

Robert Clark Associates			Page 1																																																																																																																																																																																															
Willow Cottage Herne Lane Rustington BN16 3EE		Plot 1, Fontwell Avenue Eastergate																																																																																																																																																																																																
Date 24 August 2021 File SA1 calcs.SRCX		Designed by RTFC Checked by																																																																																																																																																																																																
Micro Drainage		Source Control 2016.1																																																																																																																																																																																																
<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 174 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>11.758</td><td>0.758</td><td>0.1</td><td>1.7</td><td>O K</td></tr><tr><td>30 min Summer</td><td>11.987</td><td>0.987</td><td>0.2</td><td>2.2</td><td>O K</td></tr><tr><td>60 min Summer</td><td>12.187</td><td>1.187</td><td>0.2</td><td>2.6</td><td>O K</td></tr><tr><td>120 min Summer</td><td>12.310</td><td>1.310</td><td>0.2</td><td>2.9</td><td>O K</td></tr><tr><td>180 min Summer</td><td>12.388</td><td>1.388</td><td>0.2</td><td>2.9</td><td>O K</td></tr><tr><td>240 min Summer</td><td>12.407</td><td>1.407</td><td>0.2</td><td>3.0</td><td>O K</td></tr><tr><td>360 min Summer</td><td>12.392</td><td>1.392</td><td>0.2</td><td>3.0</td><td>O K</td></tr><tr><td>480 min Summer</td><td>12.333</td><td>1.333</td><td>0.2</td><td>2.9</td><td>O K</td></tr><tr><td>600 min Summer</td><td>12.280</td><td>1.280</td><td>0.2</td><td>2.8</td><td>O K</td></tr><tr><td>720 min Summer</td><td>12.241</td><td>1.241</td><td>0.2</td><td>2.7</td><td>O K</td></tr><tr><td>960 min Summer</td><td>12.164</td><td>1.164</td><td>0.2</td><td>2.5</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>12.029</td><td>1.029</td><td>0.2</td><td>2.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>11.879</td><td>0.879</td><td>0.1</td><td>1.9</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>11.771</td><td>0.771</td><td>0.1</td><td>1.7</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>11.623</td><td>0.623</td><td>0.1</td><td>1.4</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>11.526</td><td>0.526</td><td>0.1</td><td>1.2</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>11.458</td><td>0.458</td><td>0.1</td><td>1.0</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>11.407</td><td>0.407</td><td>0.1</td><td>0.9</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>131.851</td><td>0.0</td><td>18</td></tr><tr><td>30 min Summer</td><td>88.566</td><td>0.0</td><td>33</td></tr><tr><td>60 min Summer</td><td>56.713</td><td>0.0</td><td>62</td></tr><tr><td>120 min Summer</td><td>35.004</td><td>0.0</td><td>104</td></tr><tr><td>180 min Summer</td><td>25.973</td><td>0.0</td><td>134</td></tr><tr><td>240 min Summer</td><td>20.877</td><td>0.0</td><td>168</td></tr><tr><td>360 min Summer</td><td>15.365</td><td>0.0</td><td>236</td></tr><tr><td>480 min Summer</td><td>12.341</td><td>0.0</td><td>304</td></tr><tr><td>600 min Summer</td><td>10.402</td><td>0.0</td><td>370</td></tr><tr><td>720 min Summer</td><td>9.042</td><td>0.0</td><td>436</td></tr><tr><td>960 min Summer</td><td>7.241</td><td>0.0</td><td>568</td></tr><tr><td>1440 min Summer</td><td>5.284</td><td>0.0</td><td>824</td></tr><tr><td>2160 min Summer</td><td>3.848</td><td>0.0</td><td>1192</td></tr><tr><td>2880 min Summer</td><td>3.068</td><td>0.0</td><td>1560</td></tr><tr><td>4320 min Summer</td><td>2.226</td><td>0.0</td><td>2292</td></tr><tr><td>5760 min Summer</td><td>1.771</td><td>0.0</td><td>3008</td></tr><tr><td>7200 min Summer</td><td>1.483</td><td>0.0</td><td>3744</td></tr><tr><td>8640 min Summer</td><td>1.284</td><td>0.0</td><td>4488</td></tr></table>					Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	11.758	0.758	0.1	1.7	O K	30 min Summer	11.987	0.987	0.2	2.2	O K	60 min Summer	12.187	1.187	0.2	2.6	O K	120 min Summer	12.310	1.310	0.2	2.9	O K	180 min Summer	12.388	1.388	0.2	2.9	O K	240 min Summer	12.407	1.407	0.2	3.0	O K	360 min Summer	12.392	1.392	0.2	3.0	O K	480 min Summer	12.333	1.333	0.2	2.9	O K	600 min Summer	12.280	1.280	0.2	2.8	O K	720 min Summer	12.241	1.241	0.2	2.7	O K	960 min Summer	12.164	1.164	0.2	2.5	O K	1440 min Summer	12.029	1.029	0.2	2.3	O K	2160 min Summer	11.879	0.879	0.1	1.9	O K	2880 min Summer	11.771	0.771	0.1	1.7	O K	4320 min Summer	11.623	0.623	0.1	1.4	O K	5760 min Summer	11.526	0.526	0.1	1.2	O K	7200 min Summer	11.458	0.458	0.1	1.0	O K	8640 min Summer	11.407	0.407	0.1	0.9	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	131.851	0.0	18	30 min Summer	88.566	0.0	33	60 min Summer	56.713	0.0	62	120 min Summer	35.004	0.0	104	180 min Summer	25.973	0.0	134	240 min Summer	20.877	0.0	168	360 min Summer	15.365	0.0	236	480 min Summer	12.341	0.0	304	600 min Summer	10.402	0.0	370	720 min Summer	9.042	0.0	436	960 min Summer	7.241	0.0	568	1440 min Summer	5.284	0.0	824	2160 min Summer	3.848	0.0	1192	2880 min Summer	3.068	0.0	1560	4320 min Summer	2.226	0.0	2292	5760 min Summer	1.771	0.0	3008	7200 min Summer	1.483	0.0	3744	8640 min Summer	1.284	0.0	4488
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																													
15 min Summer	11.758	0.758	0.1	1.7	O K																																																																																																																																																																																													
30 min Summer	11.987	0.987	0.2	2.2	O K																																																																																																																																																																																													
60 min Summer	12.187	1.187	0.2	2.6	O K																																																																																																																																																																																													
120 min Summer	12.310	1.310	0.2	2.9	O K																																																																																																																																																																																													
180 min Summer	12.388	1.388	0.2	2.9	O K																																																																																																																																																																																													
240 min Summer	12.407	1.407	0.2	3.0	O K																																																																																																																																																																																													
