

Robert Clark Associates				Page 1																																																																																																																																																																																																																			
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<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 992 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>3.302</td><td>0.302</td><td>0.1</td><td>2.6</td><td>O K</td></tr><tr><td>30 min Summer</td><td>3.408</td><td>0.408</td><td>0.1</td><td>3.5</td><td>O K</td></tr><tr><td>60 min Summer</td><td>3.520</td><td>0.520</td><td>0.1</td><td>4.5</td><td>O K</td></tr><tr><td>120 min Summer</td><td>3.630</td><td>0.630</td><td>0.1</td><td>5.4</td><td>O K</td></tr><tr><td>180 min Summer</td><td>3.687</td><td>0.687</td><td>0.1</td><td>5.9</td><td>Flood Risk</td></tr><tr><td>240 min Summer</td><td>3.720</td><td>0.720</td><td>0.1</td><td>6.2</td><td>Flood Risk</td></tr><tr><td>360 min Summer</td><td>3.757</td><td>0.757</td><td>0.1</td><td>6.5</td><td>Flood Risk</td></tr><tr><td>480 min Summer</td><td>3.773</td><td>0.773</td><td>0.1</td><td>6.7</td><td>Flood Risk</td></tr><tr><td>600 min Summer</td><td>3.777</td><td>0.777</td><td>0.1</td><td>6.7</td><td>Flood Risk</td></tr><tr><td>720 min Summer</td><td>3.774</td><td>0.774</td><td>0.1</td><td>6.7</td><td>Flood Risk</td></tr><tr><td>960 min Summer</td><td>3.757</td><td>0.757</td><td>0.1</td><td>6.5</td><td>Flood Risk</td></tr><tr><td>1440 min Summer</td><td>3.721</td><td>0.721</td><td>0.1</td><td>6.2</td><td>Flood Risk</td></tr><tr><td>2160 min Summer</td><td>3.669</td><td>0.669</td><td>0.1</td><td>5.8</td><td>Flood Risk</td></tr><tr><td>2880 min Summer</td><td>3.617</td><td>0.617</td><td>0.1</td><td>5.3</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>3.517</td><td>0.517</td><td>0.1</td><td>4.5</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>3.424</td><td>0.424</td><td>0.1</td><td>3.7</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>3.340</td><td>0.340</td><td>0.1</td><td>2.9</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>3.268</td><td>0.268</td><td>0.1</td><td>2.3</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>3.208</td><td>0.208</td><td>0.1</td><td>1.8</td><td>O K</td></tr><tr><td>15 min Winter</td><td>3.341</td><td>0.341</td><td>0.1</td><td>2.9</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>124.633</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>83.789</td><td>0.0</td><td>34</td></tr><tr><td>60 min Summer</td><td>53.779</td><td>0.0</td><td>64</td></tr><tr><td>120 min Summer</td><td>33.337</td><td>0.0</td><td>124</td></tr><tr><td>180 min Summer</td><td>24.832</td><td>0.0</td><td>182</td></tr><tr><td>240 min Summer</td><td>20.006</td><td>0.0</td><td>242</td></tr><tr><td>360 min Summer</td><td>14.706</td><td>0.0</td><td>362</td></tr><tr><td>480 min Summer</td><td>11.818</td><td>0.0</td><td>482</td></tr><tr><td>600 min Summer</td><td>9.966</td><td>0.0</td><td>600</td></tr><tr><td>720 min Summer</td><td>8.665</td><td>0.0</td><td>720</td></tr><tr><td>960 min Summer</td><td>6.943</td><td>0.0</td><td>834</td></tr><tr><td>1440 min Summer</td><td>5.071</td><td>0.0</td><td>1082</td></tr><tr><td>2160 min Summer</td><td>3.696</td><td>0.0</td><td>1472</td></tr><tr><td>2880 min Summer</td><td>2.949</td><td>0.0</td><td>1876</td></tr><tr><td>4320 min Summer</td><td>2.142</td><td>0.0</td><td>2684</td></tr><tr><td>5760 min Summer</td><td>1.705</td><td>0.0</td><td>3464</td></tr><tr><td>7200 min Summer</td><td>1.427</td><td>0.0</td><td>4184</td></tr><tr><td>8640 min Summer</td><td>1.235</td><td>0.0</td><td>4928</td></tr><tr><td>10080 min Summer</td><td>1.093</td><td>0.0</td><td>5640</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 (m ³)	Status	15 min Summer	3.302	0.302	0.1	2.6	O K	30 min Summer	3.408	0.408	0.1	3.5	O K	60 min Summer	3.520	0.520	0.1	4.5	O K	120 min Summer	3.630	0.630	0.1	5.4	O K	180 min Summer	3.687	0.687	0.1	5.9	Flood Risk	240 min Summer	3.720	0.720	0.1	6.2	Flood Risk	360 min Summer	3.757	0.757	0.1	6.5	Flood Risk	480 min Summer	3.773	0.773	0.1	6.7	Flood Risk	600 min Summer	3.777	0.777	0.1	6.7	Flood Risk	720 min Summer	3.774	0.774	0.1	6.7	Flood Risk	960 min Summer	3.757	0.757	0.1	6.5	Flood Risk	1440 min Summer	3.721	0.721	0.1	6.2	Flood Risk	2160 min Summer	3.669	0.669	0.1	5.8	Flood Risk	2880 min Summer	3.617	0.617	0.1	5.3	O K	4320 min Summer	3.517	0.517	0.1	4.5	O K	5760 min Summer	3.424	0.424	0.1	3.7	O K	7200 min Summer	3.340	0.340	0.1	2.9	O K	8640 min Summer	3.268	0.268	0.1	2.3	O K	10080 min Summer	3.208	0.208	0.1	1.8	O K	15 min Winter	3.341	0.341	0.1	2.9	O 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	182	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	600	720 min Summer	8.665	0.0	720	960 min Summer	6.943	0.0	834	1440 min Summer	5.071	0.0	1082	2160 min Summer	3.696	0.0	1472	2880 min Summer	2.949	0.0	1876	4320 min Summer	2.142	0.0	2684	5760 min Summer	1.705	0.0	3464	7200 min Summer	1.427	0.0	4184	8640 min Summer	1.235	0.0	4928	10080 min Summer	1.093	0.0	5640	15 min Winter	124.633	0.0	19
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600 min Winter	3.904	0.904	0.1	7.8	Flood Risk																																																																																																																																																																																														
720 min Winter	3.906	0.906	0.1	7.8	Flood Risk																																																																																																																																																																																														
960 min Winter	3.895	0.895	0.1	7.7	Flood Risk																																																																																																																																																																																														
1440 min Winter	3.846	0.846	0.1	7.3	Flood Risk																																																																																																																																																																																														
