

Robert Clark Associates		Page 1
Willow Cottage Herne Lane Rustington BN16 3EE	44 Ferringham Lane Ferring Permeable Paving	
Date 17.8.18 File PP-test-3.SRCX	Designed by RTFC Checked by	
Micro Drainage	Source Control 2016.1	

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

Half Drain Time : 66 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	5.640	0.170	5.9	26.2	0 K
30 min Summer	5.690	0.220	5.9	33.9	0 K
60 min Summer	5.721	0.251	5.9	38.8	Flood Risk
120 min Summer	5.730	0.260	5.9	40.2	Flood Risk
180 min Summer	5.720	0.250	5.9	38.6	Flood Risk
240 min Summer	5.704	0.234	5.9	36.1	Flood Risk
360 min Summer	5.669	0.199	5.9	30.8	0 K
480 min Summer	5.638	0.168	5.9	25.9	0 K
600 min Summer	5.609	0.139	5.9	21.5	0 K
720 min Summer	5.584	0.114	5.9	17.7	0 K
960 min Summer	5.547	0.077	5.9	11.9	0 K
1440 min Summer	5.517	0.047	5.5	7.2	0 K
2160 min Summer	5.505	0.035	4.1	5.4	0 K
2880 min Summer	5.498	0.028	3.3	4.3	0 K
4320 min Summer	5.491	0.021	2.4	3.2	0 K
5760 min Summer	5.487	0.017	2.0	2.6	0 K
7200 min Summer	5.484	0.014	1.6	2.1	0 K
8640 min Summer	5.482	0.012	1.4	1.9	0 K
10080 min Summer	5.481	0.011	1.3	1.6	0 K
15 min Winter	5.664	0.194	5.9	30.0	0 K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	124.633	0.0	17
30 min Summer	83.789	0.0	31
60 min Summer	53.779	0.0	56
120 min Summer	33.337	0.0	88
180 min Summer	24.832	0.0	122
240 min Summer	20.006	0.0	156
360 min Summer	14.706	0.0	224
480 min Summer	11.818	0.0	288
600 min Summer	9.966	0.0	348
720 min Summer	8.665	0.0	406
960 min Summer	6.943	0.0	520
1440 min Summer	5.071	0.0	736
2160 min Summer	3.696	0.0	1100
2880 min Summer	2.949	0.0	1468
4320 min Summer	2.142	0.0	2172
5760 min Summer	1.705	0.0	2928
7200 min Summer	1.427	0.0	3600
8640 min Summer	1.235	0.0	4400
10080 min Summer	1.093	0.0	5104
15 min Winter	124.633	0.0	17

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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	5.722	0.252	5.9	38.9	Flood	Risk
60 min Winter	5.762	0.292	5.9	45.2	Flood	Risk
120 min Winter	5.769	0.299	5.9	46.1	Flood	Risk
180 min Winter	5.752	0.282	5.9	43.6	Flood	Risk
240 min Winter	5.727	0.257	5.9	39.7	Flood	Risk
360 min Winter	5.673	0.203	5.9	31.4		0 K
480 min Winter	5.624	0.154	5.9	23.7		0 K
600 min Winter	5.581	0.111	5.9	17.2		0 K
720 min Winter	5.548	0.078	5.9	12.0		0 K
960 min Winter	5.518	0.048	5.6	7.3		0 K
1440 min Winter	5.505	0.035	4.1	5.4		0 K
2160 min Winter	5.496	0.026	3.0	3.9		0 K
2880 min Winter	5.491	0.021	2.4	3.2		0 K
4320 min Winter	5.485	0.015	1.8	2.3		0 K
5760 min Winter	5.482	0.012	1.4	1.8		0 K
7200 min Winter	5.480	0.010	1.2	1.5		0 K
8640 min Winter	5.479	0.009	1.0	1.3		0 K
10080 min Winter	5.478	0.008	0.9	1.2		0 K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)			
30 min Winter	83.789	0.0	31			
60 min Winter	53.779	0.0	58			
120 min Winter	33.337	0.0	94			
180 min Winter	24.832	0.0	134			
240 min Winter	20.006	0.0	170			
360 min Winter	14.706	0.0	240			
480 min Winter	11.818	0.0	304			
600 min Winter	9.966	0.0	362			
720 min Winter	8.665	0.0	414			
960 min Winter	6.943	0.0	500			
1440 min Winter	5.071	0.0	736			
2160 min Winter	3.696	0.0	1100			
2880 min Winter	2.949	0.0	1496			
4320 min Winter	2.142	0.0	2200			
5760 min Winter	1.705	0.0	2936			
7200 min Winter	1.427	0.0	3648			
8640 min Winter	1.235	0.0	4328			
10080 min Winter	1.093	0.0	5168			
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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) 0.140 <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>0.140</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 %	+40	Time (mins)		Area (ha)	From:	To:	0	4	0.140
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Model Details

Storage is Online Cover Level (m) 6.000

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.12348
Membrane Percolation (mm/hr)	1000
Max Percolation (l/s)	143.0
Safety Factor	3.0
Porosity	0.30
Invert Level (m)	5.470
Width (m)	22.0
Length (m)	23.4
Slope (1:X)	0.0
Depression Storage (mm)	5
Evaporation (mm/day)	3
Membrane Depth (m)	0

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