

MJA Consulting			Page 1																																																																																																																																																																																																																			
Monarch House Barton Lane OX14 3NB		Westergate & Eastergate Plot 112-113 114-115 116-117 1:100+40%cc																																																																																																																																																																																																																				
Date 18/10/2018 File PLOTS 116-117 OR 114-11...		Designed by S.Smith Checked by																																																																																																																																																																																																																				
Innovyze		Source Control 2017.1.2																																																																																																																																																																																																																				
<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 90 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>99.210</td><td>0.210</td><td>0.5</td><td>2.9</td><td>O K</td></tr><tr><td>30 min Summer</td><td>99.265</td><td>0.265</td><td>0.5</td><td>3.7</td><td>O K</td></tr><tr><td>60 min Summer</td><td>99.303</td><td>0.303</td><td>0.5</td><td>4.3</td><td>O K</td></tr><tr><td>120 min Summer</td><td>99.311</td><td>0.311</td><td>0.5</td><td>4.4</td><td>O K</td></tr><tr><td>180 min Summer</td><td>99.301</td><td>0.301</td><td>0.5</td><td>4.3</td><td>O K</td></tr><tr><td>240 min Summer</td><td>99.286</td><td>0.286</td><td>0.5</td><td>4.1</td><td>O K</td></tr><tr><td>360 min Summer</td><td>99.257</td><td>0.257</td><td>0.5</td><td>3.6</td><td>O K</td></tr><tr><td>480 min Summer</td><td>99.227</td><td>0.227</td><td>0.5</td><td>3.2</td><td>O K</td></tr><tr><td>600 min Summer</td><td>99.198</td><td>0.198</td><td>0.5</td><td>2.8</td><td>O K</td></tr><tr><td>720 min Summer</td><td>99.172</td><td>0.172</td><td>0.5</td><td>2.4</td><td>O K</td></tr><tr><td>960 min Summer</td><td>99.127</td><td>0.127</td><td>0.5</td><td>1.7</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>99.068</td><td>0.068</td><td>0.5</td><td>0.8</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>99.043</td><td>0.043</td><td>0.4</td><td>0.5</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>99.035</td><td>0.035</td><td>0.3</td><td>0.4</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>99.026</td><td>0.026</td><td>0.3</td><td>0.2</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>99.021</td><td>0.021</td><td>0.2</td><td>0.2</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>99.019</td><td>0.019</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>99.018</td><td>0.018</td><td>0.2</td><td>0.1</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>99.017</td><td>0.017</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>99.237</td><td>0.237</td><td>0.5</td><td>3.3</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>127.204</td><td>0.0</td><td>17</td></tr><tr><td>30 min Summer</td><td>85.821</td><td>0.0</td><td>32</td></tr><tr><td>60 min Summer</td><td>55.250</td><td>0.0</td><td>60</td></tr><tr><td>120 min Summer</td><td>34.307</td><td>0.0</td><td>96</td></tr><tr><td>180 min Summer</td><td>25.552</td><td>0.0</td><td>128</td></tr><tr><td>240 min Summer</td><td>20.570</td><td>0.0</td><td>162</td></tr><tr><td>360 min Summer</td><td>15.173</td><td>0.0</td><td>230</td></tr><tr><td>480 min Summer</td><td>12.206</td><td>0.0</td><td>296</td></tr><tr><td>600 min Summer</td><td>10.302</td><td>0.0</td><td>362</td></tr><tr><td>720 min Summer</td><td>8.963</td><td>0.0</td><td>424</td></tr><tr><td>960 min Summer</td><td>7.189</td><td>0.0</td><td>540</td></tr><tr><td>1440 min Summer</td><td>5.257</td><td>0.0</td><td>764</td></tr><tr><td>2160 min Summer</td><td>3.836</td><td>0.0</td><td>1104</td></tr><tr><td>2880 min Summer</td><td>3.063</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>2.226</td><td>0.0</td><td>2204</td></tr><tr><td>5760 min Summer</td><td>1.773</td><td>0.0</td><td>2904</td></tr><tr><td>7200 min Summer</td><td>1.487</td><td>0.0</td><td>3664</td></tr><tr><td>8640 min Summer</td><td>1.289</td><td>0.0</td><td>4352</td></tr><tr><td>10080 min Summer</td><td>1.142</td><td>0.0</td><td>5032</td></tr><tr><td>15 min Winter</td><td>127.204</td><td>0.0</td><td>17</td></tr></table>					Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	99.210	0.210	0.5	2.9	O K	30 min Summer	99.265	0.265	0.5	3.7	O K	60 min Summer	99.303	0.303	0.5	4.3	O K	120 min Summer	99.311	0.311	0.5	4.4	O K	180 min Summer	99.301	0.301	0.5	4.3	O K	240 min Summer	99.286	0.286	0.5	4.1	O K	360 min Summer	99.257	0.257	0.5	3.6	O K	480 min Summer	99.227	0.227	0.5	3.2	O K	600 min Summer	99.198	0.198	0.5	2.8	O K	720 min Summer	99.172	0.172	0.5	2.4	O K	960 min Summer	99.127	0.127	0.5	1.7	O K	1440 min Summer	99.068	0.068	0.5	0.8	O K	2160 min Summer	99.043	0.043	0.4	0.5	O K	2880 min Summer	99.035	0.035	0.3	0.4	O K	4320 min Summer	99.026	0.026	0.3	0.2	O K	5760 min Summer	99.021	0.021	0.2	0.2	O K	7200 min Summer	99.019	0.019	0.2	0.1	O K	8640 min Summer	99.018	0.018	0.2	0.1	O K	10080 min Summer	99.017	0.017	0.1	0.1	O K	15 min Winter	99.237	0.237	0.5	3.3	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	127.204	0.0	17	30 min Summer	85.821	0.0	32	60 min Summer	55.250	0.0	60	120 min Summer	34.307	0.0	96	180 min Summer	25.552	0.0	128	240 min Summer	20.570	0.0	162	360 min Summer	15.173	0.0	230	480 min Summer	12.206	0.0	296	600 min Summer	10.302	0.0	362	720 min Summer	8.963	0.0	424	960 min Summer	7.189	0.0	540	1440 min Summer	5.257	0.0	764	2160 min Summer	3.836	0.0	1104	2880 min Summer	3.063	0.0	1468	4320 min Summer	2.226	0.0	2204	5760 min Summer	1.773	0.0	2904	7200 min Summer	1.487	0.0	3664	8640 min Summer	1.289	0.0	4352	10080 min Summer	1.142	0.0	5032	15 min Winter	127.204	0.0	17
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																	
15 min Summer	99.210	0.210	0.5	2.9	O K																																																																																																																																																																																																																	
30 min Summer	99.265	0.265	0.5	3.7	O K																																																																																																																																																																																																																	
60 min Summer	99.303	0.303	0.5	4.3	O K																																																																																																																																																																																																																	
120 min Summer	99.311	0.311	0.5	4.4	O K																																																																																																																																																																																																																	
180 min Summer	99.301	0.301	0.5	4.3	O K																																																																																																																																																																																																																	
240 min Summer	99.286	0.286	0.5	4.1	O K																																																																																																																																																																																																																	
360 min Summer	99.257	0.257	0.5	3.6	O K																																																																																																																																																																																																																	
480 min Summer	99.227	0.227	0.5	3.2	O K																																																																																																																																																																																																																	
