	S14	27.9	1.587	0.869	0.6454	
30 minute winter	S14	SPN4.003	S15	29.2	1.922	0.932	0.4264	
15 minute winter	S15	SPN4.004	S16	72.3	1.819	0.581	0.9046	
15 minute winter	S16	SPN1.008	HW1	147.0	3.698	1.244	0.8634	
120 minute winter	S17	SPN5.000	S18	5.6	0.721	0.154	0.4670	
120 minute winter	S18	SPN1.010	S19	31.6	0.501	0.199	1.0469	
120 minute winter	S19	SPN1.011	S24	33.1	1.007	0.229	2.4985	
60 minute winter	S20	SPN6.000	S22	5.2	0.274	0.040	0.7458	
60 minute winter	S21	SPN7.000	ATT3	11.6	1.063	0.170	0.2672	
60 minute winter	S22	SPN7.002	S23	28.9	0.726	0.701	0.7888	
60 minute winter	S23	SPN7.003	S24	9.9	0.400	0.100	1.7684	
120 minute winter	S24	SPN1.012	S25	45.2	0.641	0.581	1.4284	
120 minute winter	S25	SPN1.013	HW3	44.6	4.319	0.100	0.6087	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.09%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	S26	990	19.415	1.165	9.0	1.3171	0.0000	FLOOD RISK
960 minute winter	S27	990	19.413	1.263	9.2	1.4287	0.0000	FLOOD RISK
15 minute winter	S28	12	27.392	0.262	10.1	0.2968	0.0000	SURCHARGED
15 minute winter	S29	12	27.365	0.455	10.5	0.5148	0.0000	SURCHARGED
15 minute winter	S30	12	27.316	0.796	43.1	0.9008	0.0000	SURCHARGED
15 minute winter	S31	11	25.719	0.594	56.1	0.6713	0.0000	SURCHARGED
15 minute winter	S32	11	25.653	0.653	96.5	0.7381	0.0000	SURCHARGED
15 minute winter	S33	11	25.348	0.598	130.6	0.6762	0.0000	SURCHARGED
15 minute winter	S34	11	25.086	0.436	130.5	0.4931	0.0000	SURCHARGED
180 minute winter	S35	172	24.970	0.470	37.0	0.5318	0.0000	SURCHARGED
180 minute winter	S36	172	24.970	1.280	24.5	19.9592	0.0000	FLOOD RISK
180 minute winter	S37	172	24.970	1.070	15.6	2.5107	0.0000	SURCHARGED
180 minute winter	S38	172	24.970	1.575	43.6	4.0073	0.0000	SURCHARGED
30 minute winter	S39	24	23.705	1.100	34.2	5.0728	0.0000	SURCHARGED
60 minute winter	S40	54	22.588	1.273	43.4	19.5427	0.0000	SURCHARGED
30 minute winter	S41	22	21.951	1.456	92.8	17.4489	0.0000	FLOOD RISK
15 minute winter	S42	10	23.136	0.056	16.3	0.0637	0.0000	OK
30 minute winter	S43	23	22.006	2.006	64.3	15.9413	0.0000	FLOOD RISK
30 minute winter	S44	24	21.930	2.730	117.3	16.2292	2.4478	FLOOD
15 minute winter	S45	10	20.585	0.045	8.2	0.0506	0.0000	OK
120 minute winter	S46	112	20.347	0.447	0.6	0.5061	0.0000	SURCHARGED
120 minute winter	S47	112	20.347	0.787	22.1	2.0747	0.0000	SURCHARGED
30 minute winter	S48	23	19.747	1.047	32.9	6.3654	0.0000	FLOOD RISK
15 minute summer	S49	1	20.220	0.000	0.0	0.0000	0.0000	OK
30 minute winter	S50	26	19.769	0.869	34.6	14.1035	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)
960 minute winter	S26	SPN1.015	S27	9.2	0.288	0.181	0.4131	
960 minute winter	S27	SPN1.016	S54	5.0	2.116	0.022	0.1485	
15 minute winter	S28	SPN8.000	S29	10.2	1.202	0.441	0.2290	
15 minute winter	S29	SPN8.001	S30	15.0	0.852	0.665	0.4277	
15 minute winter	S30	SPN8.002	S31	36.4	2.069	1.101	0.6475	
15 minute winter	S31	SPN8.003	S32	56.5	1.061	0.622	1.3126	
15 minute winter	S32	SPN8.004	S33	96.3	1.368	0.991	2.2931	
15 minute winter	S33	SPN8.005	S34	130.5	1.854	1.293	0.8519	
15 minute winter	S34	SPN8.006	S35	130.3	2.098	1.300	1.0200	
180 minute winter	S35	SPN8.007	S38	37.0	0.735	0.132	1.2366	
180 minute winter	S36	SPN9.000	ATT4	-20.9	0.977	-0.202	1.9949	
180 minute winter	S37	SPN10.000	ATT5	15.2	1.165	0.114	2.0291	
