

MJA Consulting			Page 1																																																																																																																																																																																																																			
Monarch House Barton Lane OX14 3NB		Westergate & Eastergate Parking Court 4 1:100+40%cc																																																																																																																																																																																																																				
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<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 72 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>99.342</td><td>0.342</td><td>2.9</td><td>15.0</td><td>O K</td></tr><tr><td>30 min Summer</td><td>99.384</td><td>0.384</td><td>3.3</td><td>18.9</td><td>O K</td></tr><tr><td>60 min Summer</td><td>99.408</td><td>0.408</td><td>3.5</td><td>21.4</td><td>O K</td></tr><tr><td>120 min Summer</td><td>99.418</td><td>0.418</td><td>3.6</td><td>22.4</td><td>O K</td></tr><tr><td>180 min Summer</td><td>99.414</td><td>0.414</td><td>3.5</td><td>22.0</td><td>O K</td></tr><tr><td>240 min Summer</td><td>99.404</td><td>0.404</td><td>3.5</td><td>21.0</td><td>O K</td></tr><tr><td>360 min Summer</td><td>99.385</td><td>0.385</td><td>3.3</td><td>19.1</td><td>O K</td></tr><tr><td>480 min Summer</td><td>99.367</td><td>0.367</td><td>3.1</td><td>17.3</td><td>O K</td></tr><tr><td>600 min Summer</td><td>99.350</td><td>0.350</td><td>3.0</td><td>15.7</td><td>O K</td></tr><tr><td>720 min Summer</td><td>99.334</td><td>0.334</td><td>2.9</td><td>14.3</td><td>O K</td></tr><tr><td>960 min Summer</td><td>99.307</td><td>0.307</td><td>2.6</td><td>12.1</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>99.263</td><td>0.263</td><td>2.3</td><td>8.9</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>99.217</td><td>0.217</td><td>1.9</td><td>6.1</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>99.185</td><td>0.185</td><td>1.6</td><td>4.4</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>99.144</td><td>0.144</td><td>1.2</td><td>2.7</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>99.118</td><td>0.118</td><td>1.0</td><td>1.8</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>99.100</td><td>0.100</td><td>0.9</td><td>1.3</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>99.087</td><td>0.087</td><td>0.7</td><td>1.0</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>99.077</td><td>0.077</td><td>0.7</td><td>0.8</td><td>O K</td></tr><tr><td>15 min Winter</td><td>99.363</td><td>0.363</td><td>3.1</td><td>17.0</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>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>31</td></tr><tr><td>60 min Summer</td><td>55.250</td><td>0.0</td><td>52</td></tr><tr><td>120 min Summer</td><td>34.307</td><td>0.0</td><td>84</td></tr><tr><td>180 min Summer</td><td>25.552</td><td>0.0</td><td>120</td></tr><tr><td>240 min Summer</td><td>20.570</td><td>0.0</td><td>154</td></tr><tr><td>360 min Summer</td><td>15.173</td><td>0.0</td><td>220</td></tr><tr><td>480 min Summer</td><td>12.206</td><td>0.0</td><td>286</td></tr><tr><td>600 min Summer</td><td>10.302</td><td>0.0</td><td>350</td></tr><tr><td>720 min Summer</td><td>8.963</td><td>0.0</td><td>412</td></tr><tr><td>960 min Summer</td><td>7.189</td><td>0.0</td><td>538</td></tr><tr><td>1440 min Summer</td><td>5.257</td><td>0.0</td><td>780</td></tr><tr><td>2160 min Summer</td><td>3.836</td><td>0.0</td><td>1144</td></tr><tr><td>2880 min Summer</td><td>3.063</td><td>0.0</td><td>1496</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>2936</td></tr><tr><td>7200 min Summer</td><td>1.487</td><td>0.0</td><td>3672</td></tr><tr><td>8640 min Summer</td><td>1.289</td><td>0.0</td><td>4400</td></tr><tr><td>10080 min Summer</td><td>1.142</td><td>0.0</td><td>5136</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	99.342	0.342	