

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 10 year Return Period</u> Half Drain Time : 1098 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>3.787</td><td>0.073</td><td>0.7</td><td>30.1</td><td>O K</td></tr><tr><td>30 min Summer</td><td>3.810</td><td>0.096</td><td>0.7</td><td>39.4</td><td>O K</td></tr><tr><td>60 min Summer</td><td>3.834</td><td>0.120</td><td>0.7</td><td>49.3</td><td>O K</td></tr><tr><td>120 min Summer</td><td>3.859</td><td>0.145</td><td>0.7</td><td>59.7</td><td>O K</td></tr><tr><td>180 min Summer</td><td>3.874</td><td>0.160</td><td>0.7</td><td>65.7</td><td>O K</td></tr><tr><td>240 min Summer</td><td>3.884</td><td>0.170</td><td>0.7</td><td>69.7</td><td>O K</td></tr><tr><td>360 min Summer</td><td>3.896</td><td>0.182</td><td>0.7</td><td>74.8</td><td>O K</td></tr><tr><td>480 min Summer</td><td>3.904</td><td>0.190</td><td>0.7</td><td>77.9</td><td>O K</td></tr><tr><td>600 min Summer</td><td>3.908</td><td>0.194</td><td>0.7</td><td>79.7</td><td>O K</td></tr><tr><td>720 min Summer</td><td>3.911</td><td>0.197</td><td>0.7</td><td>80.7</td><td>O K</td></tr><tr><td>960 min Summer</td><td>3.912</td><td>0.198</td><td>0.7</td><td>81.5</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>3.912</td><td>0.198</td><td>0.7</td><td>81.5</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>3.908</td><td>0.194</td><td>0.7</td><td>79.7</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>3.901</td><td>0.187</td><td>0.7</td><td>76.9</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>3.885</td><td>0.171</td><td>0.7</td><td>70.3</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>3.869</td><td>0.155</td><td>0.7</td><td>63.5</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>3.853</td><td>0.139</td><td>0.7</td><td>57.0</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>3.838</td><td>0.124</td><td>0.7</td><td>50.9</td><td>O 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Summer	3.859	0.145	0.7	59.7	O K	180 min Summer	3.874	0.160	0.7	65.7	O K	240 min Summer	3.884	0.170	0.7	69.7	O K	360 min Summer	3.896	0.182	0.7	74.8	O K	480 min Summer	3.904	0.190	0.7	77.9	O K	600 min Summer	3.908	0.194	0.7	79.7	O K	720 min Summer	3.911	0.197	0.7	80.7	O K	960 min Summer	3.912	0.198	0.7	81.5	O K	1440 min Summer	3.912	0.198	0.7	81.5	O K	2160 min Summer	3.908	0.194	0.7	79.7	O K	2880 min Summer	3.901	0.187	0.7	76.9	O K	4320 min Summer	3.885	0.171	0.7	70.3	O K	5760 min Summer	3.869	0.155	0.7	63.5	O K	7200 min Summer	3.853	0.139	0.7	57.0	O K	8640 min Summer	3.838	0.124	0.7	50.9	O K	10080 min Summer	3.824	0.110	0.7	45.4	O K	15 min Winter	3.796	0.082	0.7	33.7	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	54.438	0.0	19	30 min Summer	35.921	0.0	34	60 min Summer	22.792	0.0	64	120 min Summer	14.111	0.0	122	180 min Summer	10.575	0.0	182	240 min Summer	8.591	0.0	242	360 min Summer	6.398	0.0	362	480 min Summer	5.187	0.0	482	600 min Summer	4.406	0.0	600	720 min Summer	3.855	0.0	720	960 min Summer	3.120	0.0	858	1440 min Summer	2.315	0.0	1110	2160 min Summer	1.716	0.0	1512	2880 min Summer	1.387	0.0	1928	4320 min Summer	1.027	0.0	2728	5760 min Summer	0.829	0.0	3520	7200 min Summer	0.702	0.0	4320	8640 min Summer	0.614	0.0	5096	10080 min Summer	0.547	0.0	5840	15 min Winter	54.438	0.0	19
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Simpson Associates				Page 2	
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			
Micro Drainage		Source Control 2019.1			
<u>Summary of Results for 10 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	3.822	0.108	0.7	44.2	O K
60 min Winter	3.849	0.135	0.7	55.4	O K
120 min Winter	3.878	0.164	0.7	67.2	O K
180 min Winter	3.894	0.180	0.7	74.1	O K
240 min Winter	3.906	0.192	0.7	78.7	O K
360 min Winter	3.921	0.207	0.7	84.9	O K
480 min Winter	3.930	0.216	0.7	88.8	O K
600 min Winter	3.936	0.222	0.7	91.2	O K
720 min Winter	3.940	0.226	0.7	92.8	O K
960 min Winter	3.944	0.230	0.7	94.3	O K
1440 min Winter	3.942	0.228	0.7	93.5	O K
2160 min Winter	3.935	0.221	0.7	90.8	O K
2880 min Winter	3.924	0.210	0.7	86.3	O K
4320 min Winter	3.898	0.184	0.7	75.8	O K
5760 min Winter	3.872	0.158	0.7	64.9	O K
7200 min Winter	3.847	0.133	0.7	54.7	O K
8640 min Winter	3.825	0.111	0.7	45.5	O K
10080 min Winter	3.805	0.091	0.7	37.3	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	35.921	0.0	33		
60 min Winter	22.792	0.0	62		
120 min Winter	14.111	0.0	122		
180 min Winter	10.575	0.0	180		
240 min Winter	8.591	0.0	238		
360 min Winter	6.398	0.0	356		
480 min Winter	5.187	0.0	470		
600 min Winter	4.406	0.0	584		
720 min Winter	3.855	0.0	698		
960 min Winter	3.120	0.0	914		
1440 min Winter	2.315	0.0	1196		
2160 min Winter	1.716	0.0	1624		
2880 min Winter	1.387	0.0	2100		
4320 min Winter	1.027	0.0	2980		
5760 min Winter	0.829	0.0	3808		
7200 min Winter	0.702	0.0	4608		
8640 min Winter	0.614	0.0	5360		
10080 min Winter	0.547	0.0	6048		
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Simpson Associates		Page 3
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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)	10	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 %	+0

Time Area Diagram

Total Area (ha) 0.299

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

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Simpson Associates		Page 4
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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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