

MJA Consulting				Page 1																																																																																																																																																																																																																			
Monarch House Barton Lane OX14 3NB		Swale 5																																																																																																																																																																																																																					
Date 07/03/2018 12:38 File Swale 5.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 : 210 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>99.440</td><td>0.440</td><td>1.0</td><td>16.0</td><td>O K</td></tr><tr><td>30 min Summer</td><td>99.487</td><td>0.487</td><td>1.2</td><td>21.0</td><td>O K</td></tr><tr><td>60 min Summer</td><td>99.525</td><td>0.525</td><td>1.4</td><td>25.6</td><td>O K</td></tr><tr><td>120 min Summer</td><td>99.548</td><td>0.548</td><td>1.5</td><td>28.8</td><td>O K</td></tr><tr><td>180 min Summer</td><td>99.553</td><td>0.553</td><td>1.5</td><td>29.5</td><td>O K</td></tr><tr><td>240 min Summer</td><td>99.555</td><td>0.555</td><td>1.5</td><td>29.7</td><td>O K</td></tr><tr><td>360 min Summer</td><td>99.555</td><td>0.555</td><td>1.5</td><td>29.7</td><td>O K</td></tr><tr><td>480 min Summer</td><td>99.552</td><td>0.552</td><td>1.5</td><td>29.3</td><td>O K</td></tr><tr><td>600 min Summer</td><td>99.547</td><td>0.547</td><td>1.5</td><td>28.6</td><td>O K</td></tr><tr><td>720 min Summer</td><td>99.542</td><td>0.542</td><td>1.5</td><td>27.9</td><td>O K</td></tr><tr><td>960 min Summer</td><td>99.530</td><td>0.530</td><td>1.4</td><td>26.3</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>99.506</td><td>0.506</td><td>1.3</td><td>23.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>99.475</td><td>0.475</td><td>1.2</td><td>19.7</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>99.449</td><td>0.449</td><td>1.0</td><td>16.9</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>99.408</td><td>0.408</td><td>0.9</td><td>13.1</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>99.375</td><td>0.375</td><td>0.8</td><td>10.6</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>99.350</td><td>0.350</td><td>0.7</td><td>8.8</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>99.329</td><td>0.329</td><td>0.6</td><td>7.5</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>99.311</td><td>0.311</td><td>0.6</td><td>6.5</td><td>O K</td></tr><tr><td>15 min Winter</td><td>99.460</td><td>0.460</td><td>1.1</td><td>18.0</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>120</td></tr><tr><td>180 min Summer</td><td>26.413</td><td>0.0</td><td>154</td></tr><tr><td>240 min Summer</td><td>21.237</td><td>0.0</td><td>184</td></tr><tr><td>360 min Summer</td><td>15.626</td><td>0.0</td><td>250</td></tr><tr><td>480 min Summer</td><td>12.548</td><td>0.0</td><td>320</td></tr><tr><td>600 min Summer</td><td>10.575</td><td>0.0</td><td>388</td></tr><tr><td>720 min Summer</td><td>9.191</td><td>0.0</td><td>456</td></tr><tr><td>960 min Summer</td><td>7.358</td><td>0.0</td><td>590</td></tr><tr><td>1440 min Summer</td><td>5.368</td><td>0.0</td><td>852</td></tr><tr><td>2160 min Summer</td><td>3.907</td><td>0.0</td><td>1236</td></tr><tr><td>2880 min Summer</td><td>3.115</td><td>0.0</td><td>1612</td></tr><tr><td>4320 min Summer</td><td>2.259</td><td>0.0</td><td>2336</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>3808</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	99.440	0.440	1.0	16.0	O K	30 min Summer	99.487	0.487	1.2	21.0	O K	60 min Summer	99.525	0.525	1.4	25.6	O K	120 min Summer	99.548	0.548	1.5	28.8	O K	180 min Summer	99.553	0.553	1.5	29.5	O K	240 min Summer	99.555	0.555	1.5	29.7	O K	360 min Summer	99.555	0.555	1.5	29.7	O K	480 min Summer	99.552	0.552	1.5	29.3	O K	600 min Summer	99.547	0.547	1.5	28.6	O K	720 min Summer	99.542	0.542	1.5	27.9	O K	960 min Summer	99.530	0.530	1.4	26.3	O K	1440 min Summer	99.506	0.506	1.3	23.3	O K	2160 min Summer	99.475	0.475	1.2	19.7	O K	2880 min Summer	99.449	0.449	1.0	16.9	O K	4320 min Summer	99.408	0.408	0.9	13.1	O K	5760 min Summer	99.375	0.375	0.8	10.6	O K	7200 min Summer	99.350	0.350	0.7	8.8	O K	8640 min Summer	99.329	0.329	0.6	7.5	O K	10080 min Summer	99.311	0.311	0.6	6.5	O K	15 min Winter	99.460	0.460	1.1	18.0	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	120	180 min Summer	26.413	0.0	154	240 min Summer	21.237	0.0	184	360 min Summer	15.626	0.0	250	480 min Summer	12.548	0.0	320	600 min Summer	10.575	0.0	388	720 min Summer	9.191	0.0	456	960 min Summer	7.358	0.0	590	1440 min Summer	5.368	0.0	852	2160 min Summer	3.907	0.0	1236	2880 min Summer	3.115	0.0	1612	4320 min Summer	2.259	0.0	2336	5760 min Summer	1.796	0.0	3056	7200 min Summer	1.506	0.0	3808	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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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	99.509	0.509	1.3	23.6	O K
60 min Winter	99.549	0.549	1.5	28.9	O K
120 min Winter	99.575	0.575	1.6	32.7	O K
180 min Winter	99.580	0.580	1.6	33.5	O K
240 min Winter	99.581	0.581	1.6	33.6	O K
360 min Winter	99.579	0.579	1.6	33.3	O K
480 min Winter	99.573	0.573	1.6	32.5	O K
600 min Winter	99.566	0.566	1.6	31.3	O K
720 min Winter	99.558	0.558	1.5	30.1	O K
960 min Winter	99.541	0.541	1.4	27.7	O K
1440 min Winter	99.508	0.508	1.3	23.5	O K
2160 min Winter	99.466	0.466	1.1	18.7	O K
2880 min Winter	99.432	0.432	1.0	15.3	O K
4320 min Winter	99.379	0.379	0.8	10.8	O K
5760 min Winter	99.340	0.340	0.6	8.2	O K
7200 min Winter	99.311	0.311	0.6	6.5	O K
8640 min Winter	99.288	0.288	0.5	5.3	O K
10080 min Winter	99.269	0.269	0.4	4.5	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	118		
180 min Winter	26.413	0.0	170		
240 min Winter	21.237	0.0	192		
360 min Winter	15.626	0.0	268		
480 min Winter	12.548	0.0	344		
600 min Winter	10.575	0.0	418		
720 min Winter	9.191	0.0	492		
960 min Winter	7.358	0.0	634		
1440 min Winter	5.368	0.0	908		
2160 min Winter	3.907	0.0	1296		
2880 min Winter	3.115	0.0	1672		
4320 min Winter	2.259	0.0	2416		
5760 min Winter	1.796	0.0	3120		
7200 min Winter	1.506	0.0	3824		
8640 min Winter	1.304	0.0	4576		
10080 min Winter	1.154	0.0	5248		
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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)	100.0
Infiltration Coefficient Side (m/hr)	0.07200	Side Slope (1:X)	3.0
Safety Factor	2.0	Slope (1:X)	120.0
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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