600 min Summer	99.198	0.198	0.5	2.8	O K																																																																																																																																																																																																																	
720 min Summer	99.172	0.172	0.5	2.4	O K																																																																																																																																																																																																																	
960 min Summer	99.127	0.127	0.5	1.7	O K																																																																																																																																																																																																																	
1440 min Summer	99.068	0.068	0.5	0.8	O K																																																																																																																																																																																																																	
2160 min Summer	99.043	0.043	0.4	0.5	O K																																																																																																																																																																																																																	
2880 min Summer	99.035	0.035	0.3	0.4	O K																																																																																																																																																																																																																	
4320 min Summer	99.026	0.026	0.3	0.2	O K																																																																																																																																																																																																																	
5760 min Summer	99.021	0.021	0.2	0.2	O K																																																																																																																																																																																																																	
7200 min Summer	99.019	0.019	0.2	0.1	O K																																																																																																																																																																																																																	
8640 min Summer	99.018	0.018	0.2	0.1	O K																																																																																																																																																																																																																	
10080 min Summer	99.017	0.017	0.1	0.1	O K																																																																																																																																																																																																																	
15 min Winter	99.237	0.237	0.5	3.3	O K																																																																																																																																																																																																																	
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																			
15 min Summer	127.204	0.0	17																																																																																																																																																																																																																			
30 min Summer	85.821	0.0	32																																																																																																																																																																																																																			
60 min Summer	55.250	0.0	60																																																																																																																																																																																																																			
120 min Summer	34.307	0.0	96																																																																																																																																																																																																																			
180 min Summer	25.552	0.0	128																																																																																																																																																																																																																			
240 min Summer	20.570	0.0	162																																																																																																																																																																																																																			
360 min Summer	15.173	0.0	230																																																																																																																																																																																																																			
480 min Summer	12.206	0.0	296																																																																																																																																																																																																																			
600 min Summer	10.302	0.0	362																																																																																																																																																																																																																			
720 min Summer	8.963	0.0	424																																																																																																																																																																																																																			
960 min Summer	7.189	0.0	540																																																																																																																																																																																																																			
1440 min Summer	5.257	0.0	764																																																																																																																																																																																																																			
2160 min Summer	3.836	0.0	1104																																																																																																																																																																																																																			
2880 min Summer	3.063	0.0	1468																																																																																																																																																																																																																			
4320 min Summer	2.226	0.0	2204																																																																																																																																																																																																																			
5760 min Summer	1.773	0.0	2904																																																																																																																																																																																																																			
7200 min Summer	1.487	0.0	3664																																																																																																																																																																																																																			
8640 min Summer	1.289	0.0	4352																																																																																																																																																																																																																			
10080 min Summer	1.142	0.0	5032																																																																																																																																																																																																																			
15 min Winter	127.204	0.0	17																																																																																																																																																																																																																			
©1982-2017 XP Solutions																																																																																																																																																																																																																						

