

Cotswold Transport Planning		Page 1
CTP House, Knapp Road Cheltenham Gloucestershire, GL50 3QQ	BREINTON LEE SIX, HEREFORD, BASIN B.	
Date 05/08/2024 14:27 File NORTH.SRCX	Designed by E. Bailey Checked by RS	
Innovyze	Source Control 2020.1.3	

Summary of Results for 100 year Return Period (+45%)

Half Drain Time : 3936 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	66.829	1.329	0.4	51.0	O K
30 min Summer	67.259	1.759	0.4	67.6	O K
60 min Summer	67.737	2.237	0.4	85.1	O K
120 min Summer	68.038	2.538	0.4	103.1	O K
180 min Summer	68.162	2.662	0.4	113.5	O K
240 min Summer	68.234	2.734	0.4	120.4	O K
360 min Summer	68.320	2.820	0.4	129.7	O K
480 min Summer	68.375	2.875	0.4	136.1	O K
600 min Summer	68.413	2.913	0.4	140.9	O K
720 min Summer	68.441	2.941	0.4	144.4	O K
960 min Summer	68.477	2.977	0.4	149.3	O K
1440 min Summer	68.509	3.009	0.4	153.8	O K
2160 min Summer	68.510	3.010	0.4	153.9	O K
2880 min Summer	68.482	2.982	0.4	150.0	O K
4320 min Summer	68.408	2.908	0.4	140.2	O K
5760 min Summer	68.346	2.846	0.4	132.7	O K
7200 min Summer	68.289	2.789	0.4	126.2	O K
8640 min Summer	68.231	2.731	0.4	120.2	O K
10080 min Summer	68.170	2.670	0.4	114.3	O K
15 min Winter	66.990	1.490	0.4	57.2	O K
30 min Winter	67.473	1.973	0.4	75.8	O K
60 min Winter	67.929	2.429	0.4	95.5	O K
120 min Winter	68.188	2.688	0.4	115.9	O K
180 min Winter	68.302	2.802	0.4	127.7	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	132.487	0.0	19
30 min Summer	87.950	0.0	34
60 min Summer	55.699	0.0	64
120 min Summer	34.099	0.0	124
180 min Summer	25.245	0.0	184
240 min Summer	20.270	0.0	244
360 min Summer	14.794	0.0	364
480 min Summer	11.836	0.0	484
600 min Summer	9.948	0.0	602
720 min Summer	8.627	0.0	722
960 min Summer	6.884	0.0	962
1440 min Summer	5.000	0.0	1442
2160 min Summer	3.625	0.0	2160
2880 min Summer	2.882	0.0	2880
4320 min Summer	2.083	0.0	3584
5760 min Summer	1.653	0.0	4320
7200 min Summer	1.380	0.0	5048
8640 min Summer	1.191	0.0	5880
10080 min Summer	1.051	0.0	6664
15 min Winter	132.487	0.0	19
30 min Winter	87.950	0.0	34
60 min Winter	55.699	0.0	64
120 min Winter	34.099	0.0	122
180 min Winter	25.245	0.0	182

Summary of Results for 100 year Return Period (+45%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
240 min Winter	68.371	2.871	0.4	135.7	O K
360 min Winter	68.456	2.956	0.4	146.4	O K
480 min Winter	68.511	3.011	0.4	154.0	O K
600 min Winter	68.550	3.050	0.4	159.7	O K
720 min Winter	68.579	3.079	0.4	164.1	O K
960 min Winter	68.619	3.119	0.4	170.3	O K
1440 min Winter	68.660	3.160	0.4	177.0	O K
2160 min Winter	68.675	3.175	0.4	179.6	O K
2880 min Winter	68.665	3.165	0.4	177.8	O K
4320 min Winter	68.604	3.104	0.4	168.0	O K
5760 min Winter	68.530	3.030	0.4	156.7	O K
7200 min Winter	68.470	2.970	0.4	148.3	O K
8640 min Winter	68.404	2.904	0.4	139.7	O K
10080 min Winter	68.332	2.832	0.4	131.1	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
240 min Winter	20.270	0.0	242
360 min Winter	14.794	0.0	360
480 min Winter	11.836	0.0	478
600 min Winter	9.948	0.0	596
720 min Winter	8.627	0.0	714
960 min Winter	6.884	0.0	950
1440 min Winter	5.000	0.0	1414
2160 min Winter	3.625	0.0	2100
2880 min Winter	2.882	0.0	2772
4320 min Winter	2.083	0.0	4060
5760 min Winter	1.653	0.0	4608
7200 min Winter	1.380	0.0	5480
8640 min Winter	1.191	0.0	6400
10080 min Winter	1.051	0.0	7272

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Rainfall Details

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)	19.000	Shortest Storm (mins)	15
Ratio R	0.377	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+45

Time Area Diagram

Total Area (ha) 0.207

Time (mins)		Area
From:	To:	(ha)
0	4	0.207

Model Details

Storage is Online Cover Level (m) 69.000

Complex Structure

Infiltration Blanket

Infiltration Coefficient Base (m/hr) 0.05400 Diameter/Width (m) 8.0
Safety Factor 5.0 Length (m) 16.0
Porosity 0.30 Cap Volume Depth (m) 2.000
Invert Level (m) 65.500

Tank or Pond

Invert Level (m) 67.500

Depth (m) Area (m²)		Depth (m) Area (m²)	
0.000	26.0	1.500	232.0