

The Civil Engineering Practice					Page 1																																																																																																																																																																																																																			
11 Tungsten Building George Street Fishersgate BN41 1RA			Manor Nursery Angmering West Sussex																																																																																																																																																																																																																					
Date 23/09/2020 File Soakaway 3 Factor Safet...			Designed by S Burgess Checked by SRD																																																																																																																																																																																																																					
Innovyze			Source Control 2020.1																																																																																																																																																																																																																					
Summary of Results for 100 year Return Period (+40%) Half Drain Time : 194 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>14.312</td><td>0.712</td><td>0.8</td><td>9.1</td><td>O K</td></tr><tr><td>30 min Summer</td><td>14.528</td><td>0.928</td><td>0.9</td><td>11.9</td><td>O K</td></tr><tr><td>60 min Summer</td><td>14.731</td><td>1.131</td><td>0.9</td><td>14.5</td><td>O K</td></tr><tr><td>120 min Summer</td><td>14.873</td><td>1.273</td><td>0.9</td><td>16.3</td><td>O K</td></tr><tr><td>180 min Summer</td><td>14.912</td><td>1.312</td><td>0.9</td><td>16.8</td><td>O K</td></tr><tr><td>240 min Summer</td><td>14.921</td><td>1.321</td><td>0.9</td><td>16.9</td><td>O K</td></tr><tr><td>360 min Summer</td><td>14.912</td><td>1.312</td><td>0.9</td><td>16.8</td><td>O K</td></tr><tr><td>480 min Summer</td><td>14.881</td><td>1.281</td><td>0.9</td><td>16.4</td><td>O K</td></tr><tr><td>600 min Summer</td><td>14.840</td><td>1.240</td><td>0.9</td><td>15.9</td><td>O K</td></tr><tr><td>720 min Summer</td><td>14.793</td><td>1.193</td><td>0.9</td><td>15.3</td><td>O K</td></tr><tr><td>960 min Summer</td><td>14.697</td><td>1.097</td><td>0.9</td><td>14.1</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>14.530</td><td>0.930</td><td>0.9</td><td>11.9</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>14.385</td><td>0.785</td><td>0.8</td><td>10.1</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>14.285</td><td>0.685</td><td>0.7</td><td>8.8</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>14.150</td><td>0.550</td><td>0.6</td><td>7.1</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>14.062</td><td>0.462</td><td>0.5</td><td>5.9</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>14.001</td><td>0.401</td><td>0.4</td><td>5.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>13.955</td><td>0.355</td><td>0.4</td><td>4.6</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>13.920</td><td>0.320</td><td>0.3</td><td>4.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>14.397</td><td>0.797</td><td>0.8</td><td>10.2</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>128.238</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>86.178</td><td>0.0</td><td>33</td></tr><tr><td>60 min Summer</td><td>55.250</td><td>0.0</td><td>62</td></tr><tr><td>120 min Summer</td><td>34.177</td><td>0.0</td><td>120</td></tr><tr><td>180 min Summer</td><td>25.410</td><td>0.0</td><td>148</td></tr><tr><td>240 min Summer</td><td>20.436</td><td>0.0</td><td>180</td></tr><tr><td>360 min Summer</td><td>15.037</td><td>0.0</td><td>248</td></tr><tr><td>480 min Summer</td><td>12.081</td><td>0.0</td><td>316</td></tr><tr><td>600 min Summer</td><td>10.185</td><td>0.0</td><td>382</td></tr><tr><td>720 min Summer</td><td>8.854</td><td>0.0</td><td>450</td></tr><tr><td>960 min Summer</td><td>7.093</td><td>0.0</td><td>578</td></tr><tr><td>1440 min Summer</td><td>5.178</td><td>0.0</td><td>822</td></tr><tr><td>2160 min Summer</td><td>3.772</td><td>0.0</td><td>1192</td></tr><tr><td>2880 min Summer</td><td>3.009</td><td>0.0</td><td>1556</td></tr><tr><td>4320 min Summer</td><td>2.184</td><td>0.0</td><td>2292</td></tr><tr><td>5760 min Summer</td><td>1.738</td><td>0.0</td><td>3000</td></tr><tr><td>7200 min Summer</td><td>1.455</td><td>0.0</td><td>3744</td></tr><tr><td>8640 min Summer</td><td>1.260</td><td>0.0</td><td>4488</td></tr><tr><td>10080 min Summer</td><td>1.115</td><td>0.0</td><td>5152</td></tr><tr><td>15 min Winter</td><td>128.238</td><td>0.0</td><td>19</td></tr></table>							Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	14.312	0.712	0.8	9.1	O K	30 min Summer	14.528	0.928	0.9	11.9	O K	60 min Summer	14.731	1.131	0.9	14.5	O K	120 min Summer	14.873	1.273	0.9	16.3	O K	180 min Summer	14.912	1.312	0.9	16.8	O K	240 min Summer	14.921	1.321	0.9	16.9	O K	360 min Summer	14.912	1.312	0.9	16.8	O K	480 min Summer	14.881	1.281	0.9	16.4	O K	600 min Summer	14.840	1.240	0.9	15.9	O K	720 min Summer	14.793	1.193	0.9	15.3	O K	960 min Summer	14.697	1.097	0.9	14.1	O K	1440 min Summer	14.530	0.930	0.9	11.9	O K	2160 min Summer	14.385	0.785	0.8	10.1	O K	2880 min Summer	14.285	