

Eastwood & Partners					Page 1																																																																																																																																																																																																																			
St Andrew's House 23 Kingfield Road Sheffield S11 9AS			Miller Homes Scholes HSA3 - one ring																																																																																																																																																																																																																					
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Summary of Results for 100 year Return Period (+30%) Half Drain Time : 843 minutes. <table><thead><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr></thead><tbody><tr><td>15 min Summer</td><td>265.655</td><td>1.055</td><td>0.2</td><td>16.8</td><td>O K</td></tr><tr><td>30 min Summer</td><td>265.995</td><td>1.395</td><td>0.3</td><td>22.1</td><td>O K</td></tr><tr><td>60 min Summer</td><td>266.348</td><td>1.748</td><td>0.4</td><td>27.8</td><td>O K</td></tr><tr><td>120 min Summer</td><td>266.694</td><td>2.094</td><td>0.4</td><td>33.2</td><td>O K</td></tr><tr><td>180 min Summer</td><td>266.874</td><td>2.274</td><td>0.5</td><td>36.1</td><td>O K</td></tr><tr><td>240 min Summer</td><td>266.979</td><td>2.379</td><td>0.5</td><td>37.8</td><td>O K</td></tr><tr><td>360 min Summer</td><td>267.089</td><td>2.489</td><td>0.5</td><td>39.5</td><td>O K</td></tr><tr><td>480 min Summer</td><td>267.137</td><td>2.537</td><td>0.5</td><td>40.3</td><td>O K</td></tr><tr><td>600 min Summer</td><td>267.157</td><td>2.557</td><td>0.5</td><td>40.6</td><td>O K</td></tr><tr><td>720 min Summer</td><td>267.172</td><td>2.572</td><td>0.5</td><td>40.8</td><td>O K</td></tr><tr><td>960 min Summer</td><td>267.189</td><td>2.589</td><td>0.5</td><td>41.1</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>267.184</td><td>2.584</td><td>0.5</td><td>41.0</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>267.123</td><td>2.523</td><td>0.5</td><td>40.0</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>267.037</td><td>2.437</td><td>0.5</td><td>38.7</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>266.856</td><td>2.256</td><td>0.5</td><td>35.8</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>266.687</td><td>2.087</td><td>0.4</td><td>33.1</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>266.540</td><td>1.940</td><td>0.4</td><td>30.8</td><td>O K</td></tr><tr><td>8640 min 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Summer</td><td>10.650</td><td>0.0</td><td>480</td></tr><tr><td>600 min Summer</td><td>8.954</td><td>0.0</td><td>534</td></tr><tr><td>720 min Summer</td><td>7.767</td><td>0.0</td><td>592</td></tr><tr><td>960 min Summer</td><td>6.201</td><td>0.0</td><td>712</td></tr><tr><td>1440 min Summer</td><td>4.507</td><td>0.0</td><td>980</td></tr><tr><td>2160 min Summer</td><td>3.269</td><td>0.0</td><td>1388</td></tr><tr><td>2880 min Summer</td><td>2.600</td><td>0.0</td><td>1792</td></tr><tr><td>4320 min Summer</td><td>1.880</td><td>0.0</td><td>2596</td></tr><tr><td>5760 min Summer</td><td>1.492</td><td>0.0</td><td>3400</td></tr><tr><td>7200 min Summer</td><td>1.247</td><td>0.0</td><td>4176</td></tr><tr><td>8640 min Summer</td><td>1.076</td><td>0.0</td><td>4928</td></tr><tr><td>10080 min Summer</td><td>0.949</td><td>0.0</td><td>5648</td></tr><tr><td>15 min Winter</td><td>118.449</td><td>0.0</td><td>19</td></tr></tbody></table>							Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	265.655	1.055	0.2	16.8	O K	30 min Summer	265.995	1.395	0.3	22.1	O K	60 min Summer	266.348	1.748	0.4	27.8	O K	120 min Summer	266.694	2.094	0.4	33.2	O K	180 min Summer	266.874	2.274	0.5	36.1	O K	240 min