

Summary of Results for 100 year Return Period (+30%)

Half Drain Time : 18 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m ³)	Status
15 min Summer	116.038	0.538	0.0	5.0	5.0	7.2	O K
30 min Summer	116.133	0.633	0.0	5.0	5.0	8.4	O K
60 min Summer	116.107	0.607	0.0	5.0	5.0	8.1	O K
120 min Summer	115.969	0.469	0.0	5.0	5.0	6.2	O K
180 min Summer	115.842	0.342	0.0	5.0	5.0	4.6	O K
240 min Summer	115.749	0.249	0.0	5.0	5.0	3.3	O K
360 min Summer	115.676	0.176	0.0	4.4	4.4	2.3	O K
480 min Summer	115.644	0.144	0.0	3.6	3.6	1.9	O K
600 min Summer	115.623	0.123	0.0	3.1	3.1	1.6	O K
720 min Summer	115.608	0.108	0.0	2.7	2.7	1.4	O K
960 min Summer	115.587	0.087	0.0	2.2	2.2	1.2	O K
1440 min Summer	115.563	0.063	0.0	1.6	1.6	0.8	O K
2160 min Summer	115.546	0.046	0.0	1.1	1.1	0.6	O K
2880 min Summer	115.536	0.036	0.0	0.9	0.9	0.5	O K
4320 min Summer	115.526	0.026	0.0	0.6	0.6	0.3	O K
5760 min Summer	115.520	0.020	0.0	0.5	0.5	0.3	O K
7200 min Summer	115.517	0.017	0.0	0.4	0.4	0.2	O K
8640 min Summer	115.515	0.015	0.0	0.4	0.4	0.2	O K
10080 min Summer	115.513	0.013	0.0	0.3	0.3	0.2	O K
15 min Winter	116.126	0.626	0.0	5.0	5.0	8.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Discharge Volume (m ³)	Time-Peak (mins)
15 min Summer	136.550	0.0	11.5	20
30 min Summer	88.279	0.0	14.9	30
60 min Summer	54.281	0.0	18.3	46
120 min Summer	32.242	0.0	21.8	78
180 min Summer	23.469	0.0	23.8	108
240 min Summer	18.633	0.0	25.1	136
360 min Summer	13.430	0.0	27.2	192
480 min Summer	10.644	0.0	28.7	252
600 min Summer	8.882	0.0	30.0	312
720 min Summer	7.658	0.0	31.0	374
960 min Summer	6.056	0.0	32.7	494
1440 min Summer	4.345	0.0	35.2	736
2160 min Summer	3.113	0.0	37.8	1100
2880 min Summer	2.455	0.0	39.8	1460
4320 min Summer	1.755	0.0	42.6	2200
5760 min Summer	1.382	0.0	44.8	2936
7200 min Summer	1.148	0.0	46.5	3640
8640 min Summer	0.986	0.0	47.9	4296
10080 min Summer	0.866	0.0	49.1	5072
15 min Winter	136.550	0.0	12.9	21

The Stables
High Cogges, Witney
Oxfordshire



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Summary of Results for 100 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 (m³)	Status
30 min Winter	116.234	0.734	0.0	5.0	5.0	9.8	O K
60 min Winter	116.178	0.678	0.0	5.0	5.0	9.0	O K
120 min Winter	115.954	0.454	0.0	5.0	5.0	6.0	O K
180 min Winter	115.768	0.268	0.0	5.0	5.0	3.6	O K
240 min Winter	115.688	0.188	0.0	4.7	4.7	2.5	O K
360 min Winter	115.639	0.139	0.0	3.5	3.5	1.8	O K
480 min Winter	115.611	0.111	0.0	2.8	2.8	1.5	O K
600 min Winter	115.593	0.093	0.0	2.3	2.3	1.2	O K
720 min Winter	115.581	0.081	0.0	2.0	2.0	1.1	O K
960 min Winter	115.564	0.064	0.0	1.6	1.6	0.9	O K
1440 min Winter	115.546	0.046	0.0	1.2	1.2	0.6	O K
2160 min Winter	115.533	0.033	0.0	0.8	0.8	0.4	O K
2880 min Winter	115.526	0.026	0.0	0.7	0.7	0.3	O K
4320 min Winter	115.519	0.019	0.0	0.5	0.5	0.2	O K
5760 min Winter	115.515	0.015	0.0	0.4	0.4	0.2	O K
7200 min Winter	115.512	0.012	0.0	0.3	0.3	0.2	O K
8640 min Winter	115.511	0.011	0.0	0.3	0.3	0.1	O K
10080 min Winter	115.509	0.009	0.0	0.2	0.2	0.1	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
30 min Winter	88.279	0.0	16.7	31
60 min Winter	54.281	0.0	20.5	50
120 min Winter	32.242	0.0	24.4	82
180 min Winter	23.469	0.0	26.6	110
240 min Winter	18.633	0.0	28.2	134
360 min Winter	13.430	0.0	30.5	194
480 min Winter	10.644	0.0	32.2	254
600 min Winter	8.882	0.0	33.6	314
720 min Winter	7.658	0.0	34.7	374
960 min Winter	6.056	0.0	36.6	492
1440 min Winter	4.345	0.0	39.4	730
2160 min Winter	3.113	0.0	42.4	1088
2880 min Winter	2.455	0.0	44.5	1476
4320 min Winter	1.755	0.0	47.8	2200
5760 min Winter	1.382	0.0	50.1	2856
7200 min Winter	1.148	0.0	52.0	3624
8640 min Winter	0.986	0.0	53.6	4384
10080 min Winter	0.866	0.0	55.0	5032

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High Cogges, Witney
Oxfordshire



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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)	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:
0	4	0.015	4	8	0.015
				8	12
					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 ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
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		