

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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<u>Summary of Results for 1 year Return Period</u> Half Drain Time : 28 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>24.655</td><td>0.055</td><td>1.0</td><td>1.0</td><td>O K</td></tr><tr><td>30 min Summer</td><td>24.688</td><td>0.088</td><td>1.5</td><td>2.5</td><td>O K</td></tr><tr><td>60 min Summer</td><td>24.704</td><td>0.104</td><td>1.8</td><td>3.6</td><td>O K</td></tr><tr><td>120 min Summer</td><td>24.716</td><td>0.116</td><td>2.0</td><td>4.4</td><td>O K</td></tr><tr><td>180 min Summer</td><td>24.719</td><td>0.119</td><td>2.1</td><td>4.7</td><td>O K</td></tr><tr><td>240 min Summer</td><td>24.719</td><td>0.119</td><td>2.1</td><td>4.7</td><td>O K</td></tr><tr><td>360 min Summer</td><td>24.715</td><td>0.115</td><td>2.0</td><td>4.3</td><td>O K</td></tr><tr><td>480 min Summer</td><td>24.709</td><td>0.109</td><td>1.9</td><td>3.9</td><td>O 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Innovyze		Source Control 2020.1			
<u>Summary of Results for 1 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	24.705	0.105	1.9	3.6	O K
60 min Winter	24.721	0.121	2.1	4.8	O K
120 min Winter	24.729	0.129	2.3	5.5	O K
180 min Winter	24.728	0.128	2.2	5.4	O K
240 min Winter	24.724	0.124	2.2	5.1	O K
360 min Winter	24.713	0.113	2.0	4.3	O K
480 min Winter	24.703	0.103	1.8	3.5	O K
600 min Winter	24.694	0.094	1.7	2.9	O K
720 min Winter	24.685	0.085	1.5	2.4	O K
960 min Winter	24.672	0.072	1.3	1.7	O K
1440 min Winter	24.654	0.054	1.0	1.0	O K
2160 min Winter	24.645	0.045	0.7	0.7	O K
2880 min Winter	24.640	0.040	0.6	0.5	O K
4320 min Winter	24.634	0.034	0.4	0.4	O K
5760 min Winter	24.630	0.030	0.3	0.3	O K
7200 min Winter	24.627	0.027	0.3	0.2	O K
8640 min Winter	24.625	0.025	0.2	0.2	O K
10080 min Winter	24.623	0.023	0.2	0.2	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	20.755	0.0	31		
60 min Winter	12.944	0.0	50		
120 min Winter	7.900	0.0	86		
180 min Winter	5.887	0.0	122		
240 min Winter	4.772	0.0	156		
360 min Winter	3.535	0.0	220		
480 min Winter	2.846	0.0	280		
600 min Winter	2.404	0.0	340		
720 min Winter	2.095	0.0	398		
960 min Winter	1.686	0.0	512		
1440 min Winter	1.242	0.0	750		
2160 min Winter	0.915	0.0	1100		
2880 min Winter	0.737	0.0	1468		
4320 min Winter	0.542	0.0	2196		
5760 min Winter	0.436	0.0	2848		
7200 min Winter	0.369	0.0	3584		
8640 min Winter	0.321	0.0	4400		
10080 min Winter	0.286	0.0	5152		
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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	1	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.200	Shortest Storm (mins)	15
Ratio R	0.435	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+0

Time Area Diagram

Total Area (ha) 0.140

Time	(mins)	Area
From:	To:	(ha)
0	4	0.140

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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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