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Spring Lodge 172 Chester Road Helsby Cheshire WA6 0AR																																																																																																																																																																																																																				
Date 21/12/2021 12:30 File Soakaway TP101 detached...	Designed by mrayner Checked by																																																																																																																																																																																																																			
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Summary of Results for 30 year Return Period Half Drain Time : 114 minutes. <table><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><tr><td>15 min Summer</td><td>98.956</td><td>0.206</td><td>0.3</td><td>2.3</td><td>O K</td></tr><tr><td>30 min Summer</td><td>99.010</td><td>0.260</td><td>0.3</td><td>3.0</td><td>O K</td></tr><tr><td>60 min Summer</td><td>99.052</td><td>0.302</td><td>0.3</td><td>3.4</td><td>O K</td></tr><tr><td>120 min Summer</td><td>99.066</td><td>0.316</td><td>0.3</td><td>3.6</td><td>O K</td></tr><tr><td>180 min Summer</td><td>99.062</td><td>0.312</td><td>0.3</td><td>3.6</td><td>O K</td></tr><tr><td>240 min Summer</td><td>99.053</td><td>0.303</td><td>0.3</td><td>3.5</td><td>O K</td></tr><tr><td>360 min Summer</td><td>99.029</td><td>0.279</td><td>0.3</td><td>3.2</td><td>O K</td></tr><tr><td>480 min Summer</td><td>99.004</td><td>0.254</td><td>0.3</td><td>2.9</td><td>O K</td></tr><tr><td>600 min Summer</td><td>98.980</td><td>0.230</td><td>0.3</td><td>2.6</td><td>O K</td></tr><tr><td>720 min Summer</td><td>98.957</td><td>0.207</td><td>0.3</td><td>2.4</td><td>O K</td></tr><tr><td>960 min Summer</td><td>98.915</td><td>0.165</td><td>0.3</td><td>1.9</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>98.850</td><td>0.100</td><td>0.3</td><td>1.1</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>98.802</td><td>0.052</td><td>0.3</td><td>0.6</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>98.792</td><td>0.042</td><td>0.3</td><td>0.5</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>98.781</td><td>0.031</td><td>0.2</td><td>0.4</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>98.775</td><td>0.025</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>98.771</td><td>0.021</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>98.768</td><td>0.018</td><td>0.1</td><td>0.2</td><td>O 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Summer</td><td>4.507</td><td>0.0</td><td>434</td></tr><tr><td>960 min Summer</td><td>3.624</td><td>0.0</td><td>558</td></tr><tr><td>1440 min Summer</td><td>2.661</td><td>0.0</td><td>792</td></tr><tr><td>2160 min Summer</td><td>1.952</td><td>0.0</td><td>1104</td></tr><tr><td>2880 min Summer</td><td>1.565</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>1.145</td><td>0.0</td><td>2200</td></tr><tr><td>5760 min Summer</td><td>0.917</td><td>0.0</td><td>2928</td></tr><tr><td>7200 min Summer</td><td>0.772</td><td>0.0</td><td>3664</td></tr><tr><td>8640 min Summer</td><td>0.670</td><td>0.0</td><td>4400</td></tr><tr><td>10080 min Summer</td><td>0.594</td><td>0.0</td><td>5136</td></tr><tr><td>15 min Winter</td><td>65.808</td><td>0.0</td><td>18</td></tr></table>			Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	98.956	0.206	0.3	2.3	O K	30 min Summer	99.010	0.260	0.3	3.0	O K	60 min Summer	99.052	0.302	0.3	3.4	O K	120 min Summer	99.066	0.316	0.3	3.6	O K	180 min Summer	99.062	0.312	0.3	3.6	O K	240 min Summer	99.053	0.303	0.3	3.5	O K	360 min Summer	99.029	0.279	0.3	3.2	O K	480 min Summer	99.004	0.254	0.3	2.9	O K	600 min Summer	98.980	0.230	0.3	2.6	O K	720 min Summer	98.957	0.207	0.3	2.4	O K	960 min Summer	98.915	0.165	0.3	1.9	O K	1440 min Summer	98.850	0.100	0.3	1.1	O K	2160 min Summer	98.802	0.052	0.3	0.6	O K	2880 min Summer	98.792	0.042	0.3	0.5	O K	4320 min Summer	98.781	0.031	0.2	0.4	O K	5760 min Summer	98.775	0.025	0.2	0.3	O K	7200 min Summer	98.771	0.021	0.1	0.2	O K	8640 min Summer	98.768	0.018	0.1	0.2	O K	10080 min Summer	98.766	0.016	0.1	0.2	O K	15 min Winter	98.983	0.233	0.3	2.7	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	65.808	0.0	18	30 min Summer	43.570	0.0	32	60 min Summer	27.653	0.0	60	120 min Summer	17.064	0.0	102	180 min Summer	12.735	0.0	134	240 min Summer	10.303	0.0	168	360 min Summer	7.597	0.0	236	480 min Summer	6.121	0.0	304	600 min 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Spring Lodge 172 Chester Road Helsby Cheshire WA6 0AR						
Date 21/12/2021 12:30 File Soakaway TP101 detached...		Designed by mrayner Checked by				
Micro Drainage			Source Control 2017.1.2			
<u>Summary of Results for 30 year Return Period</u>						
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	
30 min Winter	99.046	0.296	0.3	3.4	O K	
60 min Winter	99.097	0.347	0.3	4.0	O K	
120 min Winter	99.119	0.369	0.3	4.2	O K	
180 min Winter	99.111	0.361	0.3	4.1	O K	
240 min Winter	99.098	0.348	0.3	4.0	O K	
360 min Winter	99.061	0.311	0.3	3.5	O K	
480 min Winter	99.022	0.272	0.3	3.1	O K	
600 min Winter	98.983	0.233	0.3	2.7	O K	
720 min Winter	98.947	0.197	0.3	2.2	O K	
960 min Winter	98.883	0.133	0.3	1.5	O K	
1440 min Winter	98.804	0.054	0.3	0.6	O K	
2160 min Winter	98.788	0.038	0.2	0.4	O K	
2880 min Winter	98.781	0.031	0.2	0.4	O K	
4320 min Winter	98.773	0.023	0.1	0.3	O K	
5760 min Winter	98.768	0.018	0.1	0.2	O K	
7200 min Winter	98.765	0.015	0.1	0.2	O K	
8640 min Winter	98.763	0.013	0.1	0.1	O K	
10080 min Winter	98.762	0.012	0.1	0.1	O K	
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)			
30 min Winter	43.570	0.0	32			
60 min Winter	27.653	0.0	60			
120 min Winter	17.064	0.0	114			
180 min Winter	12.735	0.0	144			
240 min Winter	10.303	0.0	182			
360 min Winter	7.597	0.0	258			
480 min Winter	6.121	0.0	330			
600 min Winter	5.173	0.0	398			
720 min Winter	4.507	0.0	464			
960 min Winter	3.624	0.0	586			
1440 min Winter	2.661	0.0	766			
2160 min Winter	1.952	0.0	1104			
2880 min Winter	1.565	0.0	1472			
4320 min Winter	1.145	0.0	2200			
5760 min Winter	0.917	0.0	2848			
7200 min Winter	0.772	0.0	3672			
8640 min Winter	0.670	0.0	4448			
10080 min Winter	0.594	0.0	5240			
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Micro Drainage Source Control 2017.1.2		

Model Details

Storage is Online Cover Level (m) 100.000

Cellular Storage Structure

Invert Level (m) 98.750 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.18792 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.18792

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	12.0	12.0	0.401	0.0	12.0
0.400	12.0	12.0			

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