

Eastwood & Partners				Page 1	
St Andrew's House 23 Kingfield Road Sheffield S11 9AS		Newett Homes Thurlstone Plot soakaway 200m2			
Date April 19 File Plot 200m2.srcx		Designed by CH Checked by			
Micro Drainage		Source Control 2016.1			
Summary of Results for 100 year Return Period (+30%)					
Half Drain Time : 17 minutes.					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	228.864	0.864	2.3	3.3	O K
30 min Summer	228.989	0.989	2.7	3.8	O K
60 min Summer	229.016	1.016	2.8	3.9	O K
120 min Summer	228.922	0.922	2.5	3.5	O K
180 min Summer	228.818	0.818	2.2	3.1	O K
240 min Summer	228.732	0.732	2.0	2.8	O K
360 min Summer	228.607	0.607	1.7	2.3	O K
480 min Summer	228.522	0.522	1.4	2.0	O K
600 min Summer	228.460	0.460	1.3	1.7	O K
720 min Summer	228.412	0.412	1.1	1.6	O K
960 min Summer	228.343	0.343	0.9	1.3	O K
1440 min Summer	228.261	0.261	0.7	1.0	O K
2160 min Summer	228.195	0.195	0.5	0.7	O K
2880 min Summer	228.158	0.158	0.4	0.6	O K
4320 min Summer	228.115	0.115	0.3	0.4	O K
5760 min Summer	228.092	0.092	0.2	0.3	O K
7200 min Summer	228.077	0.077	0.2	0.3	O K
8640 min Summer	228.066	0.066	0.2	0.3	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
15 min Summer	117.331	0.0	14		
30 min Summer	78.355	0.0	22		
60 min Summer	49.937	0.0	40		
120 min Summer	30.753	0.0	72		
180 min Summer	22.834	0.0	104		
240 min Summer	18.364	0.0	134		
360 min Summer	13.448	0.0	196		
480 min Summer	10.781	0.0	256		
600 min Summer	9.076	0.0	316		
720 min Summer	7.880	0.0	376		
960 min Summer	6.301	0.0	498		
1440 min Summer	4.589	0.0	736		
2160 min Summer	3.335	0.0	1100		
2880 min Summer	2.656	0.0	1468		
4320 min Summer	1.924	0.0	2200		
5760 min Summer	1.529	0.0	2936		
7200 min Summer	1.278	0.0	3672		
8640 min Summer	1.104	0.0	4400		
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Micro Drainage		Source Control 2016.1			
Summary of Results for 100 year Return Period (+30%)					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
10080 min Summer	228.059	0.059	0.2	0.2	O K
15 min Winter	228.968	0.968	2.6	3.7	O K
30 min Winter	229.089	1.089	3.0	4.1	O K
60 min Winter	229.074	1.074	2.9	4.1	O K
120 min Winter	228.913	0.913	2.5	3.5	O K
180 min Winter	228.773	0.773	2.1	2.9	O K
240 min Winter	228.667	0.667	1.8	2.5	O K
360 min Winter	228.525	0.525	1.4	2.0	O K
480 min Winter	228.436	0.436	1.2	1.7	O K
600 min Winter	228.374	0.374	1.0	1.4	O K
720 min Winter	228.329	0.329	0.9	1.3	O K
960 min Winter	228.267	0.267	0.7	1.0	O K
1440 min Winter	228.197	0.197	0.5	0.7	O K
2160 min Winter	228.144	0.144	0.4	0.5	O K
2880 min Winter	228.115	0.115	0.3	0.4	O K
4320 min Winter	228.084	0.084	0.2	0.3	O K
5760 min Winter	228.066	0.066	0.2	0.3	O K
7200 min Winter	228.056	0.056	0.2	0.2	O K
8640 min Winter	228.048	0.048	0.1	0.2	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
10080 min Summer	0.976	0.0	5136		
15 min Winter	117.331	0.0	15		
30 min Winter	78.355	0.0	24		
60 min Winter	49.937	0.0	42		
120 min Winter	30.753	0.0	76		
180 min Winter	22.834	0.0	108		
240 min Winter	18.364	0.0	138		
360 min Winter	13.448	0.0	200		
480 min Winter	10.781	0.0	260		
600 min Winter	9.076	0.0	320		
720 min Winter	7.880	0.0	382		
960 min Winter	6.301	0.0	502		
1440 min Winter	4.589	0.0	738		
2160 min Winter	3.335	0.0	1104		
2880 min Winter	2.656	0.0	1468		
4320 min Winter	1.924	0.0	2188		
5760 min Winter	1.529	0.0	2936		
7200 min Winter	1.278	0.0	3640		
8640 min Winter	1.104	0.0	4400		
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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	0.364	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+30

