

Patrick Parsons Limited				Page 1																																																																																																																																																																																																																			
Waterloo House Thornton Street Newcastle Upon Tyne, NE1 4AP		Manor Court																																																																																																																																																																																																																					
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Innovyze		Source Control 2020.1																																																																																																																																																																																																																					
<u>Summary of Results for 30 year Return Period (+40%)</u> Half Drain Time : 492 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>24.334</td><td>0.234</td><td>0.4</td><td>10.9</td><td>O K</td></tr><tr><td>30 min Summer</td><td>24.396</td><td>0.296</td><td>0.4</td><td>13.8</td><td>O K</td></tr><tr><td>60 min Summer</td><td>24.453</td><td>0.353</td><td>0.4</td><td>16.4</td><td>O K</td></tr><tr><td>120 min Summer</td><td>24.500</td><td>0.400</td><td>0.4</td><td>18.6</td><td>O K</td></tr><tr><td>180 min Summer</td><td>24.518</td><td>0.418</td><td>0.4</td><td>19.4</td><td>O K</td></tr><tr><td>240 min Summer</td><td>24.523</td><td>0.423</td><td>0.4</td><td>19.7</td><td>O K</td></tr><tr><td>360 min Summer</td><td>24.519</td><td>0.419</td><td>0.4</td><td>19.5</td><td>O K</td></tr><tr><td>480 min Summer</td><td>24.508</td><td>0.408</td><td>0.4</td><td>19.0</td><td>O K</td></tr><tr><td>600 min Summer</td><td>24.497</td><td>0.397</td><td>0.4</td><td>18.5</td><td>O K</td></tr><tr><td>720 min Summer</td><td>24.486</td><td>0.386</td><td>0.4</td><td>18.0</td><td>O K</td></tr><tr><td>960 min Summer</td><td>24.464</td><td>0.364</td><td>0.4</td><td>17.0</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>24.423</td><td>0.323</td><td>0.4</td><td>15.1</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>24.367</td><td>0.267</td><td>0.4</td><td>12.4</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>24.318</td><td>0.218</td><td>0.4</td><td>10.1</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>24.238</td><td>0.138</td><td>0.4</td><td>6.4</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>24.185</td><td>0.085</td><td>0.4</td><td>4.0</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>24.156</td><td>0.056</td><td>0.4</td><td>2.6</td><td>O K</td></tr><tr><td>8640 min 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Summer	24.396	0.296	0.4	13.8	O K	60 min Summer	24.453	0.353	0.4	16.4	O K	120 min Summer	24.500	0.400	0.4	18.6	O K	180 min Summer	24.518	0.418	0.4	19.4	O K	240 min Summer	24.523	0.423	0.4	19.7	O K	360 min Summer	24.519	0.419	0.4	19.5	O K	480 min Summer	24.508	0.408	0.4	19.0	O K	600 min Summer	24.497	0.397	0.4	18.5	O K	720 min Summer	24.486	0.386	0.4	18.0	O K	960 min Summer	24.464	0.364	0.4	17.0	O K	1440 min Summer	24.423	0.323	0.4	15.1	O K	2160 min Summer	24.367	0.267	0.4	12.4	O K	2880 min Summer	24.318	0.218	0.4	10.1	O K	4320 min Summer	24.238	0.138	0.4	6.4	O K	5760 min Summer	24.185	0.085	0.4	4.0	O K	7200 min Summer	24.156	0.056	0.4	2.6	O K	8640 min Summer	24.147	0.047	0.4	2.2	O K	10080 min Summer	24.141	0.041	0.3	1.9	O K	15 min Winter	24.362	0.262	0.4	12.2	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	110.664	0.0	19	30 min Summer	71.049	0.0	33	60 min Summer	43.574	0.0	64	120 min Summer	25.944	0.0	122	180 min Summer	18.965	0.0	182	240 min 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Date 15/06/2023 File North Soakaway.SRCX		Designed by AR Checked by DB			
Innovyze		Source Control 2020.1			
<u>Summary of Results for 30 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	24.433	0.333	0.4	15.5	O K
60 min Winter	24.499	0.399	0.4	18.6	O K
120 min Winter	24.554	0.454	0.4	21.1	O K
180 min Winter	24.577	0.477	0.4	22.2	O K
240 min Winter	24.587	0.487	0.4	22.7	O K
360 min Winter	24.588	0.488	0.4	22.7	O K
480 min Winter	24.578	0.478	0.4	22.3	O K
600 min Winter	24.563	0.463	0.4	21.5	O K
720 min Winter	24.548	0.448	0.4	20.9	O K
960 min Winter	24.520	0.420	0.4	19.5	O K
1440 min Winter	24.460	0.360	0.4	16.7	O K
2160 min Winter	24.375	0.275	0.4	12.8	O K
2880 min Winter	24.300	0.200	0.4	9.3	O K
4320 min Winter	24.188	0.088	0.4	4.1	O K
5760 min Winter	24.147	0.047	0.4	2.2	O K
7200 min Winter	24.140	0.040	0.3	1.8	O K
8640 min Winter	24.134	0.034	0.3	1.6	O K
10080 min Winter	24.130	0.030	0.2	1.4	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	71.049	0.0	33		
60 min Winter	43.574	0.0	62		
120 min Winter	25.944	0.0	120		
180 min Winter	18.965	0.0	178		
240 min Winter	15.125	0.0	236		
360 min Winter	10.960	0.0	348		
480 min Winter	8.720	0.0	456		
600 min Winter	7.299	0.0	552		
720 min Winter	6.310	0.0	572		
960 min Winter	5.012	0.0	722		
1440 min Winter	3.619	0.0	1024		
2160 min Winter	2.610	0.0	1448		
2880 min Winter	2.069	0.0	1820		
4320 min Winter	1.490	0.0	2468		
5760 min Winter	1.180	0.0	2992		
7200 min Winter	0.984	0.0	3672		
8640 min Winter	0.849	0.0	4408		
10080 min Winter	0.748	0.0	5144		
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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	30	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) 0.054

Time (mins)		Area
From:	To:	(ha)
0	4	0.054

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Model Details

Storage is Online Cover Level (m) 25.600

Cellular Storage Structure

Invert Level (m) 24.100 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	49.0	49.0	0.800	49.0	49.0

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