

The Stables
High Cogges, Witney
Oxfordshire



Date 07/08/2019 19:25
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Designed by Tim.Trotman
Checked by

Micro Drainage

Source Control 2015.1

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

Half Drain Time : 64 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	86.736	0.261	14.2	69.3	O K
30 min Summer	86.748	0.273	14.9	76.3	O K
60 min Summer	86.753	0.278	15.1	78.5	O K
120 min Summer	86.751	0.276	15.0	77.6	O K
180 min Summer	86.745	0.270	14.7	74.2	O K
240 min Summer	86.737	0.262	14.3	70.1	O K
360 min Summer	86.721	0.246	13.4	61.9	O K
480 min Summer	86.706	0.231	12.6	54.6	O K
600 min Summer	86.693	0.218	11.9	48.6	O K
720 min Summer	86.682	0.207	11.2	43.5	O K
960 min Summer	86.661	0.186	10.1	35.4	O K
1440 min Summer	86.631	0.156	8.5	24.8	O K
2160 min Summer	86.601	0.126	6.8	16.1	O K
2880 min Summer	86.580	0.105	5.7	11.3	O K
4320 min Summer	86.553	0.078	4.3	6.3	O K
5760 min Summer	86.537	0.062	3.4	3.9	O K
7200 min Summer	86.526	0.051	2.8	2.7	O K
8640 min Summer	86.522	0.047	2.4	2.2	O K
10080 min Summer	86.519	0.044	2.1	1.9	O K
15 min Winter	86.736	0.261	14.2	69.4	O K
30 min Winter	86.749	0.274	14.9	76.5	O K
60 min Winter	86.752	0.277	15.1	78.3	O K
120 min Winter	86.747	0.272	14.8	75.7	O K
180 min Winter	86.737	0.262	14.3	70.2	O K
240 min Winter	86.726	0.251	13.6	64.2	O K
360 min Winter	86.704	0.229	12.4	53.4	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	186.259	0.0	21
30 min Summer	108.411	0.0	35
60 min Summer	63.100	0.0	54
120 min Summer	36.727	0.0	88
180 min Summer	26.760	0.0	122
240 min Summer	21.377	0.0	156
360 min Summer	15.576	0.0	222
480 min Summer	12.442	0.0	286
600 min Summer	10.453	0.0	348
720 min Summer	9.066	0.0	410
960 min Summer	7.227	0.0	532
1440 min Summer	5.251	0.0	770
2160 min Summer	3.815	0.0	1128
2880 min Summer	3.042	0.0	1476
4320 min Summer	2.152	0.0	2208
5760 min Summer	1.684	0.0	2936
7200 min Summer	1.392	0.0	3672
8640 min Summer	1.192	0.0	4400
10080 min Summer	1.045	0.0	5096
15 min Winter	186.259	0.0	21
30 min Winter	108.411	0.0	35
60 min Winter	63.100	0.0	56
120 min Winter	36.727	0.0	92
180 min Winter	26.760	0.0	130
240 min Winter	21.377	0.0	164
360 min Winter	15.576	0.0	232

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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
480 min Winter	86.684	0.209	11.4	44.5	O K
600 min Winter	86.667	0.192	10.4	37.5	O K
720 min Winter	86.652	0.177	9.6	31.9	O K
960 min Winter	86.628	0.153	8.3	23.7	O K
1440 min Winter	86.594	0.119	6.5	14.5	O K
2160 min Winter	86.565	0.090	4.9	8.2	O K
2880 min Winter	86.547	0.072	3.9	5.3	O K
4320 min Winter	86.526	0.051	2.8	2.7	O K
5760 min Winter	86.520	0.045	2.2	2.0	O K
7200 min Winter	86.516	0.041	1.8	1.7	O K
8640 min Winter	86.512	0.037	1.5	1.4	O K
10080 min Winter	86.510	0.035	1.3	1.2	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
480 min Winter	12.442	0.0	298
600 min Winter	10.453	0.0	360
720 min Winter	9.066	0.0	424
960 min Winter	7.227	0.0	544
1440 min Winter	5.251	0.0	782
2160 min Winter	3.815	0.0	1128
2880 min Winter	3.042	0.0	1476
4320 min Winter	2.152	0.0	2200
5760 min Winter	1.684	0.0	2896
7200 min Winter	1.392	0.0	3632
8640 min Winter	1.192	0.0	4256
10080 min Winter	1.045	0.0	5136

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Rainfall Details

Rainfall Model	FEH	D3 (1km)	0.253	Cv (Winter)	0.900
Return Period (years)	100	E (1km)	0.292	Shortest Storm (mins)	15
Site Location		F (1km)	2.465	Longest Storm (mins)	10080
C (1km)	-0.023	Summer Storms	Yes	Climate Change %	+40
D1 (1km)	0.325	Winter Storms	Yes		
D2 (1km)	0.318	Cv (Summer)	0.900		

Time Area Diagram

Total Area (ha) 0.210

Time (mins)	Area	Time (mins)	Area
From: To: (ha)		From: To: (ha)	
0	4 0.000	4	8 0.210

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Model Details

Storage is Online Cover Level (m) 87.000

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.05760	Width (m)	34.0
Membrane Percolation (mm/hr)	1000	Length (m)	62.0
Max Percolation (l/s)	585.6	Slope (1:X)	200.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	86.475	Cap Volume Depth (m)	0.000