

MJA Consulting				Page 1																																																																																																																																																																																																																			
Monarch House Barton Lane OX14 3NB		Swale 4																																																																																																																																																																																																																					
Date 12/04/2018 10:43 File SWALE 4.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 : 137 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>99.242</td><td>0.242</td><td>1.1</td><td>10.2</td><td>O K</td></tr><tr><td>30 min Summer</td><td>99.269</td><td>0.269</td><td>1.2</td><td>13.2</td><td>O K</td></tr><tr><td>60 min Summer</td><td>99.289</td><td>0.289</td><td>1.3</td><td>15.6</td><td>O K</td></tr><tr><td>120 min Summer</td><td>99.298</td><td>0.298</td><td>1.4</td><td>16.9</td><td>O K</td></tr><tr><td>180 min Summer</td><td>99.300</td><td>0.300</td><td>1.4</td><td>17.1</td><td>O K</td></tr><tr><td>240 min Summer</td><td>99.299</td><td>0.299</td><td>1.4</td><td>17.0</td><td>O K</td></tr><tr><td>360 min Summer</td><td>99.295</td><td>0.295</td><td>1.4</td><td>16.4</td><td>O K</td></tr><tr><td>480 min Summer</td><td>99.289</td><td>0.289</td><td>1.3</td><td>15.7</td><td>O K</td></tr><tr><td>600 min Summer</td><td>99.283</td><td>0.283</td><td>1.3</td><td>14.9</td><td>O K</td></tr><tr><td>720 min Summer</td><td>99.276</td><td>0.276</td><td>1.3</td><td>14.1</td><td>O K</td></tr><tr><td>960 min Summer</td><td>99.264</td><td>0.264</td><td>1.2</td><td>12.7</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>99.244</td><td>0.244</td><td>1.1</td><td>10.4</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>99.222</td><td>0.222</td><td>0.9</td><td>8.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>99.204</td><td>0.204</td><td>0.8</td><td>6.7</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>99.178</td><td>0.178</td><td>0.7</td><td>4.8</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>99.159</td><td>0.159</td><td>0.6</td><td>3.6</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>99.144</td><td>0.144</td><td>0.5</td><td>2.9</td><td>O K</td></tr><tr><td>8640 min 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<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	99.282	0.282	1.3	14.8	O K
60 min Winter	99.305	0.305	1.4	17.7	O K
120 min Winter	99.315	0.315	1.5	19.2	O K
180 min Winter	99.316	0.316	1.5	19.3	O K
240 min Winter	99.314	0.314	1.5	19.0	O K
360 min Winter	99.307	0.307	1.4	18.1	O K
480 min Winter	99.298	0.298	1.4	16.9	O K
600 min Winter	99.289	0.289	1.3	15.7	O K
720 min Winter	99.280	0.280	1.3	14.5	O K
960 min Winter	99.263	0.263	1.2	12.6	O K
1440 min Winter	99.236	0.236	1.0	9.6	O K
2160 min Winter	99.208	0.208	0.9	7.0	O K
2880 min Winter	99.186	0.186	0.7	5.3	O K
4320 min Winter	99.156	0.156	0.5	3.5	O K
5760 min Winter	99.135	0.135	0.4	2.5	O K
7200 min Winter	99.120	0.120	0.4	1.9	O K
8640 min Winter	99.109	0.109	0.3	1.5	O K
10080 min Winter	99.100	0.100	0.3	1.3	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	112		
180 min Winter	26.413	0.0	140		
240 min Winter	21.237	0.0	178		
360 min Winter	15.626	0.0	254		
480 min Winter	12.548	0.0	326		
600 min Winter	10.575	0.0	398		
720 min Winter	9.191	0.0	464		
960 min Winter	7.358	0.0	598		
1440 min Winter	5.368	0.0	850		
2160 min Winter	3.907	0.0	1212		
2880 min Winter	3.115	0.0	1584		
4320 min Winter	2.259	0.0	2292		
5760 min Winter	1.796	0.0	3000		
7200 min Winter	1.506	0.0	3744		
8640 min Winter	1.304	0.0	4416		
10080 min Winter	1.154	0.0	5144		
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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)	20.400	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.043

Time (mins)	Area
From:	To: (ha)
0	4 0.043

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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)	85.0
Infiltration Coefficient Side (m/hr)	0.07200	Side Slope (1:X)	3.0
Safety Factor	2.0	Slope (1:X)	354.0
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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