2.9	15.0	O K	30 min Summer	99.384	0.384	3.3	18.9	O K	60 min Summer	99.408	0.408	3.5	21.4	O K	120 min Summer	99.418	0.418	3.6	22.4	O K	180 min Summer	99.414	0.414	3.5	22.0	O K	240 min Summer	99.404	0.404	3.5	21.0	O K	360 min Summer	99.385	0.385	3.3	19.1	O K	480 min Summer	99.367	0.367	3.1	17.3	O K	600 min Summer	99.350	0.350	3.0	15.7	O K	720 min Summer	99.334	0.334	2.9	14.3	O K	960 min Summer	99.307	0.307	2.6	12.1	O K	1440 min Summer	99.263	0.263	2.3	8.9	O K	2160 min Summer	99.217	0.217	1.9	6.1	O K	2880 min Summer	99.185	0.185	1.6	4.4	O K	4320 min Summer	99.144	0.144	1.2	2.7	O K	5760 min Summer	99.118	0.118	1.0	1.8	O K	7200 min Summer	99.100	0.100	0.9	1.3	O K	8640 min Summer	99.087	0.087	0.7	1.0	O K	10080 min Summer	99.077	0.077	0.7	0.8	O K	15 min Winter	99.363	0.363	3.1	17.0	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	31	60 min Summer	55.250	0.0	52	120 min Summer	34.307	0.0	84	180 min Summer	25.552	0.0	120	240 min Summer	20.570	0.0	154	360 min Summer	15.173	0.0	220	480 min Summer	12.206	0.0	286	600 min Summer	10.302	0.0	350	720 min Summer	8.963	0.0	412	960 min Summer	7.189	0.0	538	1440 min Summer	5.257	0.0	780	2160 min Summer	3.836	0.0	1144	2880 min Summer	3.063	0.0	1496	4320 min Summer	2.226	0.0	2204	5760 min Summer	1.773	0.0	2936	7200 min Summer	1.487	0.0	3672	8640 min Summer	1.289	0.0	4400	10080 min Summer	1.142	0.0	5136	15 min Winter	127.204	0.0	17
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Date 07/03/2018 File Parking Court 4.srcx		Designed by C.Pendle 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	99.409	0.409	3.5	21.5	O K
60 min Winter	99.436	0.436	3.7	24.4	O K
120 min Winter	99.444	0.444	3.8	25.3	O K
180 min Winter	99.436	0.436	3.7	24.4	O K
240 min Winter	99.422	0.422	3.6	22.8	O K
360 min Winter	99.394	0.394	3.4	19.9	O K
480 min Winter	99.367	0.367	3.1	17.3	O K
600 min Winter	99.343	0.343	2.9	15.1	O K
720 min Winter	99.322	0.322	2.8	13.3	O K
960 min Winter	99.285	0.285	2.4	10.5	O K
1440 min Winter	99.231	0.231	2.0	6.9	O K
2160 min Winter	99.179	0.179	1.5	4.1	O K
2880 min Winter	99.147	0.147	1.3	2.8	O K
4320 min Winter	99.108	0.108	0.9	1.5	O K
5760 min Winter	99.087	0.087	0.7	1.0	O K
7200 min Winter	99.073	0.073	0.6	0.7	O K
8640 min Winter	99.063	0.063	0.5	0.5	O K
10080 min Winter	99.056	0.056	0.5	0.4	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	56		
120 min Winter	34.307	0.0	92		
180 min Winter	25.552	0.0	128		
240 min Winter	20.570	0.0	166		
360 min Winter	15.173	0.0	236		
480 min Winter	12.206	0.0	304		
600 min Winter	10.302	0.0	368		
720 min Winter	8.963	0.0	432		
960 min Winter	7.189	0.0	558		
1440 min Winter	5.257	0.0	794		
2160 min Winter	3.836	0.0	1148		
2880 min Winter	3.063	0.0	1500		
4320 min Winter	2.226	0.0	2204		
5760 min Winter	1.773	0.0	2936		
7200 min Winter	1.487	0.0	3672		
8640 min Winter	1.289	0.0	4360		
10080 min Winter	1.142	0.0	5120		
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<u>Model Details</u> Storage is Online Cover Level (m) 100.000 <u>Porous Car Park Structure</u> <table> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.07200</td> <td>Width (m)</td> <td>21.4</td> </tr> <tr> <td>Membrane Percolation (mm/hr)</td> <td>1000</td> <td>Length (m)</td> <td>21.4</td> </tr> <tr> <td>Max Percolation (l/s)</td> <td>127.2</td> <td>Slope (1:X)</td> <td>40.0</td> </tr> <tr> <td>Safety Factor</td> <td>2.0</td> <td>Depression Storage (mm)</td> <td>0</td> </tr> <tr> <td>Porosity</td> <td>0.30</td> <td>Evaporation (mm/day)</td> <td>3</td> </tr> <tr> <td>Invert Level (m)</td> <td>99.000</td> <td>Cap Volume Depth (m)</td> <td>0.500</td> </tr> </table>			Infiltration Coefficient Base (m/hr)	0.07200	Width (m)	21.4	Membrane Percolation (mm/hr)	1000	Length (m)	21.4	Max Percolation (l/s)	127.2	Slope (1:X)	40.0	Safety Factor	2.0	Depression Storage (mm)	0	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	99.000	Cap Volume Depth (m)	0.500
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