

Robert Clark Associates		Page 1
Willow Cottage Herne Lane Rustington BN16 3EE	72 Ancton Way Elmer Sands	
Date 21.1.18 File Geocell rear43.SRCX	Designed by RTFC Checked by	
Micro Drainage	Source Control 2016.1	

Summary of Results for 100 year Return Period (+30%)

Half Drain Time : 3021 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	2.401	0.101	0.0	0.9	0 K
30 min Summer	2.435	0.135	0.0	1.2	0 K
60 min Summer	2.473	0.173	0.0	1.5	0 K
120 min Summer	2.512	0.212	0.0	1.8	0 K
180 min Summer	2.535	0.235	0.0	2.0	0 K
240 min Summer	2.550	0.250	0.0	2.1	0 K
360 min Summer	2.571	0.271	0.0	2.3	0 K
480 min Summer	2.586	0.286	0.0	2.4	0 K
600 min Summer	2.597	0.297	0.0	2.5	0 K
720 min Summer	2.605	0.305	0.0	2.6	0 K
960 min Summer	2.617	0.317	0.0	2.7	0 K
1440 min Summer	2.627	0.327	0.0	2.8	0 K
2160 min Summer	2.629	0.329	0.0	2.8	0 K
2880 min Summer	2.625	0.325	0.0	2.8	0 K
4320 min Summer	2.616	0.316	0.0	2.7	0 K
5760 min Summer	2.604	0.304	0.0	2.6	0 K
7200 min Summer	2.592	0.292	0.0	2.5	0 K
8640 min Summer	2.580	0.280	0.0	2.4	0 K
10080 min Summer	2.569	0.269	0.0	2.3	0 K
15 min Winter	2.413	0.113	0.0	1.0	0 K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	115.731	0.0	19
30 min Summer	77.804	0.0	34
60 min Summer	49.937	0.0	64
120 min Summer	30.956	0.0	124
180 min Summer	23.058	0.0	184
240 min Summer	18.577	0.0	244
360 min Summer	13.656	0.0	364
480 min Summer	10.974	0.0	482
600 min Summer	9.254	0.0	602
720 min Summer	8.046	0.0	722
960 min Summer	6.447	0.0	962
1440 min Summer	4.709	0.0	1442
2160 min Summer	3.432	0.0	2136
2880 min Summer	2.739	0.0	2424
4320 min Summer	1.989	0.0	3160
5760 min Summer	1.583	0.0	3976
7200 min Summer	1.325	0.0	4824
8640 min Summer	1.147	0.0	5624
10080 min Summer	1.015	0.0	6456
15 min Winter	115.731	0.0	19

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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	2.452	0.152	0.0	1.3	0 K
60 min Winter	2.494	0.194	0.0	1.7	0 K
120 min Winter	2.538	0.238	0.0	2.0	0 K
180 min Winter	2.564	0.264	0.0	2.3	0 K
240 min Winter	2.581	0.281	0.0	2.4	0 K
360 min Winter	2.605	0.305	0.0	2.6	0 K
480 min Winter	2.623	0.323	0.0	2.8	0 K
600 min Winter	2.635	0.335	0.0	2.9	0 K
720 min Winter	2.645	0.345	0.0	2.9	0 K
960 min Winter	2.659	0.359	0.0	3.1	0 K
1440 min Winter	2.673	0.373	0.0	3.2	0 K
2160 min Winter	2.679	0.379	0.0	3.2	0 K
2880 min Winter	2.676	0.376	0.0	3.2	0 K
4320 min Winter	2.662	0.362	0.0	3.1	0 K
5760 min Winter	2.647	0.347	0.0	3.0	0 K
7200 min Winter	2.630	0.330	0.0	2.8	0 K
8640 min Winter	2.612	0.312	0.0	2.7	0 K
10080 min Winter	2.595	0.295	0.0	2.5	0 K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	77.804	0.0	34		
60 min Winter	49.937	0.0	64		
120 min Winter	30.956	0.0	122		
180 min Winter	23.058	0.0	182		
240 min Winter	18.577	0.0	240		
360 min Winter	13.656	0.0	358		
480 min Winter	10.974	0.0	476		
600 min Winter	9.254	0.0	594		
720 min Winter	8.046	0.0	712		
960 min Winter	6.447	0.0	944		
1440 min Winter	4.709	0.0	1400		
2160 min Winter	3.432	0.0	2076		
2880 min Winter	2.739	0.0	2708		
4320 min Winter	1.989	0.0	3372		
5760 min Winter	1.583	0.0	4320		
7200 min Winter	1.325	0.0	5192		
8640 min Winter	1.147	0.0	6136		
10080 min Winter	1.015	0.0	6968		
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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>+30</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.004 <table> <tr> <th colspan="2">Time (mins)</th> <th>Area</th> </tr> <tr> <th>From:</th> <th>To:</th> <th>(ha)</th> </tr> <tr> <td>0</td> <td>4</td> <td>0.004</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 %	+30	Time (mins)		Area	From:	To:	(ha)	0	4	0.004
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<u>Model Details</u> Storage is Online Cover Level (m) 3.100 <u>Cellular Storage Structure</u> Invert Level (m) 2.300 Infiltration Coefficient Base (m/hr) 0.00392 Infiltration Coefficient Side (m/hr) 0.00392 Safety Factor 1.5 Porosity 0.95 <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Depth (m)</th> <th style="text-align: left;">Area (m²)</th> <th style="text-align: left;">Inf. Area (m²)</th> <th style="text-align: left;">Depth (m)</th> <th style="text-align: left;">Area (m²)</th> <th style="text-align: left;">Inf. Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>9.0</td> <td>9.0</td> <td>0.500</td> <td>0.0</td> <td>13.8</td> </tr> <tr> <td>0.400</td> <td>9.0</td> <td>13.8</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	9.0	9.0	0.500	0.0	13.8	0.400	9.0	13.8			
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