Time Area Diagram

Total Area (ha) 0.020

Time (mins)	Area
From:	To: (ha)
0	4 0.020

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<u>Model Details</u> Storage is Online Cover Level (m) 230.000 <u>Cellular Storage Structure</u> Invert Level (m) 228.000 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95 Infiltration Coefficient Side (m/hr) 2.44800 <table border="1"> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> </tr> </thead> <tbody> <tr><td>0.000</td><td>4.0</td><td>4.0</td><td>2.600</td><td>0.0</td><td>14.4</td></tr> <tr><td>0.200</td><td>4.0</td><td>5.6</td><td>2.800</td><td>0.0</td><td>14.4</td></tr> <tr><td>0.400</td><td>4.0</td><td>7.2</td><td>3.000</td><td>0.0</td><td>14.4</td></tr> <tr><td>0.600</td><td>4.0</td><td>8.8</td><td>3.200</td><td>0.0</td><td>14.4</td></tr> <tr><td>0.800</td><td>4.0</td><td>10.4</td><td>3.400</td><td>0.0</td><td>14.4</td></tr> <tr><td>1.000</td><td>4.0</td><td>12.0</td><td>3.600</td><td>0.0</td><td>14.4</td></tr> <tr><td>1.200</td><td>4.0</td><td>13.6</td><td>3.800</td><td>0.0</td><td>14.4</td></tr> <tr><td>1.400</td><td>0.0</td><td>14.4</td><td>4.000</td><td>0.0</td><td>14.4</td></tr> <tr><td>1.600</td><td>0.0</td><td>14.4</td><td>4.200</td><td>0.0</td><td>14.4</td></tr> <tr><td>1.800</td><td>0.0</td><td>14.4</td><td>4.400</td><td>0.0</td><td>14.4</td></tr> <tr><td>2.000</td><td>0.0</td><td>14.4</td><td>4.600</td><td>0.0</td><td>14.4</td></tr> <tr><td>2.200</td><td>0.0</td><td>14.4</td><td>4.800</td><td>0.0</td><td>14.4</td></tr> <tr><td>2.400</td><td>0.0</td><td>14.4</td><td>5.000</td><td>0.0</td><td>14.4</td></tr> </tbody> </table>			Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	0.000	4.0	4.0	2.600	0.0	14.4	0.200	4.0	5.6	2.800	0.0	14.4	0.400	4.0	7.2	3.000	0.0	14.4	0.600	4.0	8.8	3.200	0.0	14.4	0.800	4.0	10.4	3.400	0.0	14.4	1.000	4.0	12.0	3.600	0.0	14.4	1.200	4.0	13.6	3.800	0.0	14.4	1.400	0.0	14.4	4.000	0.0	14.4	1.600	0.0	14.4	4.200	0.0	14.4	1.800	0.0	14.4	4.400	0.0	14.4	2.000	0.0	14.4	4.600	0.0	14.4	2.200	0.0	14.4	4.800	0.0	14.4	2.400	0.0	14.4	5.000	0.0	14.4
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