

Robert Clark Associates		Page 1
Willow Cottage Herne Lane Rustington BN16 3EE	Sunnymeade Courtwick lane Littlehampton	
Date 18.5.18 File Permeable driveways.SRCX	Designed by RTFC Checked by	
Micro Drainage	Source Control 2016.1	

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

Half Drain Time : 1538 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	4.630	0.110	0.0	0.6	0 K
30 min Summer	4.663	0.143	0.0	0.8	0 K
60 min Summer	4.699	0.179	0.0	1.1	0 K
120 min Summer	4.736	0.216	0.0	1.3	Flood Risk
180 min Summer	4.756	0.236	0.0	1.5	Flood Risk
240 min Summer	4.769	0.249	0.0	1.6	Flood Risk
360 min Summer	4.785	0.265	0.0	1.7	Flood Risk
480 min Summer	4.795	0.275	0.0	1.8	Flood Risk
600 min Summer	4.801	0.281	0.0	1.8	Flood Risk
720 min Summer	4.805	0.285	0.0	1.8	Flood Risk
960 min Summer	4.808	0.288	0.0	1.8	Flood Risk
1440 min Summer	4.803	0.283	0.0	1.8	Flood Risk
2160 min Summer	4.793	0.273	0.0	1.7	Flood Risk
2880 min Summer	4.782	0.262	0.0	1.7	Flood Risk
4320 min Summer	4.758	0.238	0.0	1.5	Flood Risk
5760 min Summer	4.735	0.215	0.0	1.3	Flood Risk
7200 min Summer	4.713	0.193	0.0	1.2	Flood Risk
8640 min Summer	4.693	0.173	0.0	1.0	0 K
10080 min Summer	4.674	0.154	0.0	0.9	0 K
15 min Winter	4.642	0.122	0.0	0.7	0 K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	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	124
180 min Summer	24.832	0.0	184
240 min Summer	20.006	0.0	242
360 min Summer	14.706	0.0	362
480 min Summer	11.818	0.0	482
600 min Summer	9.966	0.0	602
720 min Summer	8.665	0.0	722
960 min Summer	6.943	0.0	960
1440 min Summer	5.071	0.0	1254
2160 min Summer	3.696	0.0	1620
2880 min Summer	2.949	0.0	2016
4320 min Summer	2.142	0.0	2812
5760 min Summer	1.705	0.0	3632
7200 min Summer	1.427	0.0	4400
8640 min Summer	1.235	0.0	5192
10080 min Summer	1.093	0.0	5952
15 min Winter	124.633	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	4.679	0.159	0.0	0.9	0 K
60 min Winter	4.720	0.200	0.0	1.2	Flood Risk
120 min Winter	4.761	0.241	0.0	1.5	Flood Risk
180 min Winter	4.784	0.264	0.0	1.7	Flood Risk
240 min Winter	4.799	0.279	0.0	1.8	Flood Risk
360 min Winter	4.819	0.299	0.0	1.9	Flood Risk
480 min Winter	4.831	0.311	0.0	2.0	Flood Risk
600 min Winter	4.839	0.319	0.0	2.1	Flood Risk
720 min Winter	4.845	0.325	0.0	2.1	Flood Risk
960 min Winter	4.850	0.330	0.0	2.1	Flood Risk
1440 min Winter	4.848	0.328	0.0	2.1	Flood Risk
2160 min Winter	4.834	0.314	0.0	2.0	Flood Risk
2880 min Winter	4.819	0.299	0.0	1.9	Flood Risk
4320 min Winter	4.784	0.264	0.0	1.7	Flood Risk
5760 min Winter	4.749	0.229	0.0	1.4	Flood Risk
7200 min Winter	4.715	0.195	0.0	1.2	Flood Risk
8640 min Winter	4.684	0.164	0.0	1.0	0 K
10080 min Winter	4.657	0.137	0.0	0.8	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	64		
120 min Winter	33.337	0.0	122		
180 min Winter	24.832	0.0	180		
240 min Winter	20.006	0.0	240		
360 min Winter	14.706	0.0	356		
480 min Winter	11.818	0.0	474		
600 min Winter	9.966	0.0	590		
720 min Winter	8.665	0.0	706		
960 min Winter	6.943	0.0	932		
1440 min Winter	5.071	0.0	1370		
2160 min Winter	3.696	0.0	1732		
2880 min Winter	2.949	0.0	2188		
4320 min Winter	2.142	0.0	3072		
5760 min Winter	1.705	0.0	3968		
7200 min Winter	1.427	0.0	4760		
8640 min Winter	1.235	0.0	5536		
10080 min Winter	1.093	0.0	6256		
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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>+40</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.003 <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From: To:</td> <td>(ha)</td> </tr> <tr> <td>0</td> <td>4 0.003</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 %	+40	Time (mins)	Area	From: To:	(ha)	0	4 0.003
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Model Details

Storage is Online Cover Level (m) 5.000

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.00313
Membrane Percolation (mm/hr)	1000
Max Percolation (l/s)	5.6
Safety Factor	1.5
Porosity	0.35
Invert Level (m)	4.520
Width (m)	4.0
Length (m)	5.0
Slope (1:X)	100.0
Depression Storage (mm)	5
Evaporation (mm/day)	3
Membrane Depth (m)	0

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