

Scott-White & Hookins		Page 1
42 West Street London House Carshalton SM5 2PR	W01651 The Curlew, Havant Permeable Paving	
Date 01/02/2018 File W01651 PERMEABLE PAVING.SRCX	Designed by HH Checked by	
Micro Drainage	Source Control 2017.1	

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

Half Drain Time : 4 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	5.048	0.048	57.2	17.4	O K
30 min Summer	5.048	0.048	57.2	17.5	O K
60 min Summer	5.041	0.041	48.8	14.8	O K
120 min Summer	5.031	0.031	36.8	11.3	O K
180 min Summer	5.025	0.025	29.6	9.0	O K
240 min Summer	5.021	0.021	24.8	7.5	O K
360 min Summer	5.016	0.016	18.9	5.7	O K
480 min Summer	5.013	0.013	15.9	4.7	O K
600 min Summer	5.011	0.011	13.5	4.0	O K
720 min Summer	5.010	0.010	11.7	3.5	O K
960 min Summer	5.008	0.008	9.3	2.8	O K
1440 min Summer	5.006	0.006	6.9	2.1	O K
2160 min Summer	5.004	0.004	5.1	1.5	O K
2880 min Summer	5.004	0.004	4.5	1.3	O K
4320 min Summer	5.003	0.003	3.3	0.9	O K
5760 min Summer	5.002	0.002	2.7	0.8	O K
7200 min Summer	5.002	0.002	2.1	0.7	O K
8640 min Summer	5.002	0.002	2.1	0.6	O K
10080 min Summer	5.001	0.001	1.5	0.6	O K
15 min Winter	5.051	0.051	59.9	18.7	O K
30 min Winter	5.048	0.048	57.2	17.4	O K
60 min Winter	5.037	0.037	44.6	13.6	O K
120 min Winter	5.025	0.025	30.2	9.3	O K
180 min Winter	5.020	0.020	23.6	7.1	O 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	20
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	366
960 min Summer	6.943	0.0	490
1440 min Summer	5.071	0.0	722
2160 min Summer	3.696	0.0	1068
2880 min Summer	2.949	0.0	1456
4320 min Summer	2.142	0.0	2160
5760 min Summer	1.705	0.0	2824
7200 min Summer	1.427	0.0	3560
8640 min Summer	1.235	0.0	4408
10080 min Summer	1.093	0.0	5056
15 min Winter	124.633	0.0	12
30 min Winter	83.789	0.0	20
60 min Winter	53.779	0.0	36
120 min Winter	33.337	0.0	66
180 min Winter	24.832	0.0	96

Scott-White & Hookins		Page 2
42 West Street London House Carshalton SM5 2PR	W01651 The Curlew, Havant Permeable Paving	
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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	5.016	0.016	19.5	5.9	O K
360 min Winter	5.012	0.012	14.1	4.4	O K
480 min Winter	5.010	0.010	11.7	3.5	O K
600 min Winter	5.008	0.008	9.9	3.0	O K
720 min Winter	5.007	0.007	8.7	2.6	O K
960 min Winter	5.006	0.006	6.9	2.0	O K
1440 min Winter	5.004	0.004	5.1	1.5	O K
2160 min Winter	5.003	0.003	3.9	1.1	O K
2880 min Winter	5.003	0.003	3.3	0.9	O K
4320 min Winter	5.002	0.002	2.1	0.7	O K
5760 min Winter	5.002	0.002	2.1	0.6	O K
7200 min Winter	5.001	0.001	1.5	0.5	O K
8640 min Winter	5.001	0.001	1.5	0.4	O K
10080 min Winter	5.001	0.001	1.5	0.4	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
240 min Winter	20.006	0.0	126
360 min Winter	14.706	0.0	188
480 min Winter	11.818	0.0	244
600 min Winter	9.966	0.0	302
720 min Winter	8.665	0.0	358
960 min Winter	6.943	0.0	476
1440 min Winter	5.071	0.0	712
2160 min Winter	3.696	0.0	1068
2880 min Winter	2.949	0.0	1556
4320 min Winter	2.142	0.0	2140
5760 min Winter	1.705	0.0	2776
7200 min Winter	1.427	0.0	3560
8640 min Winter	1.235	0.0	3824
10080 min Winter	1.093	0.0	4664

Scott-White & Hookins		Page 3
42 West Street London House Carshalton SM5 2PR	W01651 The Curlew, Havant Permeable Paving	
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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) 0.165

Time (mins) Area
From: To: (ha)

0 4 0.165

Scott-White & Hookins		Page 4
42 West Street London House Carshalton SM5 2PR	W01651 The Curlew, Havant Permeable Paving	
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Model Details

Storage is Online Cover Level (m) 10.000

Infiltration Blanket Structure

Infiltration Coefficient Base (m/hr)	0.35388	Diameter/Width (m)	34.9
Safety Factor	2.0	Length (m)	34.9
Porosity	0.30	Cap Volume Depth (m)	0.400
Invert Level (m)	5.000		