

Eastwood & Partners				Page 1	
St Andrew's House 23 Kingfield Road Sheffield S11 9AS		Newett Homes Thurlstone HSA23 - 570m2			
Date April 19 File HSA3.srcx		Designed by CH Checked by			
Micro Drainage		Source Control 2016.1			
Summary of Results for 100 year Return Period (+30%)					
Half Drain Time : 15 minutes.					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	233.395	1.695	7.3	9.2	O K
30 min Summer	233.629	1.929	8.3	10.4	O K
60 min Summer	233.654	1.954	8.4	10.6	O K
120 min Summer	233.448	1.748	7.5	9.4	O K
180 min Summer	233.239	1.539	6.6	8.3	O K
240 min Summer	233.070	1.370	5.9	7.4	O K
360 min Summer	232.827	1.127	4.8	6.1	O K
480 min Summer	232.665	0.965	4.1	5.2	O K
600 min Summer	232.547	0.847	3.6	4.6	O K
720 min Summer	232.458	0.758	3.2	4.1	O K
960 min Summer	232.328	0.628	2.7	3.4	O K
1440 min Summer	232.177	0.477	2.0	2.6	O K
2160 min Summer	232.055	0.355	1.5	1.9	O K
2880 min Summer	231.986	0.286	1.2	1.5	O K
4320 min Summer	231.909	0.209	0.9	1.1	O K
5760 min Summer	231.866	0.166	0.7	0.9	O K
7200 min Summer	231.839	0.139	0.6	0.8	O K
8640 min Summer	231.820	0.120	0.5	0.6	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	38		
120 min Summer	30.753	0.0	72		
180 min Summer	22.834	0.0	102		
240 min Summer	18.364	0.0	134		
360 min Summer	13.448	0.0	194		
480 min Summer	10.781	0.0	254		
600 min Summer	9.076	0.0	314		
720 min Summer	7.880	0.0	376		
960 min Summer	6.301	0.0	494		
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	2928		
7200 min Summer	1.278	0.0	3672		
8640 min Summer	1.104	0.0	4368		
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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	231.806	0.106	0.5	0.6	O K
15 min Winter	233.594	1.894	8.1	10.2	O K
30 min Winter	233.811	2.111	9.0	11.4	O K
60 min Winter	233.750	2.050	8.8	11.1	O K
120 min Winter	233.414	1.714	7.3	9.3	O K
180 min Winter	233.138	1.438	6.2	7.8	O K
240 min Winter	232.933	1.233	5.3	6.7	O K
360 min Winter	232.664	0.964	4.1	5.2	O K
480 min Winter	232.497	0.797	3.4	4.3	O K
600 min Winter	232.383	0.683	2.9	3.7	O K
720 min Winter	232.299	0.599	2.6	3.2	O K
960 min Winter	232.185	0.485	2.1	2.6	O K
1440 min Winter	232.057	0.357	1.5	1.9	O K
2160 min Winter	231.961	0.261	1.1	1.4	O K
2880 min Winter	231.908	0.208	0.9	1.1	O K
4320 min Winter	231.851	0.151	0.6	0.8	O K
5760 min Winter	231.820	0.120	0.5	0.6	O K
7200 min Winter	231.801	0.101	0.4	0.5	O K
8640 min Winter	231.787	0.087	0.4	0.5	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
10080 min Summer	0.976	0.0	5128		
15 min Winter	117.331	0.0	14		
30 min Winter	78.355	0.0	23		
60 min Winter	49.937	0.0	42		
120 min Winter	30.753	0.0	74		
180 min Winter	22.834	0.0	106		
240 min Winter	18.364	0.0	138		
360 min Winter	13.448	0.0	198		
480 min Winter	10.781	0.0	260		
600 min Winter	9.076	0.0	320		
720 min Winter	7.880	0.0	380		
960 min Winter	6.301	0.0	500		
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	2896		
7200 min Winter	1.278	0.0	3640		
8640 min Winter	1.104	0.0	4368		
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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) 0.057

Time (mins)	Area
From:	To: (ha)
0	4 0.057

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<u>Model Details</u> Storage is Online Cover Level (m) 234.550 <u>Lined Soakaway Structure</u> <table> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.00000</td> <td>Ring Diameter (m)</td> <td>2.10</td> </tr> <tr> <td>Infiltration Coefficient Side (m/hr)</td> <td>2.44800</td> <td>Pit Multiplier</td> <td>1.5</td> </tr> <tr> <td>Safety Factor</td> <td>2.0</td> <td>Number Required</td> <td>1</td> </tr> <tr> <td>Porosity</td> <td>0.30</td> <td>Cap Volume Depth (m)</td> <td>0.000</td> </tr> <tr> <td>Invert Level (m)</td> <td>231.700</td> <td>Cap Infiltration Depth (m)</td> <td>0.000</td> </tr> </table>			Infiltration Coefficient Base (m/hr)	0.00000	Ring Diameter (m)	2.10	Infiltration Coefficient Side (m/hr)	2.44800	Pit Multiplier	1.5	Safety Factor	2.0	Number Required	1	Porosity	0.30	Cap Volume Depth (m)	0.000	Invert Level (m)	231.700	Cap Infiltration Depth (m)	0.000
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