

MJA Consulting				Page 1																																																																																																																																																																																																																			
Monarch House Barton Lane OX14 3NB		Swale 1																																																																																																																																																																																																																					
Date 01/05/2018 File SWALE 1.SRCX		Designed by stewart Checked by																																																																																																																																																																																																																					
Innovyze		Source Control 2017.1.2																																																																																																																																																																																																																					
<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 190 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>99.377</td><td>0.377</td><td>1.3</td><td>17.9</td><td>O K</td></tr><tr><td>30 min Summer</td><td>99.418</td><td>0.418</td><td>1.5</td><td>23.3</td><td>O K</td></tr><tr><td>60 min Summer</td><td>99.450</td><td>0.450</td><td>1.7</td><td>28.3</td><td>O K</td></tr><tr><td>120 min Summer</td><td>99.468</td><td>0.468</td><td>1.9</td><td>31.4</td><td>O K</td></tr><tr><td>180 min Summer</td><td>99.472</td><td>0.472</td><td>1.9</td><td>32.1</td><td>O K</td></tr><tr><td>240 min Summer</td><td>99.472</td><td>0.472</td><td>1.9</td><td>32.2</td><td>O K</td></tr><tr><td>360 min Summer</td><td>99.471</td><td>0.471</td><td>1.9</td><td>32.0</td><td>O K</td></tr><tr><td>480 min Summer</td><td>99.467</td><td>0.467</td><td>1.9</td><td>31.3</td><td>O K</td></tr><tr><td>600 min Summer</td><td>99.462</td><td>0.462</td><td>1.8</td><td>30.4</td><td>O K</td></tr><tr><td>720 min Summer</td><td>99.456</td><td>0.456</td><td>1.8</td><td>29.4</td><td>O K</td></tr><tr><td>960 min Summer</td><td>99.445</td><td>0.445</td><td>1.7</td><td>27.5</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>99.422</td><td>0.422</td><td>1.6</td><td>23.9</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>99.393</td><td>0.393</td><td>1.4</td><td>19.9</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>99.370</td><td>0.370</td><td>1.2</td><td>16.9</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>99.332</td><td>0.332</td><td>1.0</td><td>12.8</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>99.304</td><td>0.304</td><td>0.9</td><td>10.2</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>99.281</td><td>0.281</td><td>0.8</td><td>8.4</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>99.263</td><td>0.263</td><td>0.7</td><td>7.1</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>99.247</td><td>0.247</td><td>0.6</td><td>6.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>99.395</td><td>0.395</td><td>1.4</td><td>20.1</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>33</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>118</td></tr><tr><td>180 min Summer</td><td>26.413</td><td>0.0</td><td>146</td></tr><tr><td>240 min Summer</td><td>21.237</td><td>0.0</td><td>176</td></tr><tr><td>360 min Summer</td><td>15.626</td><td>0.0</td><td>244</td></tr><tr><td>480 min Summer</td><td>12.548</td><td>0.0</td><td>314</td></tr><tr><td>600 min Summer</td><td>10.575</td><td>0.0</td><td>382</td></tr><tr><td>720 min Summer</td><td>9.191</td><td>0.0</td><td>450</td></tr><tr><td>960 min Summer</td><td>7.358</td><td>0.0</td><td>586</td></tr><tr><td>1440 min Summer</td><td>5.368</td><td>0.0</td><td>840</td></tr><tr><td>2160 