

Baker & Associates Ltd		Page 1
Wessex House Uper Market Street Eastleigh Hampshire SO50 5FD	Upper Bognor Road Bognor Gravel Car Park 2	
Date 18/03/2022 File Paving 2 17.03.22.SRCX	Designed by S Baker Checked by	
Micro Drainage	Source Control 2018.1.1	

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

Half Drain Time : 1335 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	0.227	0.227	0.0	2.9	O K
30 min Summer	0.271	0.271	0.1	4.2	O K
60 min Summer	0.312	0.312	0.1	5.5	O K
120 min Summer	0.349	0.349	0.1	6.9	O K
180 min Summer	0.368	0.368	0.1	7.7	O K
240 min Summer	0.379	0.379	0.1	8.1	O K
360 min Summer	0.393	0.393	0.1	8.8	O K
480 min Summer	0.401	0.401	0.1	9.1	O K
600 min Summer	0.406	0.406	0.1	9.4	O K
720 min Summer	0.409	0.409	0.1	9.5	O K
960 min Summer	0.411	0.411	0.1	9.6	O K
1440 min Summer	0.412	0.412	0.1	9.6	O K
2160 min Summer	0.409	0.409	0.1	9.5	O K
2880 min Summer	0.404	0.404	0.1	9.3	O K
4320 min Summer	0.390	0.390	0.1	8.6	O K
5760 min Summer	0.375	0.375	0.1	8.0	O K
7200 min Summer	0.361	0.361	0.1	7.4	O K
8640 min Summer	0.347	0.347	0.1	6.8	O K
10080 min Summer	0.335	0.335	0.1	6.4	O K
15 min Winter	0.243	0.243	0.0	3.4	O K
30 min Winter	0.290	0.290	0.1	4.8	O K
60 min Winter	0.333	0.333	0.1	6.3	O K
120 min Winter	0.372	0.372	0.1	7.8	O K
180 min Winter	0.392	0.392	0.1	8.7	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	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	892
1440 min Summer	5.071	0.0	1112
2160 min Summer	3.696	0.0	1512
2880 min Summer	2.949	0.0	1928
4320 min Summer	2.142	0.0	2728
5760 min Summer	1.705	0.0	3568
7200 min Summer	1.427	0.0	4328
8640 min Summer	1.235	0.0	5104
10080 min Summer	1.093	0.0	5856
15 min Winter	124.633	0.0	19
30 min Winter	83.789	0.0	33
60 min Winter	53.779	0.0	64
120 min Winter	33.337	0.0	122
180 min Winter	24.832	0.0	180

Baker & Associates Ltd		Page 2
Wessex House Uper Market Street Eastleigh Hampshire SO50 5FD	Upper Bognor Road Bognor Gravel Car Park 2	
Date 18/03/2022 File Paving 2 17.03.22.SRCX	Designed by S Baker Checked by	
Micro Drainage	Source Control 2018.1.1	

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

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
240 min Winter	0.404	0.404	0.1	9.3	O K
360 min Winter	0.419	0.419	0.1	10.0	O K
480 min Winter	0.429	0.429	0.1	10.4	O K
600 min Winter	0.435	0.435	0.1	10.7	O K
720 min Winter	0.439	0.439	0.1	10.9	O K
960 min Winter	0.443	0.443	0.1	11.1	O K
1440 min Winter	0.441	0.441	0.1	11.0	O K
2160 min Winter	0.437	0.437	0.1	10.8	O K
2880 min Winter	0.428	0.428	0.1	10.4	O K
4320 min Winter	0.408	0.408	0.1	9.4	O K
5760 min Winter	0.387	0.387	0.1	8.5	O K
7200 min Winter	0.367	0.367	0.1	7.6	O K
8640 min Winter	0.348	0.348	0.1	6.9	O K
10080 min Winter	0.330	0.330	0.1	6.2	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
240 min Winter	20.006	0.0	238
360 min Winter	14.706	0.0	356
480 min Winter	11.818	0.0	470
600 min Winter	9.966	0.0	584
720 min Winter	8.665	0.0	698
960 min Winter	6.943	0.0	916
1440 min Winter	5.071	0.0	1198
2160 min Winter	3.696	0.0	1624
2880 min Winter	2.949	0.0	2076
4320 min Winter	2.142	0.0	2944
5760 min Winter	1.705	0.0	3808
7200 min Winter	1.427	0.0	4616
8640 min Winter	1.235	0.0	5448
10080 min Winter	1.093	0.0	6248

Baker & Associates Ltd		Page 3																														
Wessex House Uper Market Street Eastleigh Hampshire SO50 5FD	Upper Bognor Road Bognor Gravel Car Park 2																															
Date 18/03/2022 File Paving 2 17.03.22.SRCX	Designed by S Baker Checked by																															
Micro Drainage																																
Source Control 2018.1.1																																
<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) 0.016 <table> <thead> <tr> <th>Time (mins)</th> <th>Area</th> </tr> <tr> <th>From:</th> <th>To: (ha)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>4 0.016</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 0.016
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 0.016																															
©1982-2018 Innovyze																																

Baker & Associates Ltd		Page 4
Wessex House Uper Market Street Eastleigh Hampshire SO50 5FD	Upper Bognor Road Bognor Gravel Car Park 2	
Date 18/03/2022 File Paving 2 17.03.22.SRCX	Designed by S Baker Checked by	
Micro Drainage	Source Control 2018.1.1	

Model Details

Storage is Online Cover Level (m) 0.450

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.00360	Width (m)	12.6
Membrane Percolation (mm/hr)	1000	Length (m)	12.6
Max Percolation (l/s)	44.1	Slope (1:X)	30.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	0.000	Membrane Depth (m)	0