

Robert Clark Associates				Page 1		
Willow Cottage Herne Lane Rustington BN16 3EE		Directors Cottage Toddington Lane Littlehampton				
Date 18 May 2018 File Front geocell.SRCX		Designed by RTFC Checked by				
Micro Drainage		Source Control 2016.1				
<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 93 minutes.						
Storm Event		Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer		9.053	0.453	0.1	0.6	0 K
30 min Summer		9.179	0.579	0.1	0.8	0 K
60 min Summer		9.271	0.671	0.1	1.0	0 K
120 min Summer		9.316	0.716	0.1	1.0	0 K
180 min Summer		9.319	0.719	0.1	1.0	0 K
240 min Summer		9.305	0.705	0.1	1.0	0 K
360 min Summer		9.264	0.664	0.1	0.9	0 K
480 min Summer		9.223	0.623	0.1	0.9	0 K
600 min Summer		9.185	0.585	0.1	0.8	0 K
720 min Summer		9.150	0.550	0.1	0.8	0 K
960 min Summer		9.089	0.489	0.1	0.7	0 K
1440 min Summer		8.995	0.395	0.1	0.6	0 K
2160 min Summer		8.897	0.297	0.1	0.4	0 K
2880 min Summer		8.829	0.229	0.1	0.3	0 K
4320 min Summer		8.740	0.140	0.0	0.2	0 K
5760 min Summer		8.686	0.086	0.0	0.1	0 K
7200 min Summer		8.655	0.055	0.0	0.1	0 K
8640 min Summer		8.645	0.045	0.0	0.1	0 K
10080 min Summer		8.640	0.040	0.0	0.1	0 K
15 min Winter		9.110	0.510	0.1	0.7	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	32		
60 min Summer		53.779	0.0	60		
120 min Summer		33.337	0.0	90		
180 min Summer		24.832	0.0	124		
240 min Summer		20.006	0.0	158		
360 min Summer		14.706	0.0	228		
480 min Summer		11.818	0.0	294		
600 min Summer		9.966	0.0	362		
720 min Summer		8.665	0.0	426		
960 min Summer		6.943	0.0	556		
1440 min Summer		5.071	0.0	808		
2160 min Summer		3.696	0.0	1172		
2880 min Summer		2.949	0.0	1532		
4320 min Summer		2.142	0.0	2252		
5760 min Summer		1.705	0.0	2992		
7200 min Summer		1.427	0.0	3672		
8640 min Summer		1.235	0.0	4368		
10080 min Summer		1.093	0.0	5136		
15 min Winter		124.633	0.0	18		
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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	9.254	0.654	0.1	0.9	0 K
60 min Winter	9.363	0.763	0.1	1.1	0 K
120 min Winter	9.411	0.811	0.1	1.2	0 K
180 min Winter	9.406	0.806	0.1	1.1	0 K
240 min Winter	9.380	0.780	0.1	1.1	0 K
360 min Winter	9.317	0.717	0.1	1.0	0 K
480 min Winter	9.257	0.657	0.1	0.9	0 K
600 min Winter	9.202	0.602	0.1	0.9	0 K
720 min Winter	9.153	0.553	0.1	0.8	0 K
960 min Winter	9.071	0.471	0.1	0.7	0 K
1440 min Winter	8.952	0.352	0.1	0.5	0 K
2160 min Winter	8.837	0.237	0.1	0.3	0 K
2880 min Winter	8.763	0.163	0.0	0.2	0 K
4320 min Winter	8.674	0.074	0.0	0.1	0 K
5760 min Winter	8.645	0.045	0.0	0.1	0 K
7200 min Winter	8.638	0.038	0.0	0.1	0 K
8640 min Winter	8.633	0.033	0.0	0.0	0 K
10080 min Winter	8.629	0.029	0.0	0.0	0 K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	83.789	0.0	31		
60 min Winter	53.779	0.0	58		
120 min Winter	33.337	0.0	94		
180 min Winter	24.832	0.0	132		
240 min Winter	20.006	0.0	170		
360 min Winter	14.706	0.0	244		
480 min Winter	11.818	0.0	314		
600 min Winter	9.966	0.0	384		
720 min Winter	8.665	0.0	450		
960 min Winter	6.943	0.0	580		
1440 min Winter	5.071	0.0	838		
2160 min Winter	3.696	0.0	1212		
2880 min Winter	2.949	0.0	1584		
4320 min Winter	2.142	0.0	2288		
5760 min Winter	1.705	0.0	2904		
7200 min Winter	1.427	0.0	3568		
8640 min Winter	1.235	0.0	4320		
10080 min Winter	1.093	0.0	5048		
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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) 0.003 <table> <tr> <th align="left" colspan="3">Time (mins) Area</th> </tr> <tr> <th align="left">From:</th> <th align="left">To:</th> <th align="left">(ha)</th> </tr> <tr> <td>0</td> <td>4</td> <td>0.003</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			From:	To:	(ha)	0	4	0.003
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<u>Model Details</u> Storage is Online Cover Level (m) 10.000 <u>Cellular Storage Structure</u> Invert Level (m) 8.600 Infiltration Coefficient Base (m/hr) 0.09770 Infiltration Coefficient Side (m/hr) 0.09770 Safety Factor 1.5 Porosity 0.95 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>1.5</td> <td>1.5</td> <td>0.900</td> <td>0.0</td> <td>7.1</td> </tr> <tr> <td>0.800</td> <td>1.5</td> <td>7.1</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	0.000	1.5	1.5	0.900	0.0	7.1	0.800	1.5	7.1			
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