

Simpson Associates				Page 1																																																																																																																																																																																																																			
1 Market Place Mews Henley-on-Thames RG9 2AH		LINESIDE INDUSTRIAL ESTATE SOAKAWAY DESIGN																																																																																																																																																																																																																					
Date 01/04/2020 File 1 in 100yr +40% Soakawa...		Designed by JDC Checked by AR																																																																																																																																																																																																																					
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<u>Summary of Results for 100 year Return Period</u> Half Drain Time : 1873 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>3.834</td><td>0.120</td><td>0.7</td><td>49.4</td><td>O K</td></tr><tr><td>30 min Summer</td><td>3.875</td><td>0.161</td><td>0.7</td><td>66.1</td><td>O K</td></tr><tr><td>60 min Summer</td><td>3.919</td><td>0.205</td><td>0.7</td><td>84.1</td><td>O K</td></tr><tr><td>120 min Summer</td><td>3.964</td><td>0.250</td><td>0.7</td><td>102.7</td><td>O K</td></tr><tr><td>180 min Summer</td><td>3.989</td><td>0.275</td><td>0.7</td><td>113.1</td><td>O K</td></tr><tr><td>240 min Summer</td><td>4.006</td><td>0.292</td><td>0.7</td><td>119.8</td><td>O K</td></tr><tr><td>360 min Summer</td><td>4.027</td><td>0.313</td><td>0.7</td><td>128.7</td><td>O K</td></tr><tr><td>480 min 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Summer</td><td>3.952</td><td>0.238</td><td>0.7</td><td>97.9</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>3.933</td><td>0.219</td><td>0.7</td><td>89.8</td><td>O K</td></tr><tr><td>15 min Winter</td><td>3.849</td><td>0.135</td><td>0.7</td><td>55.4</td><td>O K</td></tr></tbody></table> <table><thead><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr></thead><tbody><tr><td>15 min Summer</td><td>89.024</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>59.849</td><td>0.0</td><td>34</td></tr><tr><td>60 min Summer</td><td>38.413</td><td>0.0</td><td>64</td></tr><tr><td>120 min Summer</td><td>23.812</td><td>0.0</td><td>124</td></tr><tr><td>180 min Summer</td><td>17.737</td><td>0.0</td><td>184</td></tr><tr><td>240 min Summer</td><td>14.290</td><td>0.0</td><td>242</td></tr><tr><td>360 min Summer</td><td>10.505</td><td>0.0</td><td>362</td></tr><tr><td>480 min Summer</td><td>8.441</td><td>0.0</td><td>482</td></tr><tr><td>600 min Summer</td><td>7.118</td><td>0.0</td><td>602</td></tr><tr><td>720 min Summer</td><td>6.190</td><td>0.0</td><td>722</td></tr><tr><td>960 min Summer</td><td>4.959</td><td>0.0</td><td>960</td></tr><tr><td>1440 min Summer</td><td>3.622</td><td>0.0</td><td>1400</td></tr><tr><td>2160 min Summer</td><td>2.640</td><td>0.0</td><td>1732</td></tr><tr><td>2880 min Summer</td><td>2.107</td><td>0.0</td><td>2104</td></tr><tr><td>4320 min Summer</td><td>1.530</td><td>0.0</td><td>2936</td></tr><tr><td>5760 min Summer</td><td>1.218</td><td>0.0</td><td>3744</td></tr><tr><td>7200 min Summer</td><td>1.019</td><td>0.0</td><td>4544</td></tr><tr><td>8640 min Summer</td><td>0.882</td><td>0.0</td><td>5360</td></tr><tr><td>10080 min