

Summary of Results for 30 year Return Period (+30%)

Half Drain Time : 11 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max $\Sigma$ Outflow (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	115.871	0.371	0.0	5.0	5.0	4.9	O K
30 min Summer	115.923	0.423	0.0	5.0	5.0	5.6	O K
60 min Summer	115.890	0.390	0.0	5.0	5.0	5.2	O K
120 min Summer	115.782	0.282	0.0	5.0	5.0	3.7	O K
180 min Summer	115.706	0.206	0.0	5.0	5.0	2.7	O K
240 min Summer	115.674	0.174	0.0	4.4	4.4	2.3	O K
360 min Summer	115.635	0.135	0.0	3.4	3.4	1.8	O K
480 min Summer	115.612	0.112	0.0	2.8	2.8	1.5	O K
600 min Summer	115.596	0.096	0.0	2.4	2.4	1.3	O K
720 min Summer	115.584	0.084	0.0	2.1	2.1	1.1	O K
960 min Summer	115.568	0.068	0.0	1.7	1.7	0.9	O K
1440 min Summer	115.550	0.050	0.0	1.2	1.2	0.7	O K
2160 min Summer	115.536	0.036	0.0	0.9	0.9	0.5	O K
2880 min Summer	115.529	0.029	0.0	0.7	0.7	0.4	O K
4320 min Summer	115.521	0.021	0.0	0.5	0.5	0.3	O K
5760 min Summer	115.517	0.017	0.0	0.4	0.4	0.2	O K
7200 min Summer	115.514	0.014	0.0	0.3	0.3	0.2	O K
8640 min Summer	115.512	0.012	0.0	0.3	0.3	0.2	O K
10080 min Summer	115.511	0.011	0.0	0.3	0.3	0.1	O K
15 min Winter	115.931	0.431	0.0	5.0	5.0	5.7	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Discharge Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	104.993	0.0	8.9	20
30 min Summer	67.363	0.0	11.4	29
60 min Summer	41.274	0.0	13.9	44
120 min Summer	24.543	0.0	16.6	74
180 min Summer	17.924	0.0	18.1	102
240 min Summer	14.284	0.0	19.3	132
360 min Summer	10.352	0.0	21.0	192
480 min Summer	8.234	0.0	22.2	252
600 min Summer	6.891	0.0	23.3	314
720 min Summer	5.956	0.0	24.1	374
960 min Summer	4.729	0.0	25.5	494
1440 min Summer	3.414	0.0	27.6	736
2160 min Summer	2.462	0.0	29.9	1092
2880 min Summer	1.951	0.0	31.6	1460
4320 min Summer	1.404	0.0	34.1	2184
5760 min Summer	1.112	0.0	36.0	2920
7200 min Summer	0.927	0.0	37.5	3600
8640 min Summer	0.799	0.0	38.8	4264
10080 min Summer	0.705	0.0	40.0	5112
15 min Winter	104.993	0.0	9.9	20

