

Robert Clark Associates				Page 1		
Willow Cottage Herne Lane Rustington BN16 3EE		Greencourt Drive Bognor Regis Permeable Paving				
Date 15.3.18 File permeable paving.SRCX		Designed by RTFC Checked by				
Micro Drainage		Source Control 2016.1				
Summary of Results for 100 year Return Period (+40%)						
Half Drain Time : 5 minutes.						
Storm Event		Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer		7.632	0.062	7.0	3.0	0 K
30 min Summer		7.640	0.070	7.0	3.4	0 K
60 min Summer		7.630	0.060	7.0	2.9	0 K
120 min Summer		7.613	0.043	6.0	2.1	0 K
180 min Summer		7.605	0.035	4.9	1.7	0 K
240 min Summer		7.599	0.029	4.1	1.4	0 K
360 min Summer		7.593	0.023	3.2	1.1	0 K
480 min Summer		7.589	0.019	2.6	0.9	0 K
600 min Summer		7.586	0.016	2.3	0.8	0 K
720 min Summer		7.584	0.014	2.0	0.7	0 K
960 min Summer		7.581	0.011	1.6	0.5	0 K
1440 min Summer		7.578	0.008	1.1	0.4	0 K
2160 min Summer		7.576	0.006	0.9	0.3	0 K
2880 min Summer		7.575	0.005	0.7	0.2	0 K
4320 min Summer		7.574	0.004	0.5	0.2	0 K
5760 min Summer		7.573	0.003	0.4	0.1	0 K
7200 min Summer		7.573	0.003	0.4	0.1	0 K
8640 min Summer		7.572	0.002	0.3	0.1	0 K
10080 min Summer		7.572	0.002	0.2	0.1	0 K
15 min Winter		7.641	0.071	7.0	3.4	0 K
Storm Event		Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
15 min Summer		124.633	0.0	12		
30 min Summer		83.789	0.0	21		
60 min Summer		53.779	0.0	36		
120 min Summer		33.337	0.0	66		
180 min Summer		24.832	0.0	96		
240 min Summer		20.006	0.0	126		
360 min Summer		14.706	0.0	186		
480 min Summer		11.818	0.0	246		
600 min Summer		9.966	0.0	306		
720 min Summer		8.665	0.0	368		
960 min Summer		6.943	0.0	490		
1440 min Summer		5.071	0.0	734		
2160 min Summer		3.696	0.0	1084		
2880 min Summer		2.949	0.0	1464		
4320 min Summer		2.142	0.0	2192		
5760 min Summer		1.705	0.0	2936		
7200 min Summer		1.427	0.0	3640		
8640 min Summer		1.235	0.0	4224		
10080 min Summer		1.093	0.0	5136		
15 min Winter		124.633	0.0	13		
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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
30 min Winter	7.643	0.073	7.0	3.6	OK
60 min Winter	7.624	0.054	7.0	2.6	OK
120 min Winter	7.607	0.037	5.1	1.8	OK
180 min Winter	7.598	0.028	3.9	1.4	OK
240 min Winter	7.593	0.023	3.2	1.1	OK
360 min Winter	7.587	0.017	2.4	0.8	OK
480 min Winter	7.584	0.014	1.9	0.7	OK
600 min Winter	7.582	0.012	1.6	0.6	OK
720 min Winter	7.580	0.010	1.4	0.5	OK
960 min Winter	7.578	0.008	1.1	0.4	OK
1440 min Winter	7.576	0.006	0.9	0.3	OK
2160 min Winter	7.575	0.005	0.7	0.2	OK
2880 min Winter	7.574	0.004	0.5	0.2	OK
4320 min Winter	7.573	0.003	0.4	0.1	OK
5760 min Winter	7.572	0.002	0.3	0.1	OK
7200 min Winter	7.572	0.002	0.2	0.1	OK
8640 min Winter	7.572	0.002	0.2	0.1	OK
10080 min Winter	7.571	0.001	0.2	0.1	OK
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	83.789	0.0	22		
60 min Winter	53.779	0.0	36		
120 min Winter	33.337	0.0	66		
180 min Winter	24.832	0.0	96		
240 min Winter	20.006	0.0	126		
360 min Winter	14.706	0.0	186		
480 min Winter	11.818	0.0	250		
600 min Winter	9.966	0.0	306		
720 min Winter	8.665	0.0	368		
960 min Winter	6.943	0.0	492		
1440 min Winter	5.071	0.0	764		
2160 min Winter	3.696	0.0	1104		
2880 min Winter	2.949	0.0	1396		
4320 min Winter	2.142	0.0	2312		
5760 min Winter	1.705	0.0	2824		
7200 min Winter	1.427	0.0	3472		
8640 min Winter	1.235	0.0	4736		
10080 min Winter	1.093	0.0	5304		
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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)	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) 0.028

Time (mins)	Area
From:	To: (ha)
0	4 0.028

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Model Details

Storage is Online Cover Level (m) 7.950

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.23144
Membrane Percolation (mm/hr)	1000
Max Percolation (l/s)	45.1
Safety Factor	1.5
Porosity	0.30
Invert Level (m)	7.570
Width (m)	12.5
Length (m)	13.0
Slope (1:X)	0.0
Depression Storage (mm)	5
Evaporation (mm/day)	3
Membrane Depth (m)	0

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