

Robert Clark Associates			Page 1																																																																																																																																																																																															
Willow Cottage Herne Lane Rustington BN16 3EE		Plot 1 Fontwell Avenue Eastergate																																																																																																																																																																																																
Date 24 August 2021 File Permeable paving calcs.SRCX		Designed by RTFC Checked by																																																																																																																																																																																																
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<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 15 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>12.474</td><td>0.104</td><td>5.3</td><td>6.2</td><td>O K</td></tr><tr><td>30 min Summer</td><td>12.488</td><td>0.118</td><td>5.3</td><td>7.7</td><td>O K</td></tr><tr><td>60 min Summer</td><td>12.493</td><td>0.123</td><td>5.3</td><td>8.3</td><td>O K</td></tr><tr><td>120 min Summer</td><td>12.483</td><td>0.113</td><td>5.3</td><td>7.1</td><td>O K</td></tr><tr><td>180 min Summer</td><td>12.470</td><td>0.100</td><td>5.3</td><td>5.7</td><td>O K</td></tr><tr><td>240 min Summer</td><td>12.461</td><td>0.091</td><td>4.9</td><td>4.8</td><td>O K</td></tr><tr><td>360 min Summer</td><td>12.448</td><td>0.078</td><td>4.2</td><td>3.5</td><td>O K</td></tr><tr><td>480 min Summer</td><td>12.438</td><td>0.068</td><td>3.7</td><td>2.6</td><td>O K</td></tr><tr><td>600 min Summer</td><td>12.431</td><td>0.061</td><td>3.3</td><td>2.1</td><td>O K</td></tr><tr><td>720 min Summer</td><td>12.425</td><td>0.055</td><td>2.9</td><td>1.7</td><td>O K</td></tr><tr><td>960 min Summer</td><td>12.418</td><td>0.048</td><td>2.5</td><td>1.3</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>12.411</td><td>0.041</td><td>1.8</td><td>1.0</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>12.405</td><td>0.035</td><td>1.3</td><td>0.7</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>12.402</td><td>0.032</td><td>1.1</td><td>0.6</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>12.397</td><td>0.027</td><td>0.8</td><td>0.4</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>12.394</td><td>0.024</td><td>0.6</td><td>0.3</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>12.392</td><td>0.022</td><td>0.5</td><td>0.3</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>12.390</td><td>0.020</td><td>0.4</td><td>0.2</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>131.851</td><td>0.0</td><td>15</td></tr><tr><td>30 min Summer</td><td>88.566</td><td>0.0</td><td>23</td></tr><tr><td>60 min Summer</td><td>56.713</td><td>0.0</td><td>40</td></tr><tr><td>120 min Summer</td><td>35.004</td><td>0.0</td><td>74</td></tr><tr><td>180 min Summer</td><td>25.973</td><td>0.0</td><td>104</td></tr><tr><td>240 min Summer</td><td>20.877</td><td>0.0</td><td>134</td></tr><tr><td>360 min Summer</td><td>15.365</td><td>0.0</td><td>194</td></tr><tr><td>480 min Summer</td><td>12.341</td><td>0.0</td><td>254</td></tr><tr><td>600 min Summer</td><td>10.402</td><td>0.0</td><td>314</td></tr><tr><td>720 min Summer</td><td>9.042</td><td>0.0</td><td>370</td></tr><tr><td>960 min Summer</td><td>7.241</td><td>0.0</td><td>490</td></tr><tr><td>1440 min Summer</td><td>5.284</td><td>0.0</td><td>734</td></tr><tr><td>2160 min Summer</td><td>3.848</td><td>0.0</td><td>1100</td></tr><tr><td>2880 min Summer</td><td>3.068</td><td>0.0</td><td>1444</td></tr><tr><td>4320 min Summer</td><td>2.226</td><td>0.0</td><td>2200</td></tr><tr><td>5760 min Summer</td><td>1.771</td><td>0.0</td><td>2888</td></tr><tr><td>7200 min Summer</td><td>1.483</td><td>0.0</td><td>3616</td></tr><tr><td>8640 min