Summary of Results for 30 year Return Period (+30%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (1/s)	Max Control (1/s)	Max Σ Outflow (1/s)	Max Volume (m <sup>3</sup> )	Status
30 min Winter	115.988	0.488	0.0	5.0	5.0	6.5	O K
60 min Winter	115.920	0.420	0.0	5.0	5.0	5.6	O K
120 min Winter	115.746	0.246	0.0	5.0	5.0	3.3	O K
180 min Winter	115.675	0.175	0.0	4.4	4.4	2.3	O K
240 min Winter	115.644	0.144	0.0	3.6	3.6	1.9	O K
360 min Winter	115.607	0.107	0.0	2.7	2.7	1.4	O K
480 min Winter	115.586	0.086	0.0	2.1	2.1	1.1	O K
600 min Winter	115.572	0.072	0.0	1.8	1.8	1.0	O K
720 min Winter	115.563	0.063	0.0	1.6	1.6	0.8	O K
960 min Winter	115.550	0.050	0.0	1.3	1.3	0.7	O K
1440 min Winter	115.536	0.036	0.0	0.9	0.9	0.5	O K
2160 min Winter	115.526	0.026	0.0	0.7	0.7	0.3	O K
2880 min Winter	115.521	0.021	0.0	0.5	0.5	0.3	O K
4320 min Winter	115.515	0.015	0.0	0.4	0.4	0.2	O K
5760 min Winter	115.512	0.012	0.0	0.3	0.3	0.2	O K
7200 min Winter	115.510	0.010	0.0	0.3	0.3	0.1	O K
8640 min Winter	115.509	0.009	0.0	0.2	0.2	0.1	O K
10080 min Winter	115.508	0.008	0.0	0.2	0.2	0.1	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Discharge Volume (m <sup>3</sup> )	Time-Peak (mins)
30 min Winter	67.363	0.0	12.7	30
60 min Winter	41.274	0.0	15.6	46
120 min Winter	24.543	0.0	18.5	76
180 min Winter	17.924	0.0	20.3	104
240 min Winter	14.284	0.0	21.6	134
360 min Winter	10.352	0.0	23.5	194
480 min Winter	8.234	0.0	24.9	254
600 min Winter	6.891	0.0	26.0	314
720 min Winter	5.956	0.0	27.0	374
960 min Winter	4.729	0.0	28.6	494
1440 min Winter	3.414	0.0	31.0	734
2160 min Winter	2.462	0.0	33.5	1100
2880 min Winter	1.951	0.0	35.4	1468
4320 min Winter	1.404	0.0	38.2	2192
5760 min Winter	1.112	0.0	40.3	2896
7200 min Winter	0.927	0.0	42.1	3592
8640 min Winter	0.799	0.0	43.5	4344
10080 min Winter	0.705	0.0	44.8	5024

The Stables  
 High Cogges, Witney  
 Oxfordshire



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Micro Drainage Source Control 2015.1


Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.600	Shortest Storm (mins)	15
Ratio R	0.436	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+30

Time Area Diagram

Total Area (ha) 0.045

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From:	To:	From:	To:	From:	To:
	(ha)		(ha)		(ha)
0	4	4	8	8	12
	0.015		0.015		0.015

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Model Details

Storage is Online Cover Level (m) 117.150

Cellular Storage Structure

Invert Level (m) 115.500 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 <sup>2</sup> )	Inf. Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Inf. Area (m <sup>2</sup> )
0.000	14.0	14.0	2.600	0.0	27.5
0.200	14.0	17.0	2.800	0.0	27.5
0.400	14.0	20.0	3.000	0.0	27.5
0.600	14.0	23.0	3.200	0.0	27.5
0.800	14.0	26.0	3.400	0.0	27.5
1.000	0.0	27.5	3.600	0.0	27.5
1.200	0.0	27.5	3.800	0.0	27.5
1.400	0.0	27.5	4.000	0.0	27.5
1.600	0.0	27.5	4.200	0.0	27.5
1.800	0.0	27.5	4.400	0.0	27.5
2.000	0.0	27.5	4.600	0.0	27.5
2.200	0.0	27.5	4.800	0.0	27.5
2.400	0.0	27.5	5.000	0.0	27.5

Depth/Flow Relationship Outflow Control

Invert Level (m) 115.500

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.200	5.0000	1.800	5.0000	3.400	5.0000	5.000	5.0000
0.400	5.0000	2.000	5.0000	3.600	5.0000	5.200	5.0000
0.600	5.0000	2.200	5.0000	3.800	5.0000	5.400	5.0000
0.800	5.0000	2.400	5.0000	4.000	5.0000	5.600	5.0000
1.000	5.0000	2.600	5.0000	4.200	5.0000	5.800	5.0000
1.200	5.0000	2.800	5.0000	4.400	5.0000	6.000	5.0000
1.400	5.0000	3.000	5.0000	4.600	5.0000		
1.600	5.0000	3.200	5.0000	4.800	5.0000		