

Paul Basham Associates				Page 1																																																																																																																																																																																																																			
Lancaster Court Fareham Hampshire, PO15 5TU		5NO																																																																																																																																																																																																																					
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<p>Summary of Results for 100 year Return Period (+30%)</p> <p>Half Drain Time : 954 minutes.</p> <table><thead><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr></thead><tbody><tr><td>15 min Summer</td><td>-3.394</td><td>1.706</td><td>1.3</td><td>87.4</td><td>O K</td></tr><tr><td>30 min Summer</td><td>-2.820</td><td>2.280</td><td>1.6</td><td>116.7</td><td>O K</td></tr><tr><td>60 min Summer</td><td>-2.209</td><td>2.891</td><td>1.9</td><td>148.0</td><td>O K</td></tr><tr><td>120 min Summer</td><td>-1.600</td><td>3.500</td><td>2.1</td><td>179.2</td><td>O K</td></tr><tr><td>180 min Summer</td><td>-1.276</td><td>3.824</td><td>2.3</td><td>195.8</td><td>O K</td></tr><tr><td>240 min Summer</td><td>-1.083</td><td>4.017</td><td>2.4</td><td>205.7</td><td>O K</td></tr><tr><td>360 min Summer</td><td>-0.862</td><td>4.238</td><td>2.5</td><td>217.0</td><td>O K</td></tr><tr><td>480 min Summer</td><td>-0.751</td><td>4.349</td><td>2.5</td><td>222.7</td><td>O K</td></tr><tr><td>600 min Summer</td><td>-0.706</td><td>4.394</td><td>2.6</td><td>225.0</td><td>O K</td></tr><tr><td>720 min Summer</td><td>-0.688</td><td>4.412</td><td>2.6</td><td>225.9</td><td>O K</td></tr><tr><td>960 min Summer</td><td>-0.669</td><td>4.431</td><td>2.6</td><td>226.9</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>-0.695</td><td>4.405</td><td>2.6</td><td>225.5</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>-0.819</td><td>4.281</td><td>2.5</td><td>219.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>-0.983</td><td>4.117</td><td>2.4</td><td>210.8</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>-1.330</td><td>3.770</td><td>2.3</td><td>193.0</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>-1.644</td><td>3.456</td><td>2.1</td><td>177.0</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>-1.912</td><td>3.188</td><td>2.0</td><td>163.2</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>-2.140</td><td>2.960</td><td>1.9</td><td>151.6</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>-2.340</td><td>2.760</td><td>1.8</td><td>141.3</td><td>O K</td></tr><tr><td>15 min Winter</td><td>-3.188</td><td>1.912</td><td>1.4</td><td>97.9</td><td>O K</td></tr></tbody></table> <table><thead><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr></thead><tbody><tr><td>15 min Summer</td><td>115.731</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>77.804</td><td>0.0</td><td>34</td></tr><tr><td>60 min Summer</td><td>49.937</td><td>0.0</td><td>64</td></tr><tr><td>120 min Summer</td><td>30.956</td><td>0.0</td><td>122</td></tr><tr><td>180 min Summer</td><td>23.058</td><td>0.0</td><td>182</td></tr><tr><td>240 min Summer</td><td>18.577</td><td>0.0</td><td>242</td></tr><tr><td>360 min Summer</td><td>13.656</td><td>0.0</td><td>362</td></tr><tr><td>480 min Summer</td><td>10.974</td><td>0.0</td><td>480</td></tr><tr><td>600 min Summer</td><td>9.254</td><td>0.0</td><td>596</td></tr><tr><td>720 min Summer</td><td>8.046</td><td>0.0</td><td>642</td></tr><tr><td>960 min Summer</td><td>6.447</td><td>0.0</td><td>760</td></tr><tr><td>1440 min Summer</td><td>4.709</td><td>0.0</td><td>1012</td></tr><tr><td>2160 min Summer</td><td>3.432</td><td>0.0</td><td>1428</td></tr><tr><td>2880 min Summer</td><td>2.739</td><td>0.0</td><td>1844</td></tr><tr><td>4320 min Summer</td><td>1.989</td><td>0.0</td><td>2676</td></tr><tr><td>5760 min Summer</td><td>1.583</td><td>0.0</td><td>3464</td></tr><tr><td>7200 min Summer</td><td>1.325</td><td>0.0</td><td>4256</td></tr><tr><td>8640 min Summer</td><td>1.147</td><td>0.0</td><td>5016</td></tr><tr><td>10080 min Summer</td><td>1.015</td><td>0.0</td><td>5760</td></tr><tr><td>15 min Winter</td><td>115.731</td><td>0.0</td><td>19</td></tr></tbody></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	-3.394	1.706	1.3	87.4	O K	30 min Summer	-2.820	2.280	1.6	116.7	O K	60 min Summer	-2.209	2.891	1.9	148.0	O K	120 min Summer	-1.600	3.500	2.1	179.2	O K	180 min Summer	-1.276	3.824	2.3	195.8	O K	240 min Summer	-1.083	4.017	2.4	205.7	O K	360 min Summer	-0.862	4.238	2.5	217.0	O K	480 min Summer	-0.751	4.349	2.5	222.7	O K	600 min Summer	-0.706	4.394	2.6	225.0	O K	720 min Summer	-0.688	4.412	2.6	225.9	O K	960 min Summer	-0.669	4.431	2.6	226.9	O K	1440 min Summer	-0.695	4.405	2.6	225.5	O K	2160 min Summer	-0.819	4.281	2.5	219.2	O K	2880 min Summer	-0.983	4.117	2.4	210.8	O K	4320 min Summer	-1.330	3.770	2.3	193.0	O K	5760 min Summer	-1.644	3.456	2.1	177.0	O K	7200 min Summer	-1.912	3.188	2.0	163.2	O K	8640 min Summer	-2.140	2.960	1.9	151.6	O K	10080 min Summer	-2.340	2.760	1.8	141.3	O K	15 min Winter	-3.188	1.912	1.4	97.9	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	115.731	0.0	19	30 min Summer	77.804	0.0	34	60 min 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Lancaster Court Fareham Hampshire, PO15 5TU		5NO			
Date 29/04/2019		Designed by JB			
File 5no Ring Soakaway. lin1...		Checked by AS			
Innovyze		Source Control 2018.1.1			
Summary of Results for 100 year Return Period (+30%)					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	-2.544	2.556	1.7	130.9	O K
60 min Winter	-1.857	3.243	2.0	166.0	O K
120 min Winter	-1.166	3.934	2.3	201.4	O K
180 min Winter	-0.797	4.303	2.5	220.3	O K
240 min Winter	-0.575	4.525	2.6	231.7	O K
360 min Winter	-0.311	4.789	2.7	245.2	O K
480 min Winter	-0.169	4.931	2.8	252.5	O K
600 min Winter	-0.099	5.001	2.8	256.0	O K
720 min Winter	-0.074	5.026	2.9	257.3	O K
960 min Winter	-0.084	5.016	2.9	256.8	O K
1440 min Winter	-0.134	4.966	2.8	254.3	O K
2160 min Winter	-0.334	4.766	2.7	244.0	O K
2880 min Winter	-0.581	4.519	2.6	231.4	O K
4320 min Winter	-1.072	4.028	2.4	206.2	O K
5760 min Winter	-1.505	3.595	2.2	184.0	O K
7200 min Winter	-1.875	3.225	2.0	165.1	O K
8640 min Winter	-2.180	2.920	1.9	149.5	O K
10080 min Winter	-2.438	2.662	1.7	136.3	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	77.804	0.0	33		
60 min Winter	49.937	0.0	62		
120 min Winter	30.956	0.0	122		
180 min Winter	23.058	0.0	180		
240 min Winter	18.577	0.0	238		
360 min Winter	13.656	0.0	352		
480 min Winter	10.974	0.0	466		
600 min Winter	9.254	0.0	574		
720 min Winter	8.046	0.0	680		
960 min Winter	6.447	0.0	780		
1440 min Winter	4.709	0.0	1082		
2160 min Winter	3.432	0.0	1536		
2880 min Winter	2.739	0.0	1988		
4320 min Winter	1.989	0.0	2852		
5760 min Winter	1.583	0.0	3688		
7200 min Winter	1.325	0.0	4472		
8640 min Winter	1.147	0.0	5280		
10080 min Winter	1.015	0.0	6056		
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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)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+30