min Summer</td><td>3.907</td><td>0.0</td><td>1216</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>2332</td></tr><tr><td>5760 min Summer</td><td>1.796</td><td>0.0</td><td>3056</td></tr><tr><td>7200 min Summer</td><td>1.506</td><td>0.0</td><td>3752</td></tr><tr><td>8640 min Summer</td><td>1.304</td><td>0.0</td><td>4496</td></tr><tr><td>10080 min Summer</td><td>1.154</td><td>0.0</td><td>5240</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	99.377	0.377	1.3	17.9	O K	30 min Summer	99.418	0.418	1.5	23.3	O K	60 min Summer	99.450	0.450	1.7	28.3	O K	120 min Summer	99.468	0.468	1.9	31.4	O K	180 min Summer	99.472	0.472	1.9	32.1	O K	240 min Summer	99.472	0.472	1.9	32.2	O K	360 min Summer	99.471	0.471	1.9	32.0	O K	480 min Summer	99.467	0.467	1.9	31.3	O K	600 min Summer	99.462	0.462	1.8	30.4	O K	720 min Summer	99.456	0.456	1.8	29.4	O K	960 min Summer	99.445	0.445	1.7	27.5	O K	1440 min Summer	99.422	0.422	1.6	23.9	O K	2160 min Summer	99.393	0.393	1.4	19.9	O K	2880 min Summer	99.370	0.370	1.2	16.9	O K	4320 min Summer	99.332	0.332	1.0	12.8	O K	5760 min Summer	99.304	0.304	0.9	10.2	O K	7200 min Summer	99.281	0.281	0.8	8.4	O K	8640 min Summer	99.263	0.263	0.7	7.1	O K	10080 min Summer	99.247	0.247	0.6	6.1	O K	15 min Winter	99.395	0.395	1.4	20.1	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	33	60 min Summer	57.877	0.0	62	120 min Summer	35.655	0.0	118	180 min Summer	26.413	0.0	146	240 min Summer	21.237	0.0	176	360 min Summer	15.626	0.0	244	480 min Summer	12.548	0.0	314	600 min Summer	10.575	0.0	382	720 min Summer	9.191	0.0	450	960 min Summer	7.358	0.0	586	1440 min Summer	5.368	0.0	840	2160 min Summer	3.907	0.0	1216	2880 min Summer	3.115	0.0	1588	4320 min Summer	2.259	0.0	2332	5760 min Summer	1.796	0.0	3056	7200 min Summer	1.506	0.0	3752	8640 min Summer	1.304	0.0	4496	10080 min Summer	1.154	0.0	5240	15 min Winter	134.746	0.0	18
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Monarch House Barton Lane OX14 3NB	Swale 1				
Date 01/05/2018 File SWALE 1.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	99.437	0.437	1.7	26.3	O K
60 min Winter	99.471	0.471	1.9	31.9	O K
120 min Winter	99.491	0.491	2.0	35.7	O K
180 min Winter	99.494	0.494	2.0	36.3	O K
240 min Winter	99.494	0.494	2.0	36.4	O K
360 min Winter	99.491	0.491	2.0	35.7	O K
480 min Winter	99.484	0.484	2.0	34.4	O K
600 min Winter	99.476	0.476	1.9	33.0	O K
720 min Winter	99.468	0.468	1.9	31.5	O K
960 min Winter	99.451	0.451	1.7	28.6	O K
1440 min Winter	99.420	0.420	1.5	23.7	O K
2160 min Winter	99.382	0.382	1.3	18.4	O K
2880 min Winter	99.351	0.351	1.1	14.8	O K
4320 min Winter	99.305	0.305	0.9	10.3	O K
5760 min Winter	99.271	0.271	0.7	7.7	O K
7200 min Winter	99.246	0.246	0.6	6.0	O K
8640 min Winter	99.227	0.227	0.6	4.9	O K
10080 min Winter	99.211	0.211	0.5	4.1	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	152		
240 min Winter	21.237	0.0	186		
360 min Winter	15.626	0.0	264		
480 min Winter	12.548	0.0	338		
600 min Winter	10.575	0.0	412		
720 min Winter	9.191	0.0	484		
960 min Winter	7.358	0.0	624		
1440 min Winter	5.368	0.0	892		
2160 min Winter	3.907	0.0	1276		
2880 min Winter	3.115	0.0	1644		
4320 min Winter	2.259	0.0	2376		
5760 min Winter	1.796	0.0	3104		
7200 min Winter	1.506	0.0	3816		
8640 min Winter	1.304	0.0	4496		
10080 min Winter	1.154	0.0	5240		
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Model Details

Storage is Online Cover Level (m) 100.000

Swale Structure

Infiltration Coefficient Base (m/hr)	0.07200	Length (m)	115.0
Infiltration Coefficient Side (m/hr)	0.07200	Side Slope (1:X)	3.0
Safety Factor	2.0	Slope (1:X)	200.0
Porosity	1.00	Cap Volume Depth (m)	0.000
Invert Level (m)	99.000	Cap Infiltration Depth (m)	0.000
Base Width (m)	0.5		

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