

Robert Clark Associates		Page 1
Willow Cottage Herne Lane Rustington BN16 3EE	Tulley Cottages Toddington Lane Concrete Ring Soakaways	
Date 8.4.18 File SA4.SRCX	Designed by RTFC Checked by	
Micro Drainage	Source Control 2016.1	

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

Half Drain Time : 49 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	4.622	1.222	0.7	3.1	0 K
30 min Summer	4.899	1.499	0.9	3.8	0 K
60 min Summer	5.082	1.682	1.0	4.3	0 K
120 min Summer	5.154	1.754	1.1	4.5	0 K
180 min Summer	5.110	1.710	1.0	4.4	0 K
240 min Summer	5.036	1.636	1.0	4.2	0 K
360 min Summer	4.885	1.485	0.9	3.8	0 K
480 min Summer	4.757	1.357	0.8	3.5	0 K
600 min Summer	4.651	1.251	0.8	3.2	0 K
720 min Summer	4.561	1.161	0.7	3.0	0 K
960 min Summer	4.419	1.019	0.6	2.6	0 K
1440 min Summer	4.225	0.825	0.5	2.1	0 K
2160 min Summer	4.049	0.649	0.4	1.7	0 K
2880 min Summer	3.939	0.539	0.3	1.4	0 K
4320 min Summer	3.810	0.410	0.2	1.0	0 K
5760 min Summer	3.733	0.333	0.2	0.8	0 K
7200 min Summer	3.683	0.283	0.2	0.7	0 K
8640 min Summer	3.646	0.246	0.1	0.6	0 K
10080 min Summer	3.619	0.219	0.1	0.6	0 K
15 min Winter	4.772	1.372	0.8	3.5	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	30
60 min Summer	53.779	0.0	46
120 min Summer	33.337	0.0	80
180 min Summer	24.832	0.0	114
240 min Summer	20.006	0.0	146
360 min Summer	14.706	0.0	212
480 min Summer	11.818	0.0	274
600 min Summer	9.966	0.0	338
720 min Summer	8.665	0.0	398
960 min Summer	6.943	0.0	520
1440 min Summer	5.071	0.0	764
2160 min Summer	3.696	0.0	1124
2880 min Summer	2.949	0.0	1496
4320 min Summer	2.142	0.0	2204
5760 min Summer	1.705	0.0	2936
7200 min Summer	1.427	0.0	3672
8640 min Summer	1.235	0.0	4408
10080 min Summer	1.093	0.0	5136
15 min Winter	124.633	0.0	17

Robert Clark Associates		Page 2
Willow Cottage Herne Lane Rustington BN16 3EE	Tulley Cottages Toddington Lane Concrete Ring Soakaways	
Date 8.4.18 File SA4.SRCX	Designed by RTFC 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	5.090	1.690	1.0	4.3	0 K
60 min Winter	5.277	1.877	1.1	4.8	0 K
120 min Winter	5.300	1.900	1.2	4.8	0 K
180 min Winter	5.202	1.802	1.1	4.6	0 K
240 min Winter	5.082	1.682	1.0	4.3	0 K
360 min Winter	4.868	1.468	0.9	3.7	0 K
480 min Winter	4.700	1.300	0.8	3.3	0 K
600 min Winter	4.566	1.166	0.7	3.0	0 K
720 min Winter	4.458	1.058	0.6	2.7	0 K
960 min Winter	4.294	0.894	0.5	2.3	0 K
1440 min Winter	4.089	0.689	0.4	1.8	0 K
2160 min Winter	3.918	0.518	0.3	1.3	0 K
2880 min Winter	3.819	0.419	0.3	1.1	0 K
4320 min Winter	3.708	0.308	0.2	0.8	0 K
5760 min Winter	3.647	0.247	0.2	0.6	0 K
7200 min Winter	3.607	0.207	0.1	0.5	0 K
8640 min Winter	3.579	0.179	0.1	0.5	0 K
10080 min Winter	3.559	0.159	0.1	0.4	0 K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	83.789	0.0	30
60 min Winter	53.779	0.0	48
120 min Winter	33.337	0.0	84
180 min Winter	24.832	0.0	120
240 min Winter	20.006	0.0	156
360 min Winter	14.706	0.0	222
480 min Winter	11.818	0.0	286
600 min Winter	9.966	0.0	350
720 min Winter	8.665	0.0	412
960 min Winter	6.943	0.0	538
1440 min Winter	5.071	0.0	780
2160 min Winter	3.696	0.0	1144
2880 min Winter	2.949	0.0	1500
4320 min Winter	2.142	0.0	2208
5760 min Winter	1.705	0.0	2944
7200 min Winter	1.427	0.0	3672
8640 min Winter	1.235	0.0	4408
10080 min Winter	1.093	0.0	5136

Robert Clark Associates		Page 3																																	
Willow Cottage Herne Lane Rustington BN16 3EE	Tulley Cottages Toddington Lane Concrete Ring Soakaways																																		
Date 8.4.18 File SA4.SRCX	Designed by RTFC Checked by																																		
Micro Drainage																																			
<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) 0.015 <table> <thead> <tr> <th colspan="2">Time (mins)</th> <th>Area</th> </tr> <tr> <th>From:</th> <th>To:</th> <th>(ha)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>4</td> <td>0.015</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	From:	To:	(ha)	0	4	0.015
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																																	
From:	To:	(ha)																																	
0	4	0.015																																	
©1982-2016 XP Solutions																																			

Robert Clark Associates		Page 4																				
Willow Cottage Herne Lane Rustington BN16 3EE	Tulley Cottages Toddington Lane Concrete Ring Soakaways																					
Date 8.4.18 File SA4.SRCX	Designed by RTFC Checked by																					
Micro Drainage																						
<u>Model Details</u> Storage is Online Cover Level (m) 5.900 <u>Lined Soakaway Structure</u> <table> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.00000</td> </tr> <tr> <td>Infiltration Coefficient Side (m/hr)</td> <td>0.38002</td> </tr> <tr> <td>Safety Factor</td> <td>1.5</td> </tr> <tr> <td>Porosity</td> <td>0.40</td> </tr> <tr> <td>Invert Level (m)</td> <td>3.400</td> </tr> <tr> <td>Ring Diameter (m)</td> <td>1.20</td> </tr> <tr> <td>Pit Multiplier</td> <td>1.8</td> </tr> <tr> <td>Number Required</td> <td>1</td> </tr> <tr> <td>Cap Volume Depth (m)</td> <td>2.150</td> </tr> <tr> <td>Cap Infiltration Depth (m)</td> <td>1.900</td> </tr> </table>			Infiltration Coefficient Base (m/hr)	0.00000	Infiltration Coefficient Side (m/hr)	0.38002	Safety Factor	1.5	Porosity	0.40	Invert Level (m)	3.400	Ring Diameter (m)	1.20	Pit Multiplier	1.8	Number Required	1	Cap Volume Depth (m)	2.150	Cap Infiltration Depth (m)	1.900
Infiltration Coefficient Base (m/hr)	0.00000																					
Infiltration Coefficient Side (m/hr)	0.38002																					
Safety Factor	1.5																					
Porosity	0.40																					
Invert Level (m)	3.400																					
Ring Diameter (m)	1.20																					
Pit Multiplier	1.8																					
Number Required	1																					
Cap Volume Depth (m)	2.150																					
Cap Infiltration Depth (m)	1.900																					
©1982-2016 XP Solutions																						