360 min Summer	12.392	1.392	0.2	3.0	O K																																																																																																																																																																																													
480 min Summer	12.333	1.333	0.2	2.9	O K																																																																																																																																																																																													
600 min Summer	12.280	1.280	0.2	2.8	O K																																																																																																																																																																																													
720 min Summer	12.241	1.241	0.2	2.7	O K																																																																																																																																																																																													
960 min Summer	12.164	1.164	0.2	2.5	O K																																																																																																																																																																																													
1440 min Summer	12.029	1.029	0.2	2.3	O K																																																																																																																																																																																													
2160 min Summer	11.879	0.879	0.1	1.9	O K																																																																																																																																																																																													
2880 min Summer	11.771	0.771	0.1	1.7	O K																																																																																																																																																																																													
4320 min Summer	11.623	0.623	0.1	1.4	O K																																																																																																																																																																																													
5760 min Summer	11.526	0.526	0.1	1.2	O K																																																																																																																																																																																													
7200 min Summer	11.458	0.458	0.1	1.0	O K																																																																																																																																																																																													
8640 min Summer	11.407	0.407	0.1	0.9	O K																																																																																																																																																																																													
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																															
15 min Summer	131.851	0.0	18																																																																																																																																																																																															
30 min Summer	88.566	0.0	33																																																																																																																																																																																															
60 min Summer	56.713	0.0	62																																																																																																																																																																																															
120 min Summer	35.004	0.0	104																																																																																																																																																																																															
180 min Summer	25.973	0.0	134																																																																																																																																																																																															
240 min Summer	20.877	0.0	168																																																																																																																																																																																															
360 min Summer	15.365	0.0	236																																																																																																																																																																																															
480 min Summer	12.341	0.0	304																																																																																																																																																																																															
600 min Summer	10.402	0.0	370																																																																																																																																																																																															
720 min Summer	9.042	0.0	436																																																																																																																																																																																															
960 min Summer	7.241	0.0	568																																																																																																																																																																																															
1440 min Summer	5.284	0.0	824																																																																																																																																																																																															
2160 min Summer	3.848	0.0	1192																																																																																																																																																																																															
2880 min Summer	3.068	0.0	1560																																																																																																																																																																																															
4320 min Summer	2.226	0.0	2292																																																																																																																																																																																															
5760 min Summer	1.771	0.0	3008																																																																																																																																																																																															
7200 min Summer	1.483	0.0	3744																																																																																																																																																																																															
8640 min Summer	1.284	0.0	4488																																																																																																																																																																																															
©1982-2016 XP Solutions																																																																																																																																																																																																		

