

MJA Consulting				Page 1																																																																																																																																																																																																																			
Monarch House Barton Lane OX14 3NB		Plots 131																																																																																																																																																																																																																					
Date 08/03/2018 10:10 File Trench SA Plots 131.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 : 112 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>99.444</td><td>0.444</td><td>0.2</td><td>1.6</td><td>O K</td></tr><tr><td>30 min Summer</td><td>99.568</td><td>0.568</td><td>0.2</td><td>2.1</td><td>O K</td></tr><tr><td>60 min Summer</td><td>99.660</td><td>0.660</td><td>0.2</td><td>2.4</td><td>O K</td></tr><tr><td>120 min Summer</td><td>99.693</td><td>0.693</td><td>0.2</td><td>2.5</td><td>O K</td></tr><tr><td>180 min Summer</td><td>99.685</td><td>0.685</td><td>0.2</td><td>2.5</td><td>O K</td></tr><tr><td>240 min Summer</td><td>99.665</td><td>0.665</td><td>0.2</td><td>2.4</td><td>O K</td></tr><tr><td>360 min Summer</td><td>99.622</td><td>0.622</td><td>0.2</td><td>2.3</td><td>O K</td></tr><tr><td>480 min Summer</td><td>99.579</td><td>0.579</td><td>0.2</td><td>2.1</td><td>O K</td></tr><tr><td>600 min Summer</td><td>99.539</td><td>0.539</td><td>0.2</td><td>2.0</td><td>O K</td></tr><tr><td>720 min Summer</td><td>99.501</td><td>0.501</td><td>0.2</td><td>1.8</td><td>O K</td></tr><tr><td>960 min Summer</td><td>99.432</td><td>0.432</td><td>0.2</td><td>1.6</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>99.320</td><td>0.320</td><td>0.2</td><td>1.2</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>99.201</td><td>0.201</td><td>0.2</td><td>0.7</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>99.122</td><td>0.122</td><td>0.1</td><td>0.4</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>99.049</td><td>0.049</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>99.039</td><td>0.039</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>99.033</td><td>0.033</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>99.029</td><td>0.029</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>99.025</td><td>0.025</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>99.500</td><td>0.500</td><td>0.2</td><td>1.8</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>60</td></tr><tr><td>120 min Summer</td><td>35.655</td><td>0.0</td><td>96</td></tr><tr><td>180 min Summer</td><td>26.413</td><td>0.0</td><td>128</td></tr><tr><td>240 min Summer</td><td>21.237</td><td>0.0</td><td>164</td></tr><tr><td>360 min Summer</td><td>15.626</td><td>0.0</td><td>232</td></tr><tr><td>480 min Summer</td><td>12.548</td><td>0.0</td><td>302</td></tr><tr><td>600 min 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Summer	99.568	0.568	0.2	2.1	O K	60 min Summer	99.660	0.660	0.2	2.4	O K	120 min Summer	99.693	0.693	0.2	2.5	O K	180 min Summer	99.685	0.685	0.2	2.5	O K	240 min Summer	99.665	0.665	0.2	2.4	O K	360 min Summer	99.622	0.622	0.2	2.3	O K	480 min Summer	99.579	0.579	0.2	2.1	O K	600 min Summer	99.539	0.539	0.2	2.0	O K	720 min Summer	99.501	0.501	0.2	1.8	O K	960 min Summer	99.432	0.432	0.2	1.6	O K	1440 min Summer	99.320	0.320	0.2	1.2	O K	2160 min Summer	99.201	0.201	0.2	0.7	O K	2880 min Summer	99.122	0.122	0.1	0.4	O K	4320 min Summer	99.049	0.049	0.1	0.2	O K	5760 min Summer	99.039	0.039	0.1	0.1	O K	7200 min Summer	99.033	0.033	0.1	0.1	O K	8640 min Summer	99.029	0.029	0.1	0.1	O K	10080 min Summer	99.025	0.025	0.1	0.1	O K	15 min Winter	99.500	0.500	0.2	1.8	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	60	120 min Summer	35.655	0.0	96	180 min Summer	26.413	0.0	128	240 min Summer	21.237	0.0	164	360 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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	99.643	0.643	0.2	2.3	O K
60 min Winter	99.755	0.755	0.3	2.8	Flood Risk
120 min Winter	99.795	0.795	0.3	2.9	Flood Risk
180 min Winter	99.783	0.783	0.3	2.9	Flood Risk
240 min Winter	99.755	0.755	0.3	2.8	Flood Risk
360 min Winter	99.690	0.690	0.2	2.5	O K
480 min Winter	99.625	0.625	0.2	2.3	O K
600 min Winter	99.565	0.565	0.2	2.1	O K
720 min Winter	99.510	0.510	0.2	1.9	O K
960 min Winter	99.413	0.413	0.2	1.5	O K
1440 min Winter	99.263	0.263	0.2	1.0	O K
2160 min Winter	99.117	0.117	0.1	0.4	O K
2880 min Winter	99.049	0.049	0.1	0.2	O K
4320 min Winter	99.036	0.036	0.1	0.1	O K
5760 min Winter	99.029	0.029	0.1	0.1	O K
7200 min Winter	99.024	0.024	0.1	0.1	O K
8640 min Winter	99.021	0.021	0.1	0.1	O K
10080 min Winter	99.018	0.018	0.0	0.1	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	100		
180 min Winter	26.413	0.0	138		
240 min Winter	21.237	0.0	176		
360 min Winter	15.626	0.0	252		
480 min Winter	12.548	0.0	324		
600 min Winter	10.575	0.0	394		
720 min Winter	9.191	0.0	462		
960 min Winter	7.358	0.0	596		
1440 min Winter	5.368	0.0	852		
2160 min Winter	3.907	0.0	1208		
2880 min Winter	3.115	0.0	1464		
4320 min Winter	2.259	0.0	2160		
5760 min Winter	1.796	0.0	2912		
7200 min Winter	1.506	0.0	3672		
8640 min Winter	1.304	0.0	4360		
10080 min Winter	1.154	0.0	5056		
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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) 0.007

Time (mins)	Area
From:	To: (ha)
0	4 0.007

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Model Details

Storage is Online Cover Level (m) 100.000

Trench Soakaway Structure

Infiltration Coefficient Base (m/hr) 0.07200	Trench Width (m) 1.6
Infiltration Coefficient Side (m/hr) 0.07200	Trench Length (m) 7.6
Safety Factor 2.0	Slope (1:X) 0.0
Porosity 0.30	Cap Volume Depth (m) 0.000
Invert Level (m) 99.000	Cap Infiltration Depth (m) 0.000

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