Summer</td><td>1.284</td><td>0.0</td><td>4256</td></tr></table>					Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	12.474	0.104	5.3	6.2	O K	30 min Summer	12.488	0.118	5.3	7.7	O K	60 min Summer	12.493	0.123	5.3	8.3	O K	120 min Summer	12.483	0.113	5.3	7.1	O K	180 min Summer	12.470	0.100	5.3	5.7	O K	240 min Summer	12.461	0.091	4.9	4.8	O K	360 min Summer	12.448	0.078	4.2	3.5	O K	480 min Summer	12.438	0.068	3.7	2.6	O K	600 min Summer	12.431	0.061	3.3	2.1	O K	720 min Summer	12.425	0.055	2.9	1.7	O K	960 min Summer	12.418	0.048	2.5	1.3	O K	1440 min Summer	12.411	0.041	1.8	1.0	O K	2160 min Summer	12.405	0.035	1.3	0.7	O K	2880 min Summer	12.402	0.032	1.1	0.6	O K	4320 min Summer	12.397	0.027	0.8	0.4	O K	5760 min Summer	12.394	0.024	0.6	0.3	O K	7200 min Summer	12.392	0.022	0.5	0.3	O K	8640 min Summer	12.390	0.020	0.4	0.2	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	131.851	0.0	15	30 min Summer	88.566	0.0	23	60 min Summer	56.713	0.0	40	120 min Summer	35.004	0.0	74	180 min Summer	25.973	0.0	104	240 min Summer	20.877	0.0	134	360 min Summer	15.365	0.0	194	480 min Summer	12.341	0.0	254	600 min Summer	10.402	0.0	314	720 min Summer	9.042	0.0	370	960 min Summer	7.241	0.0	490	1440 min Summer	5.284	0.0	734	2160 min Summer	3.848	0.0	1100	2880 min Summer	3.068	0.0	1444	4320 min Summer	2.226	0.0	2200	5760 min Summer	1.771	0.0	2888	7200 min Summer	1.483	0.0	3616	8640 min Summer	1.284	0.0	4256
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Willow Cottage Herne Lane Rustington BN16 3EE		Plot 1 Fontwell Avenue Eastergate				
Date 24 August 2021 File Permeable paving calcs.SRCX		Designed by RTFC Checked by				
Micro Drainage		Source Control 2016.1				
<u>Summary of Results for 100 year Return Period (+40%)</u>						
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status	
10080 min Summer	12.389	0.019	0.4	0.2	O K	
15 min Winter	12.484	0.114	5.3	7.3	O K	
30 min Winter	12.498	0.128	5.3	8.9	O K	
60 min Winter	12.500	0.130	5.3	9.1	O K	
120 min Winter	12.482	0.112	5.3	7.0	O K	
180 min Winter	12.465	0.095	5.1	5.1	O K	
240 min Winter	12.453	0.083	4.5	4.0	O K	
360 min Winter	12.437	0.067	3.6	2.6	O K	
480 min Winter	12.426	0.056	3.0	1.8	O K	
600 min Winter	12.419	0.049	2.6	1.4	O K	
720 min Winter	12.416	0.046	2.3	1.2	O K	
960 min Winter	12.411	0.041	1.8	1.0	O K	
1440 min Winter	12.405	0.035	1.3	0.7	O K	
2160 min Winter	12.400	0.030	1.0	0.5	O K	
2880 min Winter	12.397	0.027	0.8	0.4	O K	
4320 min Winter	12.393	0.023	0.6	0.3	O K	
5760 min Winter	12.390	0.020	0.4	0.2	O K	
7200 min Winter	12.389	0.019	0.4	0.2	O K	
8640 min Winter	12.387	0.017	0.3	0.2	O K	
Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)			
10080 min Summer	1.137	0.0	5056			
15 min Winter	131.851	0.0	15			
30 min Winter	88.566	0.0	25			
60 min Winter	56.713	0.0	44			
120 min Winter	35.004	0.0	78			
180 min Winter	25.973	0.0	108			
240 min Winter	20.877	0.0	138			
360 min Winter	15.365	0.0	198			
480 min Winter	12.341	0.0	256			
600 min Winter	10.402	0.0	310			
720 min Winter	9.042	0.0	368			
960 min Winter	7.241	0.0	490			
1440 min Winter	5.284	0.0	722			
2160 min Winter	3.848	0.0	1100			
2880 min Winter	3.068	0.0	1416			
4320 min Winter	2.226	0.0	2160			
5760 min Winter	1.771	0.0	2928			
7200 min Winter	1.483	0.0	3600			
8640 min Winter	1.284	0.0	4312			
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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)	20.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.043

Time (mins)	Area
From: To:	(ha)
0 4	0.043

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Model Details

Storage is Online Cover Level (m) 12.800

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.20279	Width (m)	19.0
Membrane Percolation (mm/hr)	1000	Length (m)	19.8
Max Percolation (l/s)	104.5	Slope (1:X)	200.0
Safety Factor	4.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	12.370	Membrane Depth (m)	0

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