

Robert Clark Associates				Page 1																																																																																																																																																																																																																			
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<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 161 minutes. <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>4.098</td><td>0.198</td><td>0.2</td><td>2.0</td><td>0 K</td></tr><tr><td>30 min Summer</td><td>4.157</td><td>0.257</td><td>0.2</td><td>2.6</td><td>0 K</td></tr><tr><td>60 min Summer</td><td>4.209</td><td>0.309</td><td>0.2</td><td>3.1</td><td>0 K</td></tr><tr><td>120 min Summer</td><td>4.239</td><td>0.339</td><td>0.2</td><td>3.4</td><td>0 K</td></tr><tr><td>180 min Summer</td><td>4.243</td><td>0.343</td><td>0.2</td><td>3.4</td><td>0 K</td></tr><tr><td>240 min Summer</td><td>4.240</td><td>0.340</td><td>0.2</td><td>3.4</td><td>0 K</td></tr><tr><td>360 min Summer</td><td>4.227</td><td>0.327</td><td>0.2</td><td>3.3</td><td>0 K</td></tr><tr><td>480 min Summer</td><td>4.212</td><td>0.312</td><td>0.2</td><td>3.1</td><td>0 K</td></tr><tr><td>600 min Summer</td><td>4.196</td><td>0.296</td><td>0.2</td><td>3.0</td><td>0 K</td></tr><tr><td>720 min Summer</td><td>4.181</td><td>0.281</td><td>0.2</td><td>2.8</td><td>0 K</td></tr><tr><td>960 min Summer</td><td>4.151</td><td>0.251</td><td>0.2</td><td>2.5</td><td>0 K</td></tr><tr><td>1440 min Summer</td><td>4.099</td><td>0.199</td><td>0.2</td><td>2.0</td><td>0 K</td></tr><tr><td>2160 min Summer</td><td>4.039</td><td>0.139</td><td>0.2</td><td>1.4</td><td>0 K</td></tr><tr><td>2880 min Summer</td><td>3.996</td><td>0.096</td><td>0.2</td><td>1.0</td><td>0 K</td></tr><tr><td>4320 min Summer</td><td>3.951</td><td>0.051</td><td>0.2</td><td>0.5</td><td>0 K</td></tr><tr><td>5760 min Summer</td><td>3.941</td><td>0.041</td><td>0.1</td><td>0.4</td><td>0 K</td></tr><tr><td>7200 min Summer</td><td>3.935</td><td>0.035</td><td>0.1</td><td>0.3</td><td>0 K</td></tr><tr><td>8640 min 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Summer	4.157	0.257	0.2	2.6	0 K	60 min Summer	4.209	0.309	0.2	3.1	0 K	120 min Summer	4.239	0.339	0.2	3.4	0 K	180 min Summer	4.243	0.343	0.2	3.4	0 K	240 min Summer	4.240	0.340	0.2	3.4	0 K	360 min Summer	4.227	0.327	0.2	3.3	0 K	480 min Summer	4.212	0.312	0.2	3.1	0 K	600 min Summer	4.196	0.296	0.2	3.0	0 K	720 min Summer	4.181	0.281	0.2	2.8	0 K	960 min Summer	4.151	0.251	0.2	2.5	0 K	1440 min Summer	4.099	0.199	0.2	2.0	0 K	2160 min Summer	4.039	0.139	0.2	1.4	0 K	2880 min Summer	3.996	0.096	0.2	1.0	0 K	4320 min Summer	3.951	0.051	0.2	0.5	0 K	5760 min Summer	3.941	0.041	0.1	0.4	0 K	7200 min Summer	3.935	0.035	0.1	0.3	0 K	8640 min Summer	3.930	0.030	0.1	0.3	0 K	10080 min Summer	3.927	0.027	0.1	0.3	0 K	15 min Winter	4.122	0.222	0.2	2.2	0 K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	124.633	0.0	18	30 min Summer	83.789	0.0	33	60 min Summer	53.779	0.0	62	120 min Summer	33.337	0.0	116	180 min Summer	24.832	0.0	146	240 min Summer	20.006	0.0	178	360 min 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Date 18 May 2018 File Rear geocell.SRCX		Designed by RTFC Checked by			
Micro Drainage		Source Control 2016.1			
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
30 min Winter	4.190	0.290	0.2	2.9	0 K
60 min Winter	4.252	0.352	0.2	3.5	0 K
120 min Winter	4.291	0.391	0.2	3.9	0 K
180 min Winter	4.294	0.394	0.2	3.9	0 K
240 min Winter	4.289	0.389	0.2	3.9	0 K
360 min Winter	4.271	0.371	0.2	3.7	0 K
480 min Winter	4.248	0.348	0.2	3.5	0 K
600 min Winter	4.224	0.324	0.2	3.2	0 K
720 min Winter	4.201	0.301	0.2	3.0	0 K
960 min Winter	4.156	0.256	0.2	2.6	0 K
1440 min Winter	4.081	0.181	0.2	1.8	0 K
2160 min Winter	4.000	0.100	0.2	1.0	0 K
2880 min Winter	3.953	0.053	0.2	0.5	0 K
4320 min Winter	3.938	0.038	0.1	0.4	0 K
5760 min Winter	3.930	0.030	0.1	0.3	0 K
7200 min Winter	3.925	0.025	0.1	0.3	0 K
8640 min Winter	3.922	0.022	0.1	0.2	0 K
10080 min Winter	3.919	0.019	0.1	0.2	0 K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	83.789	0.0	32		
60 min Winter	53.779	0.0	60		
120 min Winter	33.337	0.0	116		
180 min Winter	24.832	0.0	166		
240 min Winter	20.006	0.0	188		
360 min Winter	14.706	0.0	266		
480 min Winter	11.818	0.0	340		
600 min Winter	9.966	0.0	416		
720 min Winter	8.665	0.0	486		
960 min Winter	6.943	0.0	626		
1440 min Winter	5.071	0.0	884		
2160 min Winter	3.696	0.0	1236		
2880 min Winter	2.949	0.0	1528		
4320 min Winter	2.142	0.0	2204		
5760 min Winter	1.705	0.0	2896		
7200 min Winter	1.427	0.0	3672		
8640 min Winter	1.235	0.0	4408		
10080 min Winter	1.093	0.0	5144		
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FSR</td> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Return Period (years)</td> <td>100</td> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Region</td> <td>England and Wales</td> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>M5-60 (mm)</td> <td>19.000</td> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Ratio R</td> <td>0.350</td> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> <td>Climate Change %</td> <td>+40</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.009 <table> <tr> <th colspan="2">Time (mins)</th> <th rowspan="2">Area (ha)</th> </tr> <tr> <th>From:</th> <th>To:</th> </tr> <tr> <td>0</td> <td>4</td> <td>0.009</td> </tr> </table>			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 %	+40	Time (mins)		Area (ha)	From:	To:	0	4	0.009
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Model Details

Storage is Online Cover Level (m) 4.850

Cellular Storage Structure

Invert Level (m)	3.900
Infiltration Coefficient Base (m/hr)	0.07124
Infiltration Coefficient Side (m/hr)	0.07124
Safety Factor	1.5
Porosity	0.95

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	10.5	10.5	0.500	0.0	17.3
0.400	10.5	17.3			

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