Time Area Diagram

Total Area (ha) 0.407

Time (mins)	Area
From:	To: (ha)
0	4 0.407

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<p style="text-align: center;"><u>Model Details</u></p> <p style="text-align: center;">Storage is Online Cover Level (m) 0.000</p> <p style="text-align: center;"><u>Lined Soakaway Structure</u></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Infiltration Coefficient Base (m/hr) 0.13104</td> <td style="width: 50%;">Ring Diameter (m) 3.00</td> </tr> <tr> <td>Infiltration Coefficient Side (m/hr) 0.13104</td> <td>Pit Multiplier 1.4</td> </tr> <tr> <td>Safety Factor 6.5</td> <td>Number Required 5</td> </tr> <tr> <td>Porosity 0.30</td> <td>Cap Volume Depth (m) 5.100</td> </tr> <tr> <td>Invert Level (m) -5.100</td> <td>Cap Infiltration Depth (m) 5.100</td> </tr> </table>			Infiltration Coefficient Base (m/hr) 0.13104	Ring Diameter (m) 3.00	Infiltration Coefficient Side (m/hr) 0.13104	Pit Multiplier 1.4	Safety Factor 6.5	Number Required 5	Porosity 0.30	Cap Volume Depth (m) 5.100	Invert Level (m) -5.100	Cap Infiltration Depth (m) 5.100
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