

MJA Consulting				Page 1																																																																																																																																																																																																																			
Monarch House Barton Lane OX14 3NB		Swale 6																																																																																																																																																																																																																					
Date 10/05/2018 12:15 File SWALE 6.SRCX		Designed by stewart Checked by																																																																																																																																																																																																																					
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<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 168 minutes. <table><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><tr><td>15 min Summer</td><td>11.103</td><td>0.703</td><td>5.9</td><td>66.3</td><td>O K</td></tr><tr><td>30 min Summer</td><td>11.197</td><td>0.797</td><td>6.8</td><td>86.0</td><td>O K</td></tr><tr><td>60 min Summer</td><td>11.263</td><td>0.863</td><td>7.4</td><td>102.9</td><td>Flood Risk</td></tr><tr><td>120 min Summer</td><td>11.296</td><td>0.896</td><td>7.5</td><td>112.2</td><td>Flood Risk</td></tr><tr><td>180 min Summer</td><td>11.300</td><td>0.900</td><td>7.5</td><td>113.4</td><td>Flood Risk</td></tr><tr><td>240 min Summer</td><td>11.297</td><td>0.897</td><td>7.5</td><td>112.5</td><td>Flood Risk</td></tr><tr><td>360 min Summer</td><td>11.285</td><td>0.885</td><td>7.5</td><td>109.0</td><td>Flood Risk</td></tr><tr><td>480 min Summer</td><td>11.269</td><td>0.869</td><td>7.4</td><td>104.4</td><td>Flood Risk</td></tr><tr><td>600 min Summer</td><td>11.251</td><td>0.851</td><td>7.3</td><td>99.5</td><td>Flood Risk</td></tr><tr><td>720 min Summer</td><td>11.233</td><td>0.833</td><td>7.2</td><td>94.8</td><td>Flood Risk</td></tr><tr><td>960 min Summer</td><td>11.198</td><td>0.798</td><td>6.8</td><td>86.3</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>11.133</td><td>0.733</td><td>6.2</td><td>72.1</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>11.044</td><td>0.644</td><td>5.4</td><td>56.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>10.963</td><td>0.563</td><td>4.7</td><td>44.6</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>10.800</td><td>0.400</td><td>4.1</td><td>25.8</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>10.720</td><td>0.320</td><td>3.8</td><td>16.9</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>10.680</td><td>0.280</td><td>3.3</td><td>12.9</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>10.649</td><td>0.249</td><td>2.9</td><td>10.2</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>10.624</td><td>0.224</td><td>2.6</td><td>8.3</td><td>O K</td></tr><tr><td>15 min Winter</td><td>11.146</td><td>0.746</td><td>6.3</td><td>74.6</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>134.746</td><td>0.0</td><td>18</td></tr><tr><td>30 min Summer</td><td>90.474</td><td>0.0</td><td>32</td></tr><tr><td>60 min Summer</td><td>57.877</td><td>0.0</td><td>62</td></tr><tr><td>120 min Summer</td><td>35.655</td><td>0.0</td><td>112</td></tr><tr><td>180 min Summer</td><td>26.413</td><td>0.0</td><td>142</td></tr><tr><td>240 min Summer</td><td>21.237</td><td>0.0</td><td>174</td></tr><tr><td>360 min Summer</td><td>15.626</td><td>0.0</td><td>242</td></tr><tr><td>480 min Summer</td><td>12.548</td><td>0.0</td><td>310</td></tr><tr><td>600 min Summer</td><td>10.575</td><td>0.0</td><td>380</td></tr><tr><td>720 min Summer</td><td>9.191</td><td>0.0</td><td>446</td></tr><tr><td>960 min Summer</td><td>7.358</td><td>0.0</td><td>578</td></tr><tr><td>1440 min Summer</td><td>5.368</td><td>0.0</td><td>838</td></tr><tr><td>2160 min Summer</td><td>3.907</td><td>0.0</td><td>1212</td></tr><tr><td>2880 min