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Willow Cottage Herne Lane Rustington BN16 3EE		Apple Barn Cottage Climping 100 year storm calcs				
Date 27.4.19 File Geocell G2-2.SRCX		Designed by rca-l Checked by				
Micro Drainage		Source Control 2016.1				
<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 877 minutes.						
Storm Event		Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer		5.686	0.161	0.1	2.3	0 K
30 min Summer		5.740	0.215	0.1	3.1	0 K
60 min Summer		5.796	0.271	0.1	3.9	0 K
120 min Summer		5.852	0.327	0.1	4.7	0 K
180 min Summer		5.880	0.355	0.1	5.1	0 K
240 min Summer		5.896	0.371	0.1	5.3	0 K
360 min Summer		5.914	0.389	0.1	5.5	0 K
480 min Summer		5.921	0.396	0.1	5.6	0 K
600 min Summer		5.922	0.397	0.1	5.7	0 K
720 min Summer		5.920	0.395	0.1	5.6	0 K
960 min Summer		5.916	0.391	0.1	5.6	0 K
1440 min Summer		5.903	0.378	0.1	5.4	0 K
2160 min Summer		5.879	0.354	0.1	5.0	0 K
2880 min Summer		5.854	0.329	0.1	4.7	0 K
4320 min Summer		5.808	0.283	0.1	4.0	0 K
5760 min Summer		5.767	0.242	0.1	3.4	0 K
7200 min Summer		5.731	0.206	0.1	2.9	0 K
8640 min Summer		5.699	0.174	0.1	2.5	0 K
10080 min Summer		5.672	0.147	0.1	2.1	0 K
15 min Winter		5.706	0.181	0.1	2.6	0 K
Storm Event		Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
15 min Summer		124.633	0.0	19		
30 min Summer		83.789	0.0	34		
60 min Summer		53.779	0.0	64		
120 min Summer		33.337	0.0	122		
180 min Summer		24.832	0.0	182		
240 min Summer		20.006	0.0	242		
360 min Summer		14.706	0.0	362		
480 min Summer		11.818	0.0	480		
600 min Summer		9.966	0.0	596		
720 min Summer		8.665	0.0	644		
960 min Summer		6.943	0.0	762		
1440 min Summer		5.071	0.0	1024		
2160 min Summer		3.696	0.0	1432		
2880 min Summer		2.949	0.0	1844		
4320 min Summer		2.142	0.0	2640		
5760 min Summer		1.705	0.0	3456		
7200 min Summer		1.427	0.0	4184		
8640 min Summer		1.235	0.0	4928		
10080 min Summer		1.093	0.0	5648		
15 min Winter		124.633	0.0	19		
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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	5.766	0.241	0.1	3.4	0 K
60 min Winter	5.830	0.305	0.1	4.3	0 K
120 min Winter	5.893	0.368	0.1	5.2	0 K
180 min Winter	5.927	0.402	0.1	5.7	0 K
240 min Winter	5.953	0.428	0.1	6.0	0 K
360 min Winter	6.171	0.646	0.1	6.3	Flood Risk
480 min Winter	6.333	0.808	0.1	6.5	Flood Risk
600 min Winter	6.400	0.875	0.1	6.5	Flood Risk
720 min Winter	6.404	0.879	0.1	6.6	Flood Risk
960 min Winter	6.304	0.779	0.1	6.5	Flood Risk
1440 min Winter	6.037	0.512	0.1	6.2	0 K
2160 min Winter	5.924	0.399	0.1	5.7	0 K
2880 min Winter	5.888	0.363	0.1	5.2	0 K
4320 min Winter	5.820	0.295	0.1	4.2	0 K
5760 min Winter	5.759	0.234	0.1	3.3	0 K
7200 min Winter	5.708	0.183	0.1	2.6	0 K
8640 min Winter	5.664	0.139	0.1	2.0	0 K
10080 min Winter	5.629	0.104	0.1	1.5	0 K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	83.789	0.0	33
60 min Winter	53.779	0.0	62
120 min Winter	33.337	0.0	122
180 min Winter	24.832	0.0	180
240 min Winter	20.006	0.0	238
360 min Winter	14.706	0.0	354
480 min Winter	11.818	0.0	468
600 min Winter	9.966	0.0	578
720 min Winter	8.665	0.0	686
960 min Winter	6.943	0.0	888
1440 min Winter	5.071	0.0	1098
2160 min Winter	3.696	0.0	1556
2880 min Winter	2.949	0.0	2016
4320 min Winter	2.142	0.0	2852
5760 min Winter	1.705	0.0	3640
7200 min Winter	1.427	0.0	4400
8640 min Winter	1.235	0.0	5112
10080 min Winter	1.093	0.0	5848

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Rainfall Details

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 Area Diagram

Total Area (ha) 0.010

Time (mins)	Area (ha)
From:	To:
0	4 0.010

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Model Details

Storage is Online Cover Level (m) 6.425

Cellular Storage Structure

Invert Level (m)	5.525
Infiltration Coefficient Base (m/hr)	0.03402
Infiltration Coefficient Side (m/hr)	0.03402
Safety Factor	3.0
Porosity	0.95

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	15.0	15.0	0.500	0.0	21.4
0.400	15.0	21.4			

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