Summer	266.979	2.379	0.5	37.8	O K	360 min Summer	267.089	2.489	0.5	39.5	O K	480 min Summer	267.137	2.537	0.5	40.3	O K	600 min Summer	267.157	2.557	0.5	40.6	O K	720 min Summer	267.172	2.572	0.5	40.8	O K	960 min Summer	267.189	2.589	0.5	41.1	O K	1440 min Summer	267.184	2.584	0.5	41.0	O K	2160 min Summer	267.123	2.523	0.5	40.0	O K	2880 min Summer	267.037	2.437	0.5	38.7	O K	4320 min Summer	266.856	2.256	0.5	35.8	O K	5760 min Summer	266.687	2.087	0.4	33.1	O K	7200 min Summer	266.540	1.940	0.4	30.8	O K	8640 min Summer	266.414	1.814	0.4	28.8	O K	10080 min Summer	266.304	1.704	0.4	27.1	O K	15 min Winter	265.782	1.182	0.2	18.8	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	118.449	0.0	19	30 min Summer	78.738	0.0	34	60 min 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St Andrew's House 23 Kingfield Road Sheffield S11 9AS		Miller Homes Scholes HSA3 - one ring			
Date May 18		Designed by CH			
File HSA3 May 18 - 1 ring.srcx		Checked by			
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
30 min Winter	266.163	1.563	0.3	24.8	O K
60 min Winter	266.559	1.959	0.4	31.1	O K
120 min Winter	266.948	2.348	0.5	37.3	O K
180 min Winter	267.151	2.551	0.5	40.5	O K
240 min Winter	267.271	2.671	0.6	42.4	Flood Risk
360 min Winter	267.400	2.800	0.6	44.4	Flood Risk
480 min Winter	267.463	2.863	0.6	45.4	Flood Risk
600 min Winter	267.486	2.886	0.6	45.8	Flood Risk
720 min Winter	267.488	2.888	0.6	45.8	Flood Risk
960 min Winter	267.497	2.897	0.6	46.0	Flood Risk
1440 min Winter	267.457	2.857	0.6	45.4	Flood Risk
2160 min Winter	267.333	2.733	0.6	43.4	Flood Risk
2880 min Winter	267.191	2.591	0.5	41.1	O K
4320 min Winter	266.920	2.320	0.5	36.8	O K
5760 min Winter	266.690	2.090	0.4	33.2	O K
7200 min Winter	266.498	1.898	0.4	30.1	O K
8640 min Winter	266.338	1.738	0.4	27.6	O K
10080 min Winter	266.203	1.603	0.3	25.4	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	78.738	0.0	33		
60 min Winter	49.937	0.0	62		
120 min Winter	30.613	0.0	120		
180 min Winter	22.679	0.0	180		
240 min Winter	18.217	0.0	238		
360 min Winter	13.305	0.0	350		
480 min Winter	10.650	0.0	460		
600 min Winter	8.954	0.0	566		
720 min Winter	7.767	0.0	652		
960 min Winter	6.201	0.0	742		
1440 min Winter	4.507	0.0	1050		
2160 min Winter	3.269	0.0	1492		
2880 min Winter	2.600	0.0	1928		
4320 min Winter	1.880	0.0	2764		
5760 min Winter	1.492	0.0	3568		
7200 min Winter	1.247	0.0	4328		
8640 min Winter	1.076	0.0	5104		
10080 min Winter	0.949	0.0	5856		
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St Andrew's House 23 Kingfield Road Sheffield S11 9AS	Miller Homes Scholes HSA3 - one ring	
Date May 18 File HSA3 May 18 - 1 ring.srcx	Designed by CH Checked by	
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	0.374	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+30

Time Area Diagram

Total Area (ha) 0.076

Time (mins)		Area
From:	To:	(ha)
0	4	0.076

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<u>Model Details</u> Storage is Online Cover Level (m) 267.500 <u>Lined Soakaway Structure</u> <table> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.00000</td> <td>Ring Diameter (m)</td> <td>3.60</td> </tr> <tr> <td>Infiltration Coefficient Side (m/hr)</td> <td>0.03490</td> <td>Pit Multiplier</td> <td>1.5</td> </tr> <tr> <td>Safety Factor</td> <td>1.0</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>264.600</td> <td>Cap Infiltration Depth (m)</td> <td>0.000</td> </tr> </table>			Infiltration Coefficient Base (m/hr)	0.00000	Ring Diameter (m)	3.60	Infiltration Coefficient Side (m/hr)	0.03490	Pit Multiplier	1.5	Safety Factor	1.0	Number Required	1	Porosity	0.30	Cap Volume Depth (m)	0.000	Invert Level (m)	264.600	Cap Infiltration Depth (m)	0.000
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