Summer</td><td>3.115</td><td>0.0</td><td>1588</td></tr><tr><td>4320 min Summer</td><td>2.259</td><td>0.0</td><td>2292</td></tr><tr><td>5760 min Summer</td><td>1.796</td><td>0.0</td><td>2952</td></tr><tr><td>7200 min Summer</td><td>1.506</td><td>0.0</td><td>3680</td></tr><tr><td>8640 min Summer</td><td>1.304</td><td>0.0</td><td>4408</td></tr><tr><td>10080 min Summer</td><td>1.154</td><td>0.0</td><td>5144</td></tr><tr><td>15 min Winter</td><td>134.746</td><td>0.0</td><td>18</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	11.103	0.703	5.9	66.3	O K	30 min Summer	11.197	0.797	6.8	86.0	O K	60 min Summer	11.263	0.863	7.4	102.9	Flood Risk	120 min Summer	11.296	0.896	7.5	112.2	Flood Risk	180 min Summer	11.300	0.900	7.5	113.4	Flood Risk	240 min Summer	11.297	0.897	7.5	112.5	Flood Risk	360 min Summer	11.285	0.885	7.5	109.0	Flood Risk	480 min Summer	11.269	0.869	7.4	104.4	Flood Risk	600 min Summer	11.251	0.851	7.3	99.5	Flood Risk	720 min Summer	11.233	0.833	7.2	94.8	Flood Risk	960 min Summer	11.198	0.798	6.8	86.3	O K	1440 min Summer	11.133	0.733	6.2	72.1	O K	2160 min Summer	11.044	0.644	5.4	56.2	O K	2880 min Summer	10.963	0.563	4.7	44.6	O K	4320 min Summer	10.800	0.400	4.1	25.8	O K	5760 min Summer	10.720	0.320	3.8	16.9	O K	7200 min Summer	10.680	0.280	3.3	12.9	O K	8640 min Summer	10.649	0.249	2.9	10.2	O K	10080 min Summer	10.624	0.224	2.6	8.3	O K	15 min Winter	11.146	0.746	6.3	74.6	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	134.746	0.0	18	30 min Summer	90.474	0.0	32	60 min Summer	57.877	0.0	62	120 min 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Monarch House Barton Lane OX14 3NB		Swale 6			
Date 10/05/2018 12:15 File SWALE 6.SRCX		Designed by stewart Checked by			
Innovyze		Source Control 2017.1.2			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	11.241	0.841		7.2 97.1	Flood Risk
60 min Winter	11.313	0.913		7.6 117.1	Flood Risk
120 min Winter	11.353	0.953		7.8 129.5	Flood Risk
180 min Winter	11.355	0.955		7.8 129.9	Flood Risk
240 min Winter	11.351	0.951		7.8 128.6	Flood Risk
360 min Winter	11.333	0.933		7.7 123.2	Flood Risk
480 min Winter	11.309	0.909		7.6 116.1	Flood Risk
600 min Winter	11.283	0.883		7.4 108.5	Flood Risk
720 min Winter	11.257	0.857		7.3 101.3	Flood Risk
960 min Winter	11.209	0.809		6.9 88.8	Flood Risk
1440 min Winter	11.119	0.719		6.1 69.3	O K
2160 min Winter	10.996	0.596		5.0 49.1	O K
2880 min Winter	10.863	0.463		4.2 33.0	O K
4320 min Winter	10.707	0.307		3.6 15.6	O K
5760 min Winter	10.651	0.251		2.9 10.4	O K
7200 min Winter	10.614	0.214		2.5 7.5	O K
8640 min Winter	10.587	0.187		2.1 5.7	O K
10080 min Winter	10.566	0.166		1.9 4.6	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	90.474	0.0	32		
60 min Winter	57.877	0.0	60		
120 min Winter	35.655	0.0	116		
180 min Winter	26.413	0.0	150		
240 min Winter	21.237	0.0	186		
360 min Winter	15.626	0.0	262		
480 min Winter	12.548	0.0	338		
600 min Winter	10.575	0.0	410		
720 min Winter	9.191	0.0	478		
960 min Winter	7.358	0.0	616		
1440 min Winter	5.368	0.0	880		
2160 min Winter	3.907	0.0	1272		
2880 min Winter	3.115	0.0	1648		
4320 min Winter	2.259	0.0	2252		
5760 min Winter	1.796	0.0	2992		
7200 min Winter	1.506	0.0	3680		
8640 min Winter	1.304	0.0	4408		
10080 min Winter	1.154	0.0	5136		
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Model Details

Storage is Online Cover Level (m) 11.500

Complex Structure

Trench Soakaway

Infiltration Coefficient Base (m/hr) 0.07200	Trench Width (m) 5.0
Infiltration Coefficient Side (m/hr) 0.07200	Trench Length (m) 75.0
Safety Factor 2.0	Slope (1:X) 220.0
Porosity 0.30	Cap Volume Depth (m) 0.500
Invert Level (m) 10.400	Cap Infiltration Depth (m) 0.500

Swale

Infiltration Coefficient Base (m/hr) 0.07200	Length (m) 75.0
Infiltration Coefficient Side (m/hr) 0.07200	Side Slope (1:X) 3.0
Safety Factor 2.0	Slope (1:X) 220.0
Porosity 1.00	Cap Volume Depth (m) 0.000
Invert Level (m) 10.900	Cap Infiltration Depth (m) 0.000
Base Width (m) 2.5	

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