Summer</td><td>0.781</td><td>0.0</td><td>6144</td></tr><tr><td>15 min Winter</td><td>89.024</td><td>0.0</td><td>19</td></tr></tbody></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	3.834	0.120	0.7	49.4	O K	30 min Summer	3.875	0.161	0.7	66.1	O K	60 min Summer	3.919	0.205	0.7	84.1	O K	120 min Summer	3.964	0.250	0.7	102.7	O K	180 min Summer	3.989	0.275	0.7	113.1	O K	240 min Summer	4.006	0.292	0.7	119.8	O K	360 min Summer	4.027	0.313	0.7	128.7	O K	480 min Summer	4.041	0.327	0.7	134.4	O K	600 min Summer	4.051	0.337	0.7	138.3	O K	720 min Summer	4.057	0.343	0.7	140.8	O K	960 min Summer	4.063	0.349	0.7	143.5	O K	1440 min Summer	4.063	0.349	0.7	143.2	O K	2160 min Summer	4.054	0.340	0.7	139.4	O K	2880 min Summer	4.043	0.329	0.7	135.0	O K	4320 min Summer	4.019	0.305	0.7	125.4	O K	5760 min Summer	3.996	0.282	0.7	115.8	O K	7200 min Summer	3.973	0.259	0.7	106.6	O K	8640 min Summer	3.952	0.238	0.7	97.9	O K	10080 min Summer	3.933	0.219	0.7	89.8	O K	15 min Winter	3.849	0.135	0.7	55.4	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	89.024	0.0	19	30 min Summer	59.849	0.0	34	60 min Summer	38.413	0.0	64	120 min Summer	23.812	0.0	124	180 min Summer	17.737	0.0	184	240 min Summer	14.290	0.0	242	360 min Summer	10.505	0.0	362	480 min Summer	8.441	0.0	482	600 min Summer	7.118	0.0	602	720 min Summer	6.190	0.0	722	960 min Summer	4.959	0.0	960	1440 min Summer	3.622	0.0	1400	2160 min Summer	2.640	0.0	1732	2880 min Summer	2.107	0.0	2104	4320 min Summer	1.530	0.0	2936	5760 min Summer	1.218	0.0	3744	7200 min Summer	1.019	0.0	4544	8640 min Summer	0.882	0.0	5360	10080 min Summer	0.781	0.0	6144	15 min Winter	89.024	0.0	19
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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</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	3.894	0.180	0.7	74.1	O K
60 min Winter	3.944	0.230	0.7	94.4	O K
120 min Winter	3.995	0.281	0.7	115.5	O K
180 min Winter	4.024	0.310	0.7	127.4	O K
240 min Winter	4.043	0.329	0.7	135.1	O K
360 min Winter	4.068	0.354	0.8	145.5	O K
480 min Winter	4.085	0.371	0.8	152.4	O K
600 min Winter	4.097	0.383	0.8	157.2	O K
720 min Winter	4.105	0.391	0.8	160.6	O K
960 min Winter	4.115	0.401	0.8	164.6	O K
1440 min Winter	4.119	0.405	0.8	166.4	O K
2160 min Winter	4.108	0.394	0.8	162.0	O K
2880 min Winter	4.094	0.380	0.8	156.0	O K
4320 min Winter	4.062	0.348	0.7	142.8	O K
5760 min Winter	4.027	0.313	0.7	128.6	O K
7200 min Winter	3.993	0.279	0.7	114.5	O K
8640 min Winter	3.961	0.247	0.7	101.4	O K
10080 min Winter	3.931	0.217	0.7	89.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	59.849	0.0	33		
60 min Winter	38.413	0.0	64		
120 min Winter	23.812	0.0	122		
180 min Winter	17.737	0.0	180		
240 min Winter	14.290	0.0	240		
360 min Winter	10.505	0.0	358		
480 min Winter	8.441	0.0	474		
600 min Winter	7.118	0.0	590		
720 min Winter	6.190	0.0	708		
960 min Winter	4.959	0.0	934		
1440 min Winter	3.622	0.0	1384		
2160 min Winter	2.640	0.0	2008		
2880 min Winter	2.107	0.0	2252		
4320 min Winter	1.530	0.0	3160		
5760 min Winter	1.218	0.0	4088		
7200 min Winter	1.019	0.0	4904		
8640 min Winter	0.882	0.0	5784		
10080 min Winter	0.781	0.0	6560		
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Model Details

Storage is Online Cover Level (m) 5.350

Complex Structure

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			

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

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