

Rodgers Leask Limited					Page 1																																																																																																																																																																																																																		
St James House St Mary's Wharf Mansfield Road Derby DE1 3TQ																																																																																																																																																																																																																							
Date 29/07/2019 09:40 File SOAKAWAY SIZING FOR NOR...		Designed by james.melbourne Checked by																																																																																																																																																																																																																					
Micro Drainage			Source Control 2016.1.1																																																																																																																																																																																																																				
Summary of Results for 100 year Return Period (+40%) Half Drain Time : 200 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>38.905</td><td>0.405</td><td>1.8</td><td>21.2</td><td>O K</td></tr><tr><td>30 min Summer</td><td>39.021</td><td>0.521</td><td>1.8</td><td>27.2</td><td>O K</td></tr><tr><td>60 min Summer</td><td>39.118</td><td>0.618</td><td>1.8</td><td>32.3</td><td>O K</td></tr><tr><td>120 min Summer</td><td>39.171</td><td>0.671</td><td>1.8</td><td>35.0</td><td>O K</td></tr><tr><td>180 min Summer</td><td>39.164</td><td>0.664</td><td>1.8</td><td>34.7</td><td>O K</td></tr><tr><td>240 min Summer</td><td>39.145</td><td>0.645</td><td>1.8</td><td>33.7</td><td>O K</td></tr><tr><td>360 min Summer</td><td>39.102</td><td>0.602</td><td>1.8</td><td>31.4</td><td>O K</td></tr><tr><td>480 min Summer</td><td>39.063</td><td>0.563</td><td>1.8</td><td>29.4</td><td>O K</td></tr><tr><td>600 min Summer</td><td>39.025</td><td>0.525</td><td>1.8</td><td>27.4</td><td>O K</td></tr><tr><td>720 min Summer</td><td>38.988</td><td>0.488</td><td>1.8</td><td>25.5</td><td>O K</td></tr><tr><td>960 min Summer</td><td>38.918</td><td>0.418</td><td>1.8</td><td>21.8</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>38.793</td><td>0.293</td><td>1.8</td><td>15.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>38.656</td><td>0.156</td><td>1.8</td><td>8.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>38.577</td><td>0.077</td><td>1.8</td><td>4.0</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>38.542</td><td>0.042</td><td>1.5</td><td>2.2</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>38.534</td><td>0.034</td><td>1.2</td><td>1.8</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>38.528</td><td>0.028</td><td>1.0</td><td>1.5</td><td>O K</td></tr><tr><td>8640 min 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Summer	39.021	0.521	1.8	27.2	O K	60 min Summer	39.118	0.618	1.8	32.3	O K	120 min Summer	39.171	0.671	1.8	35.0	O K	180 min Summer	39.164	0.664	1.8	34.7	O K	240 min Summer	39.145	0.645	1.8	33.7	O K	360 min Summer	39.102	0.602	1.8	31.4	O K	480 min Summer	39.063	0.563	1.8	29.4	O K	600 min Summer	39.025	0.525	1.8	27.4	O K	720 min Summer	38.988	0.488	1.8	25.5	O K	960 min Summer	38.918	0.418	1.8	21.8	O K	1440 min Summer	38.793	0.293	1.8	15.3	O K	2160 min Summer	38.656	0.156	1.8	8.2	O K	2880 min Summer	38.577	0.077	1.8	4.0	O K	4320 min Summer	38.542	0.042	1.5	2.2	O K	5760 min Summer	38.534	0.034	1.2	1.8	O K	7200 min Summer	38.528	0.028	1.0	1.5	O K	8640 min Summer	38.524	0.024	0.9	1.3	O K	10080 min Summer	38.521	0.021	0.7	1.1	O K	15 min Winter	38.958	0.458	1.8	23.9	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	129.089	0.0	25	30 min Summer	84.848	0.0	38	60 min Summer	53.188	0.0	66	120 min Summer	32.259	0.0	122	180 min Summer	23.779	0.0	168	240 min 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Date 29/07/2019 09:40 File SOAKAWAY SIZING FOR NOR...					
			Designed by james.melbourne Checked by		
Micro Drainage			Source Control 2016.1.1		
Summary of Results for 100 year Return Period (+40%)					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	39.091	0.591	1.8	30.9	O K
60 min Winter	39.207	0.707	1.8	36.9	O K
120 min Winter	39.279	0.779	1.8	40.7	O K
180 min Winter	39.283	0.783	1.8	40.9	O K
240 min Winter	39.259	0.759	1.8	39.7	O K
360 min Winter	39.201	0.701	1.8	36.6	O K
480 min Winter	39.145	0.645	1.8	33.7	O K
600 min Winter	39.088	0.588	1.8	30.7	O K
720 min Winter	39.031	0.531	1.8	27.7	O K
960 min Winter	38.922	0.422	1.8	22.1	O K
1440 min Winter	38.737	0.237	1.8	12.4	O K
2160 min Winter	38.565	0.065	1.8	3.4	O K
2880 min Winter	38.542	0.042	1.5	2.2	O K
4320 min Winter	38.531	0.031	1.1	1.6	O K
5760 min Winter	38.524	0.024	0.9	1.3	O K
7200 min Winter	38.520	0.020	0.7	1.1	O K
8640 min Winter	38.518	0.018	0.6	0.9	O K
10080 min Winter	38.516	0.016	0.6	0.8	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	84.848	0.0	39		
60 min Winter	53.188	0.0	66		
120 min Winter	32.259	0.0	122		
180 min Winter	23.779	0.0	176		
240 min Winter	19.047	0.0	228		
360 min Winter	13.827	0.0	282		
480 min Winter	11.024	0.0	358		
600 min Winter	9.241	0.0	432		
720 min Winter	7.997	0.0	504		
960 min Winter	6.361	0.0	642		
1440 min Winter	4.600	0.0	888		
2160 min Winter	3.321	0.0	1172		
2880 min Winter	2.633	0.0	1476		
4320 min Winter	1.896	0.0	2160		
5760 min Winter	1.500	0.0	2848		
7200 min Winter	1.251	0.0	3552		
8640 min Winter	1.077	0.0	4320		
10080 min Winter	0.949	0.0	5128		
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Micro Drainage Source Control 2016.1.1		

Model Details

Storage is Online Cover Level (m) 40.750

Cellular Storage Structure

Invert Level (m) 38.500 Safety Factor 1.0
Infiltration Coefficient Base (m/hr) 0.06190 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.06190

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	55.0	102.0	2.600	0.0	102.0
0.200	55.0	102.0	2.800	0.0	102.0
0.400	55.0	102.0	3.000	0.0	102.0
0.600	55.0	102.0	3.200	0.0	102.0
0.800	55.0	102.0	3.400	0.0	102.0
1.000	0.0	102.0	3.600	0.0	102.0
1.200	0.0	102.0	3.800	0.0	102.0
1.400	0.0	102.0	4.000	0.0	102.0
1.600	0.0	102.0	4.200	0.0	102.0
1.800	0.0	102.0	4.400	0.0	102.0
2.000	0.0	102.0	4.600	0.0	102.0
2.200	0.0	102.0	4.800	0.0	102.0
2.400	0.0	102.0	5.000	0.0	102.0

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