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Willow Cottage Herne Lane Rustington BN16 3EE	36 Corbishley Road Surface Water Drainage Calculations	
Date 7 December 2017 File Conc soakaways rear.SRCX	Designed by RTFC Checked by	
Micro Drainage	Source Control 2016.1	

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

Half Drain Time : 702 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	3.746	0.546	0.0	1.5	0 K
30 min Summer	3.929	0.729	0.0	2.0	0 K
60 min Summer	4.121	0.921	0.0	2.5	0 K
120 min Summer	4.309	1.109	0.1	3.1	0 K
180 min Summer	4.403	1.203	0.1	3.3	0 K
240 min Summer	4.454	1.254	0.1	3.5	0 K
360 min Summer	4.504	1.304	0.1	3.6	0 K
480 min Summer	4.524	1.324	0.1	3.6	0 K
600 min Summer	4.539	1.339	0.1	3.7	0 K
720 min Summer	4.548	1.348	0.1	3.7	0 K
960 min Summer	4.557	1.357	0.1	3.7	0 K
1440 min Summer	4.545	1.345	0.1	3.7	0 K
2160 min Summer	4.499	1.299	0.1	3.6	0 K
2880 min Summer	4.442	1.242	0.1	3.4	0 K
4320 min Summer	4.330	1.130	0.1	3.1	0 K
5760 min Summer	4.233	1.033	0.0	2.8	0 K
7200 min Summer	4.152	0.952	0.0	2.6	0 K
8640 min Summer	4.084	0.884	0.0	2.4	0 K
10080 min Summer	4.028	0.828	0.0	2.3	0 K
15 min Winter	3.811	0.611	0.0	1.7	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	122
180 min Summer	23.058	0.0	182
240 min Summer	18.577	0.0	242
360 min Summer	13.656	0.0	360
480 min Summer	10.974	0.0	420
600 min Summer	9.254	0.0	478
720 min Summer	8.046	0.0	542
960 min Summer	6.447	0.0	672
1440 min Summer	4.709	0.0	940
2160 min Summer	3.432	0.0	1360
2880 min Summer	2.739	0.0	1760
4320 min Summer	1.989	0.0	2548
5760 min Summer	1.583	0.0	3336
7200 min Summer	1.325	0.0	4040
8640 min Summer	1.147	0.0	4840
10080 min Summer	1.015	0.0	5552
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	4.016	0.816	0.0	2.2	0 K
60 min Winter	4.233	1.033	0.0	2.8	0 K
120 min Winter	4.444	1.244	0.1	3.4	0 K
180 min Winter	4.550	1.350	0.1	3.7	0 K
240 min Winter	4.616	1.416	0.1	3.9	0 K
360 min Winter	4.717	1.517	0.1	4.1	0 K
480 min Winter	4.762	1.562	0.1	4.1	0 K
600 min Winter	4.774	1.574	0.1	4.2	0 K
720 min Winter	4.784	1.584	0.1	4.2	0 K
960 min Winter	4.783	1.583	0.1	4.2	0 K
1440 min Winter	4.720	1.520	0.1	4.1	0 K
2160 min Winter	4.585	1.385	0.1	3.8	0 K
2880 min Winter	4.495	1.295	0.1	3.6	0 K
4320 min Winter	4.336	1.136	0.1	3.1	0 K
5760 min Winter	4.208	1.008	0.0	2.8	0 K
7200 min Winter	4.105	0.905	0.0	2.5	0 K
8640 min Winter	4.023	0.823	0.0	2.3	0 K
10080 min Winter	3.955	0.755	0.0	2.1	0 K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	77.804	0.0	33		
60 min Winter	49.937	0.0	62		
120 min Winter	30.956	0.0	120		
180 min Winter	23.058	0.0	178		
240 min Winter	18.577	0.0	236		
360 min Winter	13.656	0.0	348		
480 min Winter	10.974	0.0	456		
600 min Winter	9.254	0.0	550		
720 min Winter	8.046	0.0	572		
960 min Winter	6.447	0.0	722		
1440 min Winter	4.709	0.0	1024		
2160 min Winter	3.432	0.0	1452		
2880 min Winter	2.739	0.0	1872		
4320 min Winter	1.989	0.0	2680		
5760 min Winter	1.583	0.0	3464		
7200 min Winter	1.325	0.0	4248		
8640 min Winter	1.147	0.0	5008		
10080 min Winter	1.015	0.0	5752		
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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> <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>0.007</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	0.007
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Model Details

Storage is Online Cover Level (m) 5.200

Lined Soakaway Structure

Infiltration Coefficient Base (m/hr)	0.00000
Infiltration Coefficient Side (m/hr)	0.05576
Safety Factor	3.0
Porosity	0.30
Invert Level (m)	3.200
Ring Diameter (m)	1.50
Pit Multiplier	1.5
Number Required	1
Cap Volume Depth (m)	0.000
Cap Infiltration Depth (m)	1.400

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