

Robert Clark Associates		Page 1
Willow Cottage Herne Lane Rustington BN16 3EE	Ashgrove West Walberton Lane Walberton	
Date 16.9.18 File G1.SRCX	Designed by RTFC Checked by	
Micro Drainage	Source Control 2016.1	

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 3223 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	9.016	0.216	0.0	1.2	0 K
30 min Summer	9.089	0.289	0.0	1.6	0 K
60 min Summer	9.169	0.369	0.0	2.1	0 K
120 min Summer	9.251	0.451	0.0	2.6	0 K
180 min Summer	9.298	0.498	0.0	2.8	0 K
240 min Summer	9.329	0.529	0.0	3.0	0 K
360 min Summer	9.375	0.575	0.0	3.3	0 K
480 min Summer	9.407	0.607	0.0	3.5	0 K
600 min Summer	9.430	0.630	0.0	3.6	0 K
720 min Summer	9.448	0.648	0.0	3.7	0 K
960 min Summer	9.473	0.673	0.0	3.8	0 K
1440 min Summer	9.497	0.697	0.0	4.0	0 K
2160 min Summer	9.502	0.702	0.0	4.0	0 K
2880 min Summer	9.497	0.697	0.0	4.0	0 K
4320 min Summer	9.479	0.679	0.0	3.9	0 K
5760 min Summer	9.458	0.658	0.0	3.8	0 K
7200 min Summer	9.436	0.636	0.0	3.6	0 K
8640 min Summer	9.415	0.615	0.0	3.5	0 K
10080 min Summer	9.394	0.594	0.0	3.4	0 K
15 min Winter	9.042	0.242	0.0	1.4	0 K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	131.851	0.0	19
30 min Summer	88.566	0.0	34
60 min Summer	56.713	0.0	64
120 min Summer	35.004	0.0	124
180 min Summer	25.973	0.0	184
240 min Summer	20.877	0.0	244
360 min Summer	15.365	0.0	364
480 min Summer	12.341	0.0	482
600 min Summer	10.402	0.0	602
720 min Summer	9.042	0.0	722
960 min Summer	7.241	0.0	962
1440 min Summer	5.284	0.0	1442
2160 min Summer	3.848	0.0	2140
2880 min Summer	3.068	0.0	2448
4320 min Summer	2.226	0.0	3200
5760 min Summer	1.771	0.0	3984
7200 min Summer	1.483	0.0	4832
8640 min Summer	1.284	0.0	5696
10080 min Summer	1.137	0.0	6464
15 min Winter	131.851	0.0	19

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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	9.124	0.324	0.0	1.8	0 K
60 min Winter	9.213	0.413	0.0	2.4	0 K
120 min Winter	9.306	0.506	0.0	2.9	0 K
180 min Winter	9.359	0.559	0.0	3.2	0 K
240 min Winter	9.394	0.594	0.0	3.4	0 K
360 min Winter	9.447	0.647	0.0	3.7	0 K
480 min Winter	9.483	0.683	0.0	3.9	0 K
600 min Winter	9.510	0.710	0.0	4.0	0 K
720 min Winter	9.531	0.731	0.0	4.2	0 K
960 min Winter	9.561	0.761	0.0	4.3	0 K
1440 min Winter	9.593	0.793	0.0	4.5	0 K
2160 min Winter	9.607	0.807	0.0	4.6	0 K
2880 min Winter	9.601	0.801	0.0	4.6	0 K
4320 min Winter	9.578	0.778	0.0	4.4	0 K
5760 min Winter	9.551	0.751	0.0	4.3	0 K
7200 min Winter	9.521	0.721	0.0	4.1	0 K
8640 min Winter	9.491	0.691	0.0	3.9	0 K
10080 min Winter	9.461	0.661	0.0	3.8	0 K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	88.566	0.0	34
60 min Winter	56.713	0.0	64
120 min Winter	35.004	0.0	122
180 min Winter	25.973	0.0	182
240 min Winter	20.877	0.0	240
360 min Winter	15.365	0.0	358
480 min Winter	12.341	0.0	476
600 min Winter	10.402	0.0	594
720 min Winter	9.042	0.0	712
960 min Winter	7.241	0.0	944
1440 min Winter	5.284	0.0	1400
2160 min Winter	3.848	0.0	2072
2880 min Winter	3.068	0.0	2704
4320 min Winter	2.226	0.0	3368
5760 min Winter	1.771	0.0	4272
7200 min Winter	1.483	0.0	5192
8640 min Winter	1.284	0.0	6136
10080 min Winter	1.137	0.0	7056

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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>20.000</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) 0.005 <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>0.005</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)	20.000	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	0.005
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<u>Model Details</u> Storage is Online Cover Level (m) 10.000 <u>Cellular Storage Structure</u> Invert Level (m) 8.800 Infiltration Coefficient Base (m/hr) 0.01080 Infiltration Coefficient Side (m/hr) 0.01080 Safety Factor 3.0 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>6.0</td> <td>6.0</td> <td>0.900</td> <td>0.0</td> <td>14.0</td> </tr> <tr> <td>0.800</td> <td>6.0</td> <td>14.0</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	6.0	6.0	0.900	0.0	14.0	0.800	6.0	14.0			
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