

The Stables
High Cogges, Witney
Oxfordshire



Date 07/08/2019 19:17

Designed by Tim.Trotman

File Southern Soakaway - 1 in 100yr ...

Checked by

Micro Drainage

Source Control 2015.1

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

Half Drain Time : 635 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	85.093	0.493	0.9	42.2	O K
30 min Summer	85.168	0.568	0.9	48.5	O K
60 min Summer	85.247	0.647	0.9	55.3	O K
120 min Summer	85.325	0.725	1.0	62.0	O K
180 min Summer	85.365	0.765	1.0	65.4	O K
240 min Summer	85.388	0.788	1.0	67.3	O K
360 min Summer	85.406	0.806	1.0	68.9	O K
480 min Summer	85.404	0.804	1.0	68.7	O K
600 min Summer	85.394	0.794	1.0	67.9	O K
720 min Summer	85.383	0.783	1.0	67.0	O K
960 min Summer	85.359	0.759	1.0	64.9	O K
1440 min Summer	85.312	0.712	1.0	60.9	O K
2160 min Summer	85.248	0.648	0.9	55.4	O K
2880 min Summer	85.189	0.589	0.9	50.3	O K
4320 min Summer	85.059	0.459	0.9	39.2	O K
5760 min Summer	84.953	0.353	0.8	30.2	O K
7200 min Summer	84.866	0.266	0.8	22.8	O K
8640 min Summer	84.798	0.198	0.8	16.9	O K
10080 min Summer	84.743	0.143	0.8	12.3	O K
15 min Winter	85.093	0.493	0.9	42.2	O K
30 min Winter	85.168	0.568	0.9	48.6	O K
60 min Winter	85.248	0.648	0.9	55.4	O K
120 min Winter	85.327	0.727	1.0	62.2	O K
180 min Winter	85.368	0.768	1.0	65.6	O K
240 min Winter	85.391	0.791	1.0	67.6	O K
360 min Winter	85.413	0.813	1.0	69.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	186.259	0.0	23
30 min Summer	108.411	0.0	38
60 min Summer	63.100	0.0	68
120 min Summer	36.727	0.0	126
180 min Summer	26.760	0.0	186
240 min Summer	21.377	0.0	246
360 min Summer	15.576	0.0	364
480 min Summer	12.442	0.0	484
600 min Summer	10.453	0.0	550
720 min Summer	9.066	0.0	604
960 min Summer	7.227	0.0	726
1440 min Summer	5.251	0.0	998
2160 min Summer	3.815	0.0	1408
2880 min Summer	3.042	0.0	1820
4320 min Summer	2.152	0.0	2600
5760 min Summer	1.684	0.0	3344
7200 min Summer	1.392	0.0	4104
8640 min Summer	1.192	0.0	4760
10080 min Summer	1.045	0.0	5448
15 min Winter	186.259	0.0	23
30 min Winter	108.411	0.0	37
60 min Winter	63.100	0.0	66
120 min Winter	36.727	0.0	124
180 min Winter	26.760	0.0	182
240 min Winter	21.377	0.0	240
360 min Winter	15.576	0.0	354

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Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
480 min Winter	85.414	0.814	1.0	69.4	O K
600 min Winter	85.403	0.803	1.0	68.7	O K
720 min Winter	85.388	0.788	1.0	67.4	O K
960 min Winter	85.359	0.759	1.0	64.9	O K
1440 min Winter	85.298	0.698	1.0	59.7	O K
2160 min Winter	85.207	0.607	0.9	51.9	O K
2880 min Winter	85.121	0.521	0.9	44.5	O K
4320 min Winter	84.947	0.347	0.8	29.7	O K
5760 min Winter	84.814	0.214	0.8	18.3	O K
7200 min Winter	84.716	0.116	0.8	9.9	O K
8640 min Winter	84.657	0.057	0.7	4.9	O K
10080 min Winter	84.646	0.046	0.7	3.9	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
480 min Winter	12.442	0.0	466
600 min Winter	10.453	0.0	572
720 min Winter	9.066	0.0	668
960 min Winter	7.227	0.0	754
1440 min Winter	5.251	0.0	1058
2160 min Winter	3.815	0.0	1516
2880 min Winter	3.042	0.0	1936
4320 min Winter	2.152	0.0	2728
5760 min Winter	1.684	0.0	3456
7200 min Winter	1.392	0.0	4104
8640 min Winter	1.192	0.0	4584
10080 min Winter	1.045	0.0	5144

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Rainfall Details

Rainfall Model	FEH	D3 (1km)	0.253	Cv (Winter)	0.950
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)	0.950		

Time Area Diagram

Total Area (ha) 0.097

Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)
0	4 0.000	4	8 0.097

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Model Details

Storage is Online Cover Level (m) 87.500

Cellular Storage Structure

Invert Level (m) 84.600 Safety Factor 2.0
 Infiltration Coefficient Base (m/hr) 0.05760 Porosity 0.95
 Infiltration Coefficient Side (m/hr) 0.05760

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	90.0	90.0	0.800	90.0	123.6	0.900	0.0	123.6