

Patrick Parsons Limited				Page 1																																																																																																																																																																																																																			
Waterloo House Thornton Street Newcastle Upon Tyne, NE1 4AP			Manor Court																																																																																																																																																																																																																				
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Summary of Results for 100 year Return Period (+40%) Half Drain Time : 1824 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>24.100</td><td>0.700</td><td>0.4</td><td>31.9</td><td>O K</td></tr><tr><td>30 min Summer</td><td>24.302</td><td>0.902</td><td>0.4</td><td>41.1</td><td>O K</td></tr><tr><td>60 min Summer</td><td>24.500</td><td>1.100</td><td>0.4</td><td>50.2</td><td>O K</td></tr><tr><td>120 min Summer</td><td>24.687</td><td>1.287</td><td>0.4</td><td>58.7</td><td>O K</td></tr><tr><td>180 min Summer</td><td>24.784</td><td>1.384</td><td>0.4</td><td>63.1</td><td>O K</td></tr><tr><td>240 min Summer</td><td>24.843</td><td>1.443</td><td>0.4</td><td>65.8</td><td>O K</td></tr><tr><td>360 min Summer</td><td>24.911</td><td>1.511</td><td>0.4</td><td>68.9</td><td>O K</td></tr><tr><td>480 min Summer</td><td>24.950</td><td>1.550</td><td>0.4</td><td>70.7</td><td>O K</td></tr><tr><td>600 min Summer</td><td>24.969</td><td>1.569</td><td>0.4</td><td>71.6</td><td>O K</td></tr><tr><td>720 min Summer</td><td>24.977</td><td>1.577</td><td>0.4</td><td>71.9</td><td>O K</td></tr><tr><td>960 min Summer</td><td>24.968</td><td>1.568</td><td>0.4</td><td>71.5</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>24.899</td><td>1.499</td><td>0.4</td><td>68.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>24.788</td><td>1.388</td><td>0.4</td><td>63.3</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>24.701</td><td>1.301</td><td>0.4</td><td>59.3</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>24.555</td><td>1.155</td><td>0.4</td><td>52.6</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>24.422</td><td>1.022</td><td>0.4</td><td>46.6</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>24.298</td><td>0.898</td><td>0.4</td><td>41.0</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 South Soakaway.SRCX		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	24.412	1.012	0.4	46.2	O K
60 min Winter	24.636	1.236	0.4	56.4	O K
120 min Winter	24.849	1.449	0.4	66.1	O K
180 min Winter	24.962	1.562	0.4	71.2	O K
240 min Winter	25.033	1.633	0.4	74.5	Flood Risk
360 min Winter	25.118	1.718	0.4	78.3	Flood Risk
480 min Winter	25.169	1.769	0.4	80.7	Flood Risk
600 min Winter	25.199	1.799	0.4	82.0	Flood Risk
720 min Winter	25.216	1.816	0.4	82.8	Flood Risk
960 min Winter	25.222	1.822	0.4	83.1	Flood Risk
1440 min Winter	25.177	1.777	0.4	81.0	Flood Risk
2160 min Winter	25.046	1.646	0.4	75.0	Flood Risk
2880 min Winter	24.929	1.529	0.4	69.7	O K
4320 min Winter	24.725	1.325	0.4	60.4	O K
5760 min Winter	24.527	1.127	0.4	51.4	O K
7200 min Winter	24.340	0.940	0.4	42.9	O K
8640 min Winter	24.167	0.767	0.4	35.0	O K
10080 min Winter	24.009	0.609	0.4	27.8	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	93.059	0.0	37		
60 min Winter	57.296	0.0	66		
120 min Winter	34.096	0.0	126		
180 min Winter	24.853	0.0	184		
240 min Winter	19.754	0.0	242		
360 min Winter	14.233	0.0	360		
480 min Winter	11.285	0.0	476		
600 min Winter	9.419	0.0	594		
720 min Winter	8.122	0.0	710		
960 min Winter	6.425	0.0	938		
1440 min Winter	4.612	0.0	1386		
2160 min Winter	3.306	0.0	1996		
2880 min Winter	2.608	0.0	2248		
4320 min Winter	1.865	0.0	3156		
5760 min Winter	1.469	0.0	4032		
7200 min Winter	1.220	0.0	4832		
8640 min Winter	1.048	0.0	5624		
10080 min Winter	0.922	0.0	6360		
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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)	20.200	Shortest Storm (mins)	15
Ratio R	0.435	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.120

Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)
0	4	0.060	4	8	0.060

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Model Details

Storage is Online Cover Level (m) 25.300

Cellular Storage Structure

Invert Level (m) 23.400 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.05760 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.05760

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	48.0	48.0	1.200	48.0	48.0

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