

Robert Clark Associates				Page 1																																																																																																																																																																																																																			
Willow Cottage Herne Lane Rustington BN16 3EE		99 Victoria Drive Bognor Regis Permeable paving																																																																																																																																																																																																																					
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<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 613 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>6.764</td><td>0.104</td><td>0.4</td><td>8.8</td><td>O K</td></tr><tr><td>30 min Summer</td><td>6.803</td><td>0.143</td><td>0.4</td><td>12.3</td><td>Flood Risk</td></tr><tr><td>60 min Summer</td><td>6.845</td><td>0.185</td><td>0.4</td><td>15.8</td><td>Flood Risk</td></tr><tr><td>120 min Summer</td><td>6.885</td><td>0.225</td><td>0.4</td><td>19.2</td><td>Flood Risk</td></tr><tr><td>180 min Summer</td><td>6.904</td><td>0.244</td><td>0.4</td><td>20.9</td><td>Flood Risk</td></tr><tr><td>240 min Summer</td><td>6.915</td><td>0.255</td><td>0.4</td><td>21.8</td><td>Flood Risk</td></tr><tr><td>360 min Summer</td><td>6.924</td><td>0.264</td><td>0.4</td><td>22.6</td><td>Flood Risk</td></tr><tr><td>480 min Summer</td><td>6.926</td><td>0.266</td><td>0.4</td><td>22.8</td><td>Flood Risk</td></tr><tr><td>600 min Summer</td><td>6.925</td><td>0.265</td><td>0.4</td><td>22.7</td><td>Flood Risk</td></tr><tr><td>720 min Summer</td><td>6.924</td><td>0.264</td><td>0.4</td><td>22.6</td><td>Flood Risk</td></tr><tr><td>960 min Summer</td><td>6.918</td><td>0.258</td><td>0.4</td><td>22.1</td><td>Flood Risk</td></tr><tr><td>1440 min Summer</td><td>6.904</td><td>0.244</td><td>0.4</td><td>20.8</td><td>Flood Risk</td></tr><tr><td>2160 min Summer</td><td>6.878</td><td>0.218</td><td>0.4</td><td>18.6</td><td>Flood Risk</td></tr><tr><td>2880 min Summer</td><td>6.852</td><td>0.192</td><td>0.4</td><td>16.4</td><td>Flood Risk</td></tr><tr><td>4320 min Summer</td><td>6.806</td><td>0.146</td><td>0.4</td><td>12.5</td><td>Flood Risk</td></tr><tr><td>5760 min Summer</td><td>6.769</td><td>0.109</td><td>0.4</td><td>9.3</td><td>O K</td></tr><tr><td>7200 min 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Summer</td><td>11.818</td><td>0.0</td><td>468</td></tr><tr><td>600 min Summer</td><td>9.966</td><td>0.0</td><td>518</td></tr><tr><td>720 min Summer</td><td>8.665</td><td>0.0</td><td>578</td></tr><tr><td>960 min Summer</td><td>6.943</td><td>0.0</td><td>702</td></tr><tr><td>1440 min Summer</td><td>5.071</td><td>0.0</td><td>970</td></tr><tr><td>2160 min Summer</td><td>3.696</td><td>0.0</td><td>1384</td></tr><tr><td>2880 min Summer</td><td>2.949</td><td>0.0</td><td>1784</td></tr><tr><td>4320 min Summer</td><td>2.142</td><td>0.0</td><td>2548</td></tr><tr><td>5760 min Summer</td><td>1.705</td><td>0.0</td><td>3232</td></tr><tr><td>7200 min Summer</td><td>1.427</td><td>0.0</td><td>3896</td></tr><tr><td>8640 min Summer</td><td>1.235</td><td>0.0</td><td>4576</td></tr><tr><td>10080 min Summer</td><td>1.093</td><td>0.0</td><td>5152</td></tr><tr><td>15 min Winter</td><td>124.633</td><td>0.0</td><td>19</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume 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Willow Cottage Herne Lane Rustington BN16 3EE		99 Victoria Drive Bognor Regis Permeable paving			
Date 15 July 2020 File Permeable Paving.SRCX		Designed by RC Checked by			
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	6.823	0.163	0.4	13.9	Flood Risk
60 min Winter	6.870	0.210	0.4	18.0	Flood Risk
120 min Winter	6.916	0.256	0.4	21.9	Flood Risk
180 min Winter	6.939	0.279	0.4	23.8	Flood Risk
240 min Winter	6.952	0.292	0.4	24.9	Flood Risk
360 min Winter	6.965	0.305	0.4	26.1	Flood Risk
480 min Winter	6.969	0.309	0.4	26.5	Flood Risk
600 min Winter	6.969	0.309	0.4	26.4	Flood Risk
720 min Winter	6.966	0.306	0.4	26.1	Flood Risk
960 min Winter	6.957	0.297	0.4	25.4	Flood Risk
1440 min Winter	6.936	0.276	0.4	23.6	Flood Risk
2160 min Winter	6.897	0.237	0.4	20.2	Flood Risk
2880 min Winter	6.857	0.197	0.4	16.9	Flood Risk
4320 min Winter	6.788	0.128	0.4	10.9	O K
5760 min Winter	6.736	0.076	0.4	6.5	O K
7200 min Winter	6.710	0.050	0.4	4.2	O K
8640 min Winter	6.703	0.043	0.3	3.7	O K
10080 min Winter	6.698	0.038	0.3	3.3	O 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	120		
180 min Winter	24.832	0.0	178		
240 min Winter	20.006	0.0	236		
360 min Winter	14.706	0.0	352		
480 min Winter	11.818	0.0	462		
600 min Winter	9.966	0.0	570		
720 min Winter	8.665	0.0	670		
960 min Winter	6.943	0.0	758		
1440 min Winter	5.071	0.0	1064		
2160 min Winter	3.696	0.0	1496		
2880 min Winter	2.949	0.0	1928		
4320 min Winter	2.142	0.0	2680		
5760 min Winter	1.705	0.0	3296		
7200 min Winter	1.427	0.0	3752		
8640 min Winter	1.235	0.0	4496		
10080 min Winter	1.093	0.0	5240		
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Micro Drainage Source Control 2016.1		

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) 0.045

Time (mins)	Area
From: To:	(ha)
0 4	0.045

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<u>Model Details</u> Storage is Online Cover Level (m) 7.100 <u>Porous Car Park Structure</u> <table> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.01824</td> <td>Width (m)</td> <td>15.0</td> </tr> <tr> <td>Membrane Percolation (mm/hr)</td> <td>1000</td> <td>Length (m)</td> <td>19.0</td> </tr> <tr> <td>Max Percolation (l/s)</td> <td>79.2</td> <td>Slope (1:X)</td> <td>0.0</td> </tr> <tr> <td>Safety Factor</td> <td>4.0</td> <td>Depression Storage (mm)</td> <td>5</td> </tr> <tr> <td>Porosity</td> <td>0.30</td> <td>Evaporation (mm/day)</td> <td>3</td> </tr> <tr> <td>Invert Level (m)</td> <td>6.660</td> <td>Membrane Depth (m)</td> <td>0</td> </tr> </table>			Infiltration Coefficient Base (m/hr)	0.01824	Width (m)	15.0	Membrane Percolation (mm/hr)	1000	Length (m)	19.0	Max Percolation (l/s)	79.2	Slope (1:X)	0.0	Safety Factor	4.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	6.660	Membrane Depth (m)	0
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