180 minute winter	S38	SPN8.008	S39	12.3	0.364	0.070	1.5086	
30 minute winter	S39	SPN8.009	S40	18.0	0.454	0.079	1.2397	
60 minute winter	S40	SPN8.010	S41	32.5	1.913	0.156	1.6502	
30 minute winter	S41	SPN8.011	S44	46.8	0.907	0.142	1.0524	
15 minute winter	S42	SPN11.000	S43	16.1	1.493	0.138	1.4307	
30 minute winter	S43	SPN11.001	S44	42.9	0.615	0.258	2.5235	
30 minute winter	S44	SPN8.012	HW5	53.8	2.601	0.232	0.5741	
15 minute winter	S45	SPN12.000	S47	8.1	0.296	0.087	0.6977	
120 minute winter	S46	SPN13.000	ATT6	-0.6	-0.021	-0.009	0.4713	
120 minute winter	S47	SPN12.001	S48	4.1	0.584	0.053	0.9268	
30 minute winter	S48	SPN12.002	S51	23.1	0.674	0.292	0.1725	
15 minute summer	S49	SPN14.000	S50	0.0	0.000	0.000	0.4216	
30 minute winter	S50	SPN14.001	S51	15.6	0.933	0.631	0.2053	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.09%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	S51	24	19.738	1.138	23.5	2.0115	0.0000	FLOOD RISK
180 minute winter	S52	180	19.322	0.872	28.3	2.2189	0.0000	SURCHARGED
360 minute winter	S53	352	18.814	0.414	27.9	1.0536	0.0000	SURCHARGED
360 minute winter	S54	352	18.800	1.400	33.0	4.8496	0.9986	FLOOD
240 minute winter	S55	316	16.164	0.114	32.4	0.3940	0.0000	OK
240 minute winter	S56	316	15.791	0.141	32.4	0.1592	0.0000	OK
120 minute winter	HW1	116	23.899	1.999	114.9	0.0000	0.0000	OK
120 minute winter	HW2	116	23.864	1.964	66.0	246.0627	0.0000	FLOOD RISK
960 minute winter	HW3	975	19.423	1.123	34.1	0.0000	0.0000	OK
960 minute winter	HW4	990	19.415	1.115	19.4	862.7593	0.0000	FLOOD RISK
180 minute winter	HW5	180	19.398	0.748	56.3	0.0000	0.0000	OK
180 minute winter	HW6	180	19.375	0.725	45.1	114.6876	0.0000	FLOOD RISK
180 minute winter	HW7	184	19.366	0.766	49.0	0.0000	0.0000	OK
180 minute winter	HW8	184	19.347	0.747	28.5	225.7693	0.0000	FLOOD RISK
240 minute winter	HW9	316	15.691	0.131	32.4	0.0000	0.0000	OK
120 minute winter	ATT1	112	27.296	1.466	25.3	45.6285	0.0000	SURCHARGED
120 minute winter	ATT2	114	27.293	1.343	31.4	45.6285	0.0000	SURCHARGED
60 minute winter	ATT3	51	22.859	1.459	38.6	30.4190	0.0000	SURCHARGED
180 minute winter	ATT4	172	24.970	1.525	32.1	102.6428	0.0000	SURCHARGED
180 minute winter	ATT5	172	24.970	1.485	32.1	102.6428	0.0000	SURCHARGED
120 minute winter	ATT6	112	20.347	0.647	18.2	39.3603	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)
30 minute winter	S51	SPN12.003	S52	21.0	0.801	0.357	0.2338	
180 minute winter	S52	SPN8.015	S53	27.9	1.442	0.386	0.8256	
360 minute winter	S53	SPN8.016	S54	27.9	1.017	0.097	1.0597	
360 minute winter	S54	SPN1.017	S55	32.4	1.825	0.108	0.3393	
240 minute winter	S55	SPN1.018	S56	32.4	1.139	0.307	1.2598	
240 minute winter	S56	SPN1.019	HW9	32.4	1.045	0.404	0.5333	1763.9
120 minute winter	HW2	SPN1.009	S18	29.0	1.647	1.891	0.4701	
960 minute winter	HW4	SPN1.014	S26	7.3	0.713	0.145	0.2141	
180 minute winter	HW6	SPN8.013	HW7	36.2	0.975	0.680	1.5044	
180 minute winter	HW8	SPN8.014	S52	24.5	0.617	0.413	0.4584	
120 minute winter	ATT1	SPN2.001	S05	-21.0	-0.529	-0.433	0.5898	
120 minute winter	ATT2	SPN3.001	S07	-29.4	-0.740	-0.414	0.6430	
60 minute winter	ATT3	SPN7.001	S22	-27.0	-0.679	-0.403	0.4821	
180 minute winter	ATT4	SPN9.001	S38	-28.0	0.401	-0.270	0.4041	
180 minute winter	ATT5	SPN10.001	S38	-17.5	0.572	-0.129	0.4291	
120 minute winter	ATT6	SPN13.001	S47	-18.2	-0.458	-0.343	0.5338	