

Cascade Summary of Results for Bluerroof 2.SRCX

Upstream Outflow To Overflow To Structures

(None) Tank.SRCX (None)

Half Drain Time : 355 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max E Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	99.842	0.042	0.0	0.3	0.3	9.6	O K
30 min Summer	99.853	0.053	0.0	0.4	0.4	12.2	O K
60 min Summer	99.863	0.063	0.0	0.5	0.5	14.5	O K
120 min Summer	99.871	0.071	0.0	0.5	0.5	16.3	O K
180 min Summer	99.874	0.074	0.0	0.5	0.5	16.9	O K
240 min Summer	99.874	0.074	0.0	0.5	0.5	16.9	O K
360 min Summer	99.874	0.074	0.0	0.5	0.5	17.0	O K
480 min Summer	99.874	0.074	0.0	0.5	0.5	17.0	O K
600 min Summer	99.874	0.074	0.0	0.5	0.5	16.8	O K
720 min Summer	99.873	0.073	0.0	0.5	0.5	16.7	O K
960 min Summer	99.871	0.071	0.0	0.5	0.5	16.2	O K
1440 min Summer	99.866	0.066	0.0	0.5	0.5	15.1	O K
2160 min Summer	99.859	0.059	0.0	0.5	0.5	13.5	O K
2880 min Summer	99.853	0.053	0.0	0.4	0.4	12.2	O K
4320 min Summer	99.846	0.046	0.0	0.4	0.4	10.4	O K
5760 min Summer	99.841	0.041	0.0	0.3	0.3	9.3	O K
7200 min Summer	99.837	0.037	0.0	0.3	0.3	8.5	O K
8640 min Summer	99.834	0.034	0.0	0.2	0.2	7.9	O K
10080 min Summer	99.832	0.032	0.0	0.2	0.2	7.4	O K
15 min Winter	99.847	0.047	0.0	0.4	0.4	10.7	O K
30 min Winter	99.860	0.060	0.0	0.5	0.5	13.6	O K
60 min Winter	99.871	0.071	0.0	0.5	0.5	16.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	148.305	0.0	7.8	19
30 min Summer	95.717	0.0	10.5	33
60 min Summer	58.745	0.0	14.3	62
120 min Summer	34.828	0.0	17.1	122
180 min Summer	25.326	0.0	18.8	180
240 min Summer	20.093	0.0	19.9	216
360 min Summer	14.471	0.0	21.5	274
480 min Summer	11.463	0.0	22.8	338
600 min Summer	9.561	0.0	23.7	406
720 min Summer	8.240	0.0	24.5	476
960 min Summer	6.513	0.0	25.8	608
1440 min Summer	4.670	0.0	27.6	880
2160 min Summer	3.343	0.0	30.9	1256
2880 min Summer	2.635	0.0	32.3	1640
4320 min Summer	1.882	0.0	34.2	2336
5760 min Summer	1.481	0.0	36.9	3104
7200 min Summer	1.230	0.0	38.2	3816
8640 min Summer	1.056	0.0	39.2	4576
10080 min Summer	0.928	0.0	39.8	5248
15 min Winter	148.305	0.0	8.9	18
30 min Winter	95.717	0.0	11.9	33
60 min Winter	58.745	0.0	16.1	62

48 West End
Westbury
Wiltshire, BA13 3JG

LSHTM
Blue Roof 2

Date 05/10/2021
File Cascade.CASX

Designed by Peter White
Checked by



Innovyze

Source Control 2020.1.3

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Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max E Outflow (l/s)	Max Volume (m ³)	Status
120 min Winter	99.880	0.080	0.0	0.6	0.6	18.4	O K
180 min Winter	99.883	0.083	0.0	0.6	0.6	19.1	O K
240 min Winter	99.884	0.084	0.0	0.6	0.6	19.2	O K
360 min Winter	99.883	0.083	0.0	0.6	0.6	19.1	O K
480 min Winter	99.882	0.082	0.0	0.6	0.6	18.9	O K
600 min Winter	99.881	0.081	0.0	0.6	0.6	18.6	O K
720 min Winter	99.879	0.079	0.0	0.6	0.6	18.2	O K
960 min Winter	99.876	0.076	0.0	0.6	0.6	17.3	O K
1440 min Winter	99.868	0.068	0.0	0.5	0.5	15.5	O K
2160 min Winter	99.858	0.058	0.0	0.5	0.5	13.3	O K
2880 min Winter	99.851	0.051	0.0	0.4	0.4	11.6	O K
4320 min Winter	99.842	0.042	0.0	0.3	0.3	9.6	O K
5760 min Winter	99.837	0.037	0.0	0.3	0.3	8.4	O K
7200 min Winter	99.833	0.033	0.0	0.2	0.2	7.6	O K
8640 min Winter	99.830	0.030	0.0	0.2	0.2	7.0	O K
10080 min Winter	99.828	0.028	0.0	0.2	0.2	6.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Discharge Volume (m ³)	Time-Peak (mins)
120 min Winter	34.828	0.0	19.3	118
180 min Winter	25.326	0.0	21.1	176
240 min Winter	20.093	0.0	22.4	228
360 min Winter	14.471	0.0	24.2	286
480 min Winter	11.463	0.0	25.6	362
600 min Winter	9.561	0.0	26.7	438
720 min Winter	8.240	0.0	27.6	514
960 min Winter	6.513	0.0	29.1	656
1440 min Winter	4.670	0.0	31.1	938
2160 min Winter	3.343	0.0	34.6	1324
2880 min Winter	2.635	0.0	36.3	1700
4320 min Winter	1.882	0.0	38.5	2420
5760 min Winter	1.481	0.0	41.4	3168
7200 min Winter	1.230	0.0	42.9	3888
8640 min Winter	1.056	0.0	44.0	4664
10080 min Winter	0.928	0.0	44.8	5352

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Cascade Rainfall Details for Bluerroof 2.SRCX

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.700	Shortest Storm (mins)	15
Ratio R	0.440	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.035

Time (mins)	Area
From:	To: (ha)
0	4 0.035

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Cascade Model Details for Bluerroof 2.SRCX

Storage is Online Cover Level (m) 100.000

Cellular Storage Structure

Invert Level (m) 99.800 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)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	241.0	0.0	0.100	241.0	0.0	0.101	0.0	0.0

Orifice Outflow Control

Diameter (m) 0.033 Discharge Coefficient 0.600 Invert Level (m) 99.800