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Micro Drainage	Source Control 2016.1	

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 2303 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	8.497	0.297	0.0	4.7	O K
30 min Summer	8.602	0.402	0.0	6.3	O K
60 min Summer	8.719	0.519	0.1	8.1	O K
120 min Summer	8.841	0.641	0.1	10.0	O K
180 min Summer	8.910	0.710	0.1	11.1	O K
240 min Summer	8.955	0.755	0.1	11.8	O K
360 min Summer	9.020	0.820	0.1	12.9	O K
480 min Summer	9.064	0.864	0.1	13.5	O K
600 min Summer	9.095	0.895	0.1	14.0	O K
720 min Summer	9.118	0.918	0.1	14.4	O K
960 min Summer	9.146	0.946	0.1	14.8	O K
1440 min Summer	9.166	0.966	0.1	15.1	O K
2160 min Summer	9.159	0.959	0.1	15.0	O K
2880 min Summer	9.145	0.945	0.1	14.8	O K
4320 min Summer	9.106	0.906	0.1	14.2	O K
5760 min Summer	9.065	0.865	0.1	13.6	O K
7200 min Summer	9.027	0.827	0.1	13.0	O K
8640 min Summer	8.991	0.791	0.1	12.4	O K
10080 min Summer	8.957	0.757	0.1	11.9	O K
15 min Winter	8.533	0.333	0.0	5.2	O K
30 min Winter	8.651	0.451	0.0	7.1	O K
60 min Winter	8.782	0.582	0.1	9.1	O K
120 min Winter	8.919	0.719	0.1	11.3	O K
180 min Winter	8.998	0.798	0.1	12.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	125.490	0.0	27
30 min Summer	85.226	0.0	42
60 min Summer	55.250	0.0	72
120 min Summer	34.527	0.0	130
180 min Summer	25.791	0.0	190
240 min Summer	20.812	0.0	250
360 min Summer	15.404	0.0	368
480 min Summer	12.420	0.0	488
600 min Summer	10.499	0.0	606
720 min Summer	9.148	0.0	726
960 min Summer	7.352	0.0	964
1440 min Summer	5.392	0.0	1440
2160 min Summer	3.944	0.0	1824
2880 min Summer	3.155	0.0	2204
4320 min Summer	2.299	0.0	2992
5760 min Summer	1.835	0.0	3824
7200 min Summer	1.543	0.0	4680
8640 min Summer	1.339	0.0	5464
10080 min Summer	1.188	0.0	6344
15 min Winter	125.490	0.0	27
30 min Winter	85.226	0.0	41
60 min Winter	55.250	0.0	70
120 min Winter	34.527	0.0	128
180 min Winter	25.791	0.0	188

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
240 min Winter	9.050	0.850	0.1	13.3	O K
360 min Winter	9.125	0.925	0.1	14.5	O K
480 min Winter	9.176	0.976	0.1	15.3	O K
600 min Winter	9.213	1.013	0.1	15.9	O K
720 min Winter	9.241	1.041	0.1	16.3	O K
960 min Winter	9.277	1.077	0.1	16.9	O K
1440 min Winter	9.309	1.109	0.1	17.4	O K
2160 min Winter	9.307	1.107	0.1	17.3	O K
2880 min Winter	9.287	1.087	0.1	17.0	O K
4320 min Winter	9.239	1.039	0.1	16.3	O K
5760 min Winter	9.181	0.981	0.1	15.4	O K
7200 min Winter	9.125	0.925	0.1	14.5	O K
8640 min Winter	9.071	0.871	0.1	13.7	O K
10080 min Winter	9.020	0.820	0.1	12.9	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
240 min Winter	20.812	0.0	246
360 min Winter	15.404	0.0	362
480 min Winter	12.420	0.0	480
600 min Winter	10.499	0.0	596
720 min Winter	9.148	0.0	712
960 min Winter	7.352	0.0	942
1440 min Winter	5.392	0.0	1390
2160 min Winter	3.944	0.0	2020
2880 min Winter	3.155	0.0	2288
4320 min Winter	2.299	0.0	3208
5760 min Winter	1.835	0.0	4152
7200 min Winter	1.543	0.0	5048
8640 min Winter	1.339	0.0	5896
10080 min Winter	1.188	0.0	6768

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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)	19.500	Shortest Storm (mins)	15
Ratio R	0.329	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.020

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To: (ha)		From: To: (ha)		From: To: (ha)	
0 4 0.006		4 8 0.007		8 12 0.007	

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Model Details

Storage is Online Cover Level (m) 10.200

Cellular Storage Structure

Invert Level (m) 8.200 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.01483 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.01483

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	16.5	16.5	1.200	16.5	36.9	1.300	0.0	36.9