Robert Clark Associates					Page 2	
Willow Cottage Herne Lane Rustington BN16 3EE			Plot 1, Fontwell Avenue Eastergate			
Date 24 August 2021 File SA1 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 (m³)	Status
10080 min	Summer	11.367	0.367	0.1	0.8	O K
15 min	Winter	11.850	0.850	0.1	1.9	O K
30 min	Winter	12.108	1.108	0.2	2.4	O K
60 min	Winter	12.371	1.371	0.2	2.9	O K
120 min	Winter	12.670	1.670	0.2	3.3	Flood Risk
180 min	Winter	12.729	1.729	0.2	3.3	Flood Risk
240 min	Winter	12.731	1.731	0.2	3.3	Flood Risk
360 min	Winter	12.658	1.658	0.2	3.3	Flood Risk
480 min	Winter	12.533	1.533	0.2	3.1	O K
600 min	Winter	12.395	1.395	0.2	3.0	O K
720 min	Winter	12.284	1.284	0.2	2.8	O K
960 min	Winter	12.173	1.173	0.2	2.6	O K
1440 min	Winter	11.994	0.994	0.2	2.2	O K
2160 min	Winter	11.808	0.808	0.1	1.8	O K
2880 min	Winter	11.683	0.683	0.1	1.5	O K
4320 min	Winter	11.525	0.525	0.1	1.1	O K
5760 min	Winter	11.429	0.429	0.1	0.9	O K
7200 min	Winter	11.364	0.364	0.1	0.8	O K
8640 min	Winter	11.318	0.318	0.1	0.7	O K
Storm Event		Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
10080 min	Summer	1.137	0.0	5152		
15 min	Winter	131.851	0.0	18		
30 min	Winter	88.566	0.0	32		
60 min	Winter	56.713	0.0	60		
120 min	Winter	35.004	0.0	114		
180 min	Winter	25.973	0.0	144		
240 min	Winter	20.877	0.0	182		
360 min	Winter	15.365	0.0	258		
480 min	Winter	12.341	0.0	330		
600 min	Winter	10.402	0.0	398		
720 min	Winter	9.042	0.0	464		
960 min	Winter	7.241	0.0	598		
1440 min	Winter	5.284	0.0	864		
2160 min	Winter	3.848	0.0	1236		
2880 min	Winter	3.068	0.0	1612		
4320 min	Winter	2.226	0.0	2336		
5760 min	Winter	1.771	0.0	3064		
7200 min	Winter	1.483	0.0	3816		
8640 min	Winter	1.284	0.0	4496		
©1982-2016 XP Solutions						

Robert Clark Associates		Page 3																				
Willow Cottage Herne Lane Rustington BN16 3EE	Plot 1, Fontwell Avenue Eastergate																					
Date 24 August 2021 File SA1 calcs.SRCX	Designed by RTFC Checked by																					
Micro Drainage																						
Source Control 2016.1																						
<u>Summary of Results for 100 year Return Period (+40%)</u> <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>10080 min Winter</td><td>11.284</td><td>0.284</td><td>0.0</td><td>0.6</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>10080 min Winter</td><td>1.137</td><td>0.0</td><td>5240</td></tr></table>			Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	10080 min Winter	11.284	0.284	0.0	0.6	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	10080 min Winter	1.137	0.0	5240
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																	
10080 min Winter	11.284	0.284	0.0	0.6	O K																	
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																			
10080 min Winter	1.137	0.0	5240																			
©1982-2016 XP Solutions																						

Robert Clark Associates		Page 4
Willow Cottage Herne Lane Rustington BN16 3EE	Plot 1, Fontwell Avenue Eastergate	
Date 24 August 2021 File SA1 calcs.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)	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) 0.007

Time (mins)	Area
From: To:	(ha)
0 4	0.007

©1982-2016 XP Solutions

Robert Clark Associates		Page 5
Willow Cottage Herne Lane Rustington BN16 3EE	Plot 1, Fontwell Avenue Eastergate	
Date 24 August 2021 File SA1 calcs.SRCX	Designed by RTFC Checked by	
Micro Drainage	Source Control 2016.1	

Model Details

Storage is Online Cover Level (m) 12.900

Lined Soakaway Structure

Infiltration Coefficient Base (m/hr)	0.00000	Ring Diameter (m)	1.20
Infiltration Coefficient Side (m/hr)	0.20279	Pit Multiplier	1.8
Safety Factor	3.0	Number Required	1
Porosity	0.30	Cap Volume Depth (m)	0.000
Invert Level (m)	11.000	Cap Infiltration Depth (m)	1.300

©1982-2016 XP Solutions