2160 min Winter	3.773	0.773	0.1	6.7	Flood Risk																																																																																																																																																																																														
2880 min Winter	3.695	0.695	0.1	6.0	Flood Risk																																																																																																																																																																																														
4320 min Winter	3.540	0.540	0.1	4.7	O K																																																																																																																																																																																														
5760 min Winter	3.398	0.398	0.1	3.4	O K																																																																																																																																																																																														
7200 min Winter	3.275	0.275	0.1	2.4	O K																																																																																																																																																																																														
8640 min Winter	3.174	0.174	0.1	1.5	O K																																																																																																																																																																																														
10080 min Winter	3.099	0.099	0.1	0.9	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	122																																																																																																																																																																																																
180 min Winter	24.832	0.0	180																																																																																																																																																																																																
240 min Winter	20.006	0.0	238																																																																																																																																																																																																
360 min Winter	14.706	0.0	354																																																																																																																																																																																																
480 min Winter	11.818	0.0	470																																																																																																																																																																																																
600 min Winter	9.966	0.0	584																																																																																																																																																																																																
720 min Winter	8.665	0.0	696																																																																																																																																																																																																
960 min Winter	6.943	0.0	914																																																																																																																																																																																																
1440 min Winter	5.071	0.0	1156																																																																																																																																																																																																
2160 min Winter	3.696	0.0	1604																																																																																																																																																																																																
2880 min Winter	2.949	0.0	2052																																																																																																																																																																																																
4320 min Winter	2.142	0.0	2900																																																																																																																																																																																																
5760 min Winter	1.705	0.0	3696																																																																																																																																																																																																
7200 min Winter	1.427	0.0	4400																																																																																																																																																																																																
8640 min Winter	1.235	0.0	5096																																																																																																																																																																																																
10080 min Winter	1.093	0.0	5648																																																																																																																																																																																																
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Robert Clark Associates		Page 3
Willow Cottage Herne Lane Rustington BN16 3EE	Abergail Clyde Road Felpham	
Date 20 April 2021 File SW calcs_pp_100yr with cc.SRCX	Designed by RTFC Checked by	
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) 0.012

Time (mins)	Area
From: To:	(ha)
0 4	0.012

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Willow Cottage Herne Lane Rustington BN16 3EE	Abergail Clyde Road Felpham	
Date 20 April 2021 File SW calcs_pp_100yr with cc.SRCX	Designed by RTFC Checked by	
Micro Drainage Source Control 2016.1		

Model Details

Storage is Online Cover Level (m) 3.950

Porous Car Park Structure

Infiltration Coefficient Base (m/hr) 0.01664	Width (m) 6.0
Membrane Percolation (mm/hr) 1000	Length (m) 4.8
Max Percolation (l/s) 8.0	Slope (1:X) 0.0
Safety Factor 2.0	Depression Storage (mm) 5
Porosity 0.30	Evaporation (mm/day) 3
Invert Level (m) 3.000	Membrane Depth (m) 0

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