

Robert Clark Associates				Page 1		
Willow Cottage Herne Lane Rustington BN16 3EE		R/o 182 Chichester Road Bognor Concrete Ring Soakaway				
Date 15.5.19 File Concrete ring.SRCX		Designed by Checked by				
Micro Drainage		Source Control 2016.1				
Summary of Results for 100 year Return Period (+30%) Half Drain Time : 2831 minutes.						
Storm Event		Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer		5.059	0.384	0.0	1.5	0 K
30 min Summer		5.190	0.515	0.0	2.0	0 K
60 min Summer		5.332	0.657	0.0	2.6	0 K
120 min Summer		5.482	0.807	0.0	3.2	0 K
180 min Summer		5.569	0.894	0.0	3.5	0 K
240 min Summer		5.626	0.951	0.0	3.7	0 K
360 min Summer		5.706	1.031	0.0	4.1	0 K
480 min Summer		5.762	1.087	0.0	4.3	0 K
600 min Summer		5.802	1.127	0.0	4.4	0 K
720 min Summer		5.833	1.158	0.0	4.6	0 K
960 min Summer		5.874	1.199	0.0	4.7	0 K
1440 min Summer		5.911	1.236	0.0	4.9	0 K
2160 min Summer		5.913	1.238	0.0	4.9	0 K
2880 min Summer		5.904	1.229	0.0	4.8	0 K
4320 min Summer		5.872	1.197	0.0	4.7	0 K
5760 min Summer		5.832	1.157	0.0	4.6	0 K
7200 min Summer		5.788	1.113	0.0	4.4	0 K
8640 min Summer		5.747	1.072	0.0	4.2	0 K
10080 min Summer		5.709	1.034	0.0	4.1	0 K
15 min Winter		5.105	0.430	0.0	1.7	0 K
Storm Event		Rain (mm/hr)	Flooded Volume (m³)	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	362		
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	1440		
2160 min Summer		3.432	0.0	1972		
2880 min Summer		2.739	0.0	2308		
4320 min Summer		1.989	0.0	3072		
5760 min Summer		1.583	0.0	3920		
7200 min Summer		1.325	0.0	4752		
8640 min Summer		1.147	0.0	5544		
10080 min Summer		1.015	0.0	6448		
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	5.252	0.577	0.0	2.3	0 K
60 min Winter	5.412	0.737	0.0	2.9	0 K
120 min Winter	5.580	0.905	0.0	3.6	0 K
180 min Winter	5.678	1.003	0.0	3.9	0 K
240 min Winter	5.744	1.069	0.0	4.2	0 K
360 min Winter	5.835	1.160	0.0	4.6	0 K
480 min Winter	5.899	1.224	0.0	4.8	0 K
600 min Winter	5.946	1.271	0.0	5.0	0 K
720 min Winter	5.982	1.307	0.0	5.1	0 K
960 min Winter	6.032	1.357	0.0	5.3	0 K
1440 min Winter	6.083	1.408	0.0	5.5	0 K
2160 min Winter	6.098	1.423	0.0	5.6	0 K
2880 min Winter	6.080	1.405	0.0	5.5	0 K
4320 min Winter	6.043	1.368	0.0	5.4	0 K
5760 min Winter	5.989	1.314	0.0	5.2	0 K
7200 min Winter	5.930	1.255	0.0	4.9	0 K
8640 min Winter	5.871	1.196	0.0	4.7	0 K
10080 min Winter	5.814	1.139	0.0	4.5	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	710		
960 min Winter	6.447	0.0	942		
1440 min Winter	4.709	0.0	1398		
2160 min Winter	3.432	0.0	2052		
2880 min Winter	2.739	0.0	2620		
4320 min Winter	1.989	0.0	3284		
5760 min Winter	1.583	0.0	4208		
7200 min Winter	1.325	0.0	5120		
8640 min Winter	1.147	0.0	6048		
10080 min Winter	1.015	0.0	6864		
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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) 0.007 <table> <thead> <tr> <th colspan="2">Time (mins)</th> <th rowspan="2">Area (ha)</th> </tr> <tr> <th>From:</th> <th>To:</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>4</td> <td>0.007</td> </tr> </tbody> </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 (ha)	From:	To:	0	4	0.007
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Micro Drainage Source Control 2016.1		

Model Details

Storage is Online Cover Level (m) 6.550

Lined Soakaway Structure

Infiltration Coefficient Base (m/hr)	0.01092
Infiltration Coefficient Side (m/hr)	0.01092
Safety Factor	4.0
Porosity	0.30
Invert Level (m)	4.675
Ring Diameter (m)	1.50
Pit Multiplier	2.0
Number Required	1
Cap Volume Depth (m)	0.000
Cap Infiltration Depth (m)	0.000

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