MJA Consulting			Page 2		
Monarch House Barton Lane OX14 3NB		Westergate & Eastergate Plot 112-113 114-115 116-117 1:100+40%cc			
Date 18/10/2018 File PLOTS 116-117 OR 114-11...		Designed by S.Smith 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	99.301	0.301	0.5	4.3	O K
60 min Winter	99.350	0.350	0.5	5.0	O K
120 min Winter	99.361	0.361	0.5	5.2	O K
180 min Winter	99.347	0.347	0.5	5.0	O K
240 min Winter	99.325	0.325	0.5	4.6	O K
360 min Winter	99.278	0.278	0.5	3.9	O K
480 min Winter	99.230	0.230	0.5	3.2	O K
600 min Winter	99.186	0.186	0.5	2.6	O K
720 min Winter	99.146	0.146	0.5	2.0	O K
960 min Winter	99.083	0.083	0.5	1.1	O K
1440 min Winter	99.044	0.044	0.4	0.5	O K
2160 min Winter	99.032	0.032	0.3	0.3	O K
2880 min Winter	99.026	0.026	0.3	0.2	O K
4320 min Winter	99.020	0.020	0.2	0.1	O K
5760 min Winter	99.017	0.017	0.1	0.1	O K
7200 min Winter	99.016	0.016	0.1	0.1	O K
8640 min Winter	99.015	0.015	0.1	0.1	O K
10080 min Winter	99.014	0.014	0.1	0.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	85.821	0.0	31		
60 min Winter	55.250	0.0	60		
120 min Winter	34.307	0.0	110		
180 min Winter	25.552	0.0	138		
240 min Winter	20.570	0.0	178		
360 min Winter	15.173	0.0	250		
480 min Winter	12.206	0.0	320		
600 min Winter	10.302	0.0	386		
720 min Winter	8.963	0.0	446		
960 min Winter	7.189	0.0	550		
1440 min Winter	5.257	0.0	738		
2160 min Winter	3.836	0.0	1100		
2880 min Winter	3.063	0.0	1468		
4320 min Winter	2.226	0.0	2208		
5760 min Winter	1.773	0.0	2936		
7200 min Winter	1.487	0.0	3680		
8640 min Winter	1.289	0.0	4400		
10080 min Winter	1.142	0.0	5208		
©1982-2017 XP Solutions					

MJA Consulting		Page 4
Monarch House Barton Lane OX14 3NB	Westergate & Eastergate Plot 112-113 114-115 116-117 1:100+40%cc	
Date 18/10/2018 File PLOTS 116-117 OR 114-11...	Designed by S.Smith Checked by	
Innovyze	Source Control 2017.1.2	

Model Details

Storage is Online Cover Level (m) 100.000

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.07200	Width (m)	4.9
Membrane Percolation (mm/hr)	1000	Length (m)	10.0
Max Percolation (l/s)	13.6	Slope (1:X)	500.0
Safety Factor	2.0	Depression Storage (mm)	0
Porosity	0.30	Evaporation (mm/day)	0
Invert Level (m)	99.000	Cap Volume Depth (m)	0.500

©1982-2017 XP Solutions