

Simpson Associates				Page 1																																																																																																																																																																																																																			
1 Market Place Mews Henley-on-Thames RG9 2AH		LINESIDE INDUSTRIAL ESTATE SOAKAWAY DESIGN																																																																																																																																																																																																																					
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<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 2726 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>3.883</td><td>0.169</td><td>0.7</td><td>69.3</td><td>O K</td></tr><tr><td>30 min Summer</td><td>3.940</td><td>0.226</td><td>0.7</td><td>92.9</td><td>O K</td></tr><tr><td>60 min Summer</td><td>4.002</td><td>0.288</td><td>0.7</td><td>118.5</td><td>O K</td></tr><tr><td>120 min Summer</td><td>4.067</td><td>0.353</td><td>0.8</td><td>145.1</td><td>O K</td></tr><tr><td>180 min Summer</td><td>4.105</td><td>0.391</td><td>0.8</td><td>160.4</td><td>O K</td></tr><tr><td>240 min Summer</td><td>4.129</td><td>0.415</td><td>0.8</td><td>170.5</td><td>O K</td></tr><tr><td>360 min Summer</td><td>4.163</td><td>0.449</td><td>0.8</td><td>184.2</td><td>O K</td></tr><tr><td>480 min Summer</td><td>4.186</td><td>0.472</td><td>0.8</td><td>193.7</td><td>O K</td></tr><tr><td>600 min Summer</td><td>4.202</td><td>0.488</td><td>0.8</td><td>200.5</td><td>O K</td></tr><tr><td>720 min Summer</td><td>4.214</td><td>0.500</td><td>0.8</td><td>205.4</td><td>O K</td></tr><tr><td>960 min Summer</td><td>4.230</td><td>0.516</td><td>0.8</td><td>211.9</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>4.242</td><td>0.528</td><td>0.8</td><td>216.9</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>4.237</td><td>0.523</td><td>0.8</td><td>214.6</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>4.224</td><td>0.510</td><td>0.8</td><td>209.7</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>4.199</td><td>0.485</td><td>0.8</td><td>199.0</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>4.173</td><td>0.459</td><td>0.8</td><td>188.5</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>4.148</td><td>0.434</td><td>0.8</td><td>178.2</td><td>O K</td></tr><tr><td>8640 min 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Volume (m³)	Status	15 min Summer	3.883	0.169	0.7	69.3	O K	30 min Summer	3.940	0.226	0.7	92.9	O K	60 min Summer	4.002	0.288	0.7	118.5	O K	120 min Summer	4.067	0.353	0.8	145.1	O K	180 min Summer	4.105	0.391	0.8	160.4	O K	240 min Summer	4.129	0.415	0.8	170.5	O K	360 min Summer	4.163	0.449	0.8	184.2	O K	480 min Summer	4.186	0.472	0.8	193.7	O K	600 min Summer	4.202	0.488	0.8	200.5	O K	720 min Summer	4.214	0.500	0.8	205.4	O K	960 min Summer	4.230	0.516	0.8	211.9	O K	1440 min Summer	4.242	0.528	0.8	216.9	O K	2160 min Summer	4.237	0.523	0.8	214.6	O K	2880 min Summer	4.224	0.510	0.8	209.7	O K	4320 min Summer	4.199	0.485	0.8	199.0	O K	5760 min Summer	4.173	0.459	0.8	188.5	O K	7200 min Summer	4.148	0.434	0.8	178.2	O K	8640 min Summer	4.124	0.410	0.8	168.6	O K	10080 min Summer	4.102	0.388	0.8	159.4	O K	15 min Winter	3.903	0.189	0.7	77.7	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	124.633	0.0	19	30 min Summer	83.789	0.0	34	60 min Summer	53.779	0.0	64	120 min 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Date 01/04/2020 File 1 in 100yr +40% Soakawa...		Designed by JDC Checked by AR			
Micro Drainage		Source Control 2019.1			
<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	3.968	0.254	0.7	104.1	O K
60 min Winter	4.038	0.324	0.7	132.9	O K
120 min Winter	4.111	0.397	0.8	163.0	O K
180 min Winter	4.153	0.439	0.8	180.4	O K
240 min Winter	4.181	0.467	0.8	192.0	O K
360 min Winter	4.220	0.506	0.8	207.9	O K
480 min Winter	4.247	0.533	0.8	219.0	O K
600 min Winter	4.267	0.553	0.8	227.2	O K
720 min Winter	4.282	0.568	0.8	233.3	O K
960 min Winter	4.302	0.588	0.8	241.7	O K
1440 min Winter	4.322	0.608	0.8	249.6	O K
2160 min Winter	4.324	0.610	0.8	250.5	O K
2880 min Winter	4.311	0.597	0.8	245.2	O K
4320 min Winter	4.277	0.563	0.8	231.1	O K
5760 min Winter	4.242	0.528	0.8	216.8	O K
7200 min Winter	4.206	0.492	0.8	201.9	O K
8640 min Winter	4.170	0.456	0.8	187.5	O K
10080 min Winter	4.136	0.422	0.8	173.5	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	83.789	0.0	34		
60 min Winter	53.779	0.0	64		
120 min Winter	33.337	0.0	122		
180 min Winter	24.832	0.0	182		
240 min Winter	20.006	0.0	240		
360 min Winter	14.706	0.0	358		
480 min Winter	11.818	0.0	476		
600 min Winter	9.966	0.0	594		
720 min Winter	8.665	0.0	710		
960 min Winter	6.943	0.0	944		
1440 min Winter	5.071	0.0	1400		
2160 min Winter	3.696	0.0	2072		
2880 min Winter	2.949	0.0	2708		
4320 min Winter	2.142	0.0	3368		
5760 min Winter	1.705	0.0	4272		
7200 min Winter	1.427	0.0	5192		
8640 min Winter	1.235	0.0	6056		
10080 min Winter	1.093	0.0	6960		
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Date 01/04/2020 File 1 in 100yr +40% Soakawa...	Designed by JDC Checked by AR	
Micro Drainage Source Control 2019.1		

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)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.299

Time (mins)	Area
From:	To: (ha)
0	4 0.299

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Model Details

Storage is Online Cover Level (m) 5.350

Complex Structure

Tank or Pond

Invert Level (m) 3.714

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	1.1	1.000	1.1	1.001	0.0

Tank or Pond

Invert Level (m) 3.714

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	1.1	1.000	1.1	1.001	0.0

Cellular Storage

Invert Level (m) 3.714 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.01150 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.01150

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	430.0	430.0	0.751	0.0	514.8
0.750	430.0	514.8			

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