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The Stables High Cogges, Witney Oxfordshire		Bayham Street Tanked storage					
Date 23/08/2016 15:39 File Tanked storage.srcx		Designed by David Checked by					
Micro Drainage		Source Control 2015.1					
<u>Summary of Results for 100 year Return Period (+40%)</u>							
Half Drain Time : 3 minutes.							
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	26.789	0.289	0.0	3.7	3.7	0.8	O K
30 min Summer	26.818	0.318	0.0	3.7	3.7	0.9	O K
60 min Summer	26.734	0.234	0.0	3.7	3.7	0.7	O K
120 min Summer	26.661	0.161	0.0	3.0	3.0	0.5	O K
180 min Summer	26.627	0.127	0.0	2.3	2.3	0.4	O K
240 min Summer	26.605	0.105	0.0	1.9	1.9	0.3	O K
360 min Summer	26.579	0.079	0.0	1.5	1.5	0.2	O K
480 min Summer	26.564	0.064	0.0	1.2	1.2	0.2	O K
600 min Summer	26.554	0.054	0.0	1.0	1.0	0.2	O K
720 min Summer	26.547	0.047	0.0	0.9	0.9	0.1	O K
960 min Summer	26.537	0.037	0.0	0.7	0.7	0.1	O K
1440 min Summer	26.527	0.027	0.0	0.5	0.5	0.1	O K
2160 min Summer	26.519	0.019	0.0	0.4	0.4	0.1	O K
2880 min Summer	26.515	0.015	0.0	0.3	0.3	0.0	O K
4320 min Summer	26.511	0.011	0.0	0.2	0.2	0.0	O K
5760 min Summer	26.509	0.009	0.0	0.2	0.2	0.0	O K
7200 min Summer	26.507	0.007	0.0	0.1	0.1	0.0	O K
8640 min Summer	26.506	0.006	0.0	0.1	0.1	0.0	O K
10080 min Summer	26.506	0.006	0.0	0.1	0.1	0.0	O K
15 min Winter	26.875	0.375	0.0	3.7	3.7	1.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)			
15 min Summer	146.156	0.0	3.6	19			
30 min Summer	94.538	0.0	4.6	26			
60 min Summer	58.167	0.0	5.7	40			
120 min Summer	34.576	0.0	6.7	68			
180 min Summer	25.181	0.0	7.4	100			
240 min Summer	19.999	0.0	7.8	130			
360 min Summer	14.415	0.0	8.4	188			
480 min Summer	11.427	0.0	8.9	248			
600 min Summer	9.537	0.0	9.3	308			
720 min Summer	8.224	0.0	9.6	368			
960 min Summer	6.505	0.0	10.1	490			
1440 min Summer	4.668	0.0	10.9	734			
2160 min Summer	3.345	0.0	11.7	1096			
2880 min Summer	2.639	0.0	12.3	1444			
4320 min Summer	1.887	0.0	13.2	2152			
5760 min Summer	1.486	0.0	13.9	2864			
7200 min Summer	1.234	0.0	14.4	3568			
8640 min Summer	1.060	0.0	14.9	4272			
10080 min Summer	0.932	0.0	15.3	4968			
15 min Winter	146.156	0.0	4.0	19			
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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)	20.500	Shortest Storm (mins)	15
Ratio R	0.435	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.013

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)	From: To:	(ha)
0 4	0.004	4 8	0.004	8 12	0.005

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Model Details

Storage is Online Cover Level (m) 27.925

Cellular Storage Structure

Invert Level (m) 26.500 Safety Factor 3.0
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	3.0	2.0	2.600	0.0	4.8
0.200	3.0	3.1	2.800	0.0	4.8
0.400	3.0	4.3	3.000	0.0	4.8
0.600	0.0	4.8	3.200	0.0	4.8
0.800	0.0	4.8	3.400	0.0	4.8
1.000	0.0	4.8	3.600	0.0	4.8
1.200	0.0	4.8	3.800	0.0	4.8
1.400	0.0	4.8	4.000	0.0	4.8
1.600	0.0	4.8	4.200	0.0	4.8
1.800	0.0	4.8	4.400	0.0	4.8
2.000	0.0	4.8	4.600	0.0	4.8
2.200	0.0	4.8	4.800	0.0	4.8
2.400	0.0	4.8	5.000	0.0	4.8

Depth/Flow Relationship Outflow Control

Invert Level (m) 26.500

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.200	3.7000	1.800	0.0000	3.400	0.0000	5.000	0.0000
0.400	3.7000	2.000	0.0000	3.600	0.0000	5.200	0.0000
0.600	3.7000	2.200	0.0000	3.800	0.0000	5.400	0.0000
0.800	3.7000	2.400	0.0000	4.000	0.0000	5.600	0.0000
1.000	0.0000	2.600	0.0000	4.200	0.0000	5.800	0.0000
1.200	0.0000	2.800	0.0000	4.400	0.0000	6.000	0.0000
1.400	0.0000	3.000	0.0000	4.600	0.0000		
1.600	0.0000	3.200	0.0000	4.800	0.0000		

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