

Reuby & Stagg Ltd				Page 1	
Dewey House 55 High Street Ringwood BH24 1AE		rusington Porous Paving 420mm Construction			
Date oct 2018 File parking bay porou...		Designed By RHB Checked By			
Micro Drainage		Source Control W.12.4			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Half Drain Time : 332 minutes.					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	3.915	0.165	0.1	2.2	O K
30 min Summer	3.973	0.223	0.1	3.0	O K
60 min Summer	4.030	0.280	0.1	3.8	O K
120 min Summer	4.078	0.328	0.1	4.5	O K
180 min Summer	4.096	0.346	0.1	4.7	O K
240 min Summer	4.100	0.350	0.1	4.8	Flood Risk
360 min Summer	4.096	0.346	0.1	4.7	O K
480 min Summer	4.089	0.339	0.1	4.6	O K
600 min Summer	4.080	0.330	0.1	4.5	O K
720 min Summer	4.071	0.321	0.1	4.4	O K
960 min Summer	4.050	0.300	0.1	4.1	O K
1440 min Summer	4.009	0.259	0.1	3.5	O K
2160 min Summer	3.952	0.202	0.1	2.7	O K
2880 min Summer	3.903	0.153	0.1	2.0	O K
4320 min Summer	3.834	0.084	0.1	1.1	O K
5760 min Summer	3.802	0.052	0.1	0.6	O K
7200 min Summer	3.794	0.044	0.1	0.5	O K
8640 min Summer	3.788	0.038	0.1	0.5	O K
Storm Event			Rain (mm/hr)	Time-Peak (mins)	
15 min Summer			124.633	22	
30 min Summer			83.789	36	
60 min Summer			53.779	64	
120 min Summer			33.337	124	
180 min Summer			24.832	182	
240 min Summer			20.006	240	
360 min Summer			14.706	302	
480 min Summer			11.818	364	
600 min Summer			9.966	428	
720 min Summer			8.665	496	
960 min Summer			6.943	634	
1440 min Summer			5.071	902	
2160 min Summer			3.696	1296	
2880 min Summer			2.949	1648	
4320 min Summer			2.142	2336	
5760 min Summer			1.705	2944	
7200 min Summer			1.427	3672	
8640 min Summer			1.235	4408	
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Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
10080 min Summer	3.784	0.034	0.1	0.4	O K
15 min Winter	3.937	0.187	0.1	2.5	O K
30 min Winter	4.003	0.253	0.1	3.4	O K
60 min Winter	4.068	0.318	0.1	4.3	O K
120 min Winter	4.126	0.376	0.1	5.1	Flood Risk
180 min Winter	4.149	0.399	0.1	5.4	Flood Risk
240 min Winter	4.156	0.406	0.1	5.5	Flood Risk
360 min Winter	4.154	0.404	0.1	5.5	Flood Risk
480 min Winter	4.143	0.393	0.1	5.4	Flood Risk
600 min Winter	4.131	0.381	0.1	5.2	Flood Risk
720 min Winter	4.117	0.367	0.1	5.0	Flood Risk
960 min Winter	4.087	0.337	0.1	4.6	O K
1440 min Winter	4.023	0.273	0.1	3.7	O K
2160 min Winter	3.935	0.185	0.1	2.5	O K
2880 min Winter	3.864	0.114	0.1	1.5	O K
4320 min Winter	3.798	0.048	0.1	0.6	O K
5760 min Winter	3.788	0.038	0.1	0.5	O K
7200 min Winter	3.782	0.032	0.1	0.4	O K
8640 min Winter	3.778	0.028	0.1	0.3	O K
Storm Event	Rain (mm/hr)		Time-Peak (mins)		
10080 min Summer	1.093		5136		
15 min Winter	124.633		22		
30 min Winter	83.789		36		
60 min Winter	53.779		64		
120 min Winter	33.337		122		
180 min Winter	24.832		178		
240 min Winter	20.800		234		
360 min Winter	14.706		342		
480 min Winter	11.818		390		
600 min Winter	9.966		464		
720 min Winter	8.665		540		
960 min Winter	6.943		692		
1440 min Winter	5.071		980		
2160 min Winter	3.696		1368		
2880 min Winter	2.949		1708		
4320 min Winter	2.142		2244		
5760 min Winter	1.705		2936		
7200 min Winter	1.427		3680		
8640 min Winter	1.235		4344		
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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 (m³)	Status
10080 min Winter	3.775	0.025	0.1	0.3	O K

Storm Event	Rain (mm/hr)	Time-Peak (mins)
10080 min Winter	1.093	5136

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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) 0.011

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.006	4-8	0.005

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Model Details

Storage is Online Cover Level (m) 4.400

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.01662	Width (m)	9.6
Membrane Percolation (mm/hr)	1000	Length (m)	4.8
Max Percolation (l/s)	12.8	Slope (1:X)	500.0
Safety Factor	1.5	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	3.750	Cap Volume Depth (m)	0.420

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