

Patrick Parsons Limited					Page 1																																																																																																																																																																																																																		
Waterloo House Thornton Street Newcastle Upon Tyne, NE1 4AP			Manor Court																																																																																																																																																																																																																				
Date 15/06/2023 File 100 year site wide poro...			Designed by AR Checked by DB																																																																																																																																																																																																																				
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Summary of Results for 100 year Return Period (+40%) Half Drain Time : 72 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>24.893</td><td>0.293</td><td>5.2</td><td>27.7</td><td>O K</td></tr><tr><td>30 min Summer</td><td>24.940</td><td>0.340</td><td>6.0</td><td>35.6</td><td>Flood Risk</td></tr><tr><td>60 min Summer</td><td>24.968</td><td>0.368</td><td>6.5</td><td>40.2</td><td>Flood Risk</td></tr><tr><td>120 min Summer</td><td>24.977</td><td>0.377</td><td>6.6</td><td>41.8</td><td>Flood Risk</td></tr><tr><td>180 min Summer</td><td>24.973</td><td>0.373</td><td>6.6</td><td>41.0</td><td>Flood Risk</td></tr><tr><td>240 min Summer</td><td>24.963</td><td>0.363</td><td>6.4</td><td>39.3</td><td>Flood Risk</td></tr><tr><td>360 min Summer</td><td>24.940</td><td>0.340</td><td>6.0</td><td>35.5</td><td>Flood Risk</td></tr><tr><td>480 min Summer</td><td>24.919</td><td>0.319</td><td>5.6</td><td>32.0</td><td>Flood Risk</td></tr><tr><td>600 min Summer</td><td>24.900</td><td>0.300</td><td>5.3</td><td>28.9</td><td>O K</td></tr><tr><td>720 min Summer</td><td>24.883</td><td>0.283</td><td>5.0</td><td>26.2</td><td>O K</td></tr><tr><td>960 min Summer</td><td>24.857</td><td>0.257</td><td>4.5</td><td>21.7</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>24.817</td><td>0.217</td><td>3.8</td><td>15.6</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>24.776</td><td>0.176</td><td>3.1</td><td>10.3</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>24.749</td><td>0.149</td><td>2.6</td><td>7.3</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>24.713</td><td>0.113</td><td>2.0</td><td>4.2</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>24.691</td><td>0.091</td><td>1.6</td><td>2.7</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>24.676</td><td>0.076</td><td>1.3</td><td>1.9</td><td>O K</td></tr><tr><td>8640 min 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Waterloo House Thornton Street Newcastle Upon Tyne, NE1 4AP		Manor Court			
Date 15/06/2023 File 100 year site wide poro...		Designed by AR Checked by DB			
Innovyze		Source Control 2020.1			
<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	24.973	0.373	6.6	41.0	Flood Risk
60 min Winter	25.005	0.405	7.1	46.3	Flood Risk
120 min Winter	25.010	0.410	7.2	47.2	Flood Risk
180 min Winter	24.999	0.399	7.0	45.4	Flood Risk
240 min Winter	24.983	0.383	6.7	42.7	Flood Risk
360 min Winter	24.949	0.349	6.1	37.1	Flood Risk
480 min Winter	24.920	0.320	5.6	32.3	Flood Risk
600 min Winter	24.895	0.295	5.2	28.1	O K
720 min Winter	24.873	0.273	4.8	24.5	O K
960 min Winter	24.839	0.239	4.2	18.9	O K
1440 min Winter	24.791	0.191	3.4	12.0	O K
2160 min Winter	24.745	0.145	2.6	7.0	O K
2880 min Winter	24.717	0.117	2.1	4.5	O K
4320 min Winter	24.684	0.084	1.5	2.3	O K
5760 min Winter	24.666	0.066	1.2	1.4	O K
7200 min Winter	24.655	0.055	1.0	1.0	O K
8640 min Winter	24.648	0.048	0.8	0.8	O K
10080 min Winter	24.645	0.045	0.7	0.7	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	93.059	0.0	31		
60 min Winter	57.296	0.0	58		
120 min Winter	34.096	0.0	92		
180 min Winter	24.853	0.0	130		
240 min Winter	19.754	0.0	166		
360 min Winter	14.233	0.0	236		
480 min Winter	11.285	0.0	304		
600 min Winter	9.419	0.0	370		
720 min Winter	8.122	0.0	434		
960 min Winter	6.425	0.0	558		
1440 min Winter	4.612	0.0	796		
2160 min Winter	3.306	0.0	1148		
2880 min Winter	2.608	0.0	1500		
4320 min Winter	1.865	0.0	2204		
5760 min Winter	1.469	0.0	2936		
7200 min Winter	1.220	0.0	3672		
8640 min Winter	1.048	0.0	4368		
10080 min Winter	0.922	0.0	5008		
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Model Details

Storage is Online Cover Level (m) 25.200

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.05760	Width (m)	22.0
Membrane Percolation (mm/hr)	1000	Length (m)	65.0
Max Percolation (l/s)	397.2	Slope (1:X)	100.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	24.600	Cap Volume Depth (m)	0.250

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