0.685	0.7	8.8	O K	4320 min Summer	14.150	0.550	0.6	7.1	O K	5760 min Summer	14.062	0.462	0.5	5.9	O K	7200 min Summer	14.001	0.401	0.4	5.1	O K	8640 min Summer	13.955	0.355	0.4	4.6	O K	10080 min Summer	13.920	0.320	0.3	4.1	O K	15 min Winter	14.397	0.797	0.8	10.2	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	128.238	0.0	19	30 min Summer	86.178	0.0	33	60 min Summer	55.250	0.0	62	120 min Summer	34.177	0.0	120	180 min Summer	25.410	0.0	148	240 min Summer	20.436	0.0	180	360 min Summer	15.037	0.0	248	480 min Summer	12.081	0.0	316	600 min Summer	10.185	0.0	382	720 min Summer	8.854	0.0	450	960 min Summer	7.093	0.0	578	1440 min Summer	5.178	0.0	822	2160 min Summer	3.772	0.0	1192	2880 min Summer	3.009	0.0	1556	4320 min Summer	2.184	0.0	2292	5760 min Summer	1.738	0.0	3000	7200 min Summer	1.455	0.0	3744	8640 min Summer	1.260	0.0	4488	10080 min Summer	1.115	0.0	5152	15 min Winter	128.238	0.0	19
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																			
15 min Summer	14.312	0.712	0.8	9.1	O K																																																																																																																																																																																																																			
30 min Summer	14.528	0.928	0.9	11.9	O K																																																																																																																																																																																																																			
60 min Summer	14.731	1.131	0.9	14.5	O K																																																																																																																																																																																																																			
120 min Summer	14.873	1.273	0.9	16.3	O K																																																																																																																																																																																																																			
180 min Summer	14.912	1.312	0.9	16.8	O K																																																																																																																																																																																																																			
240 min Summer	14.921	1.321	0.9	16.9	O K																																																																																																																																																																																																																			
360 min Summer	14.912	1.312	0.9	16.8	O K																																																																																																																																																																																																																			
480 min Summer	14.881	1.281	0.9	16.4	O K																																																																																																																																																																																																																			
600 min Summer	14.840	1.240	0.9	15.9	O K																																																																																																																																																																																																																			
720 min Summer	14.793	1.193	0.9	15.3	O K																																																																																																																																																																																																																			
960 min Summer	14.697	1.097	0.9	14.1	O K																																																																																																																																																																																																																			
1440 min Summer	14.530	0.930	0.9	11.9	O K																																																																																																																																																																																																																			
2160 min Summer	14.385	0.785	0.8	10.1	O K																																																																																																																																																																																																																			
2880 min Summer	14.285	0.685	0.7	8.8	O K																																																																																																																																																																																																																			
4320 min Summer	14.150	0.550	0.6	7.1	O K																																																																																																																																																																																																																			
5760 min Summer	14.062	0.462	0.5	5.9	O K																																																																																																																																																																																																																			
7200 min Summer	14.001	0.401	0.4	5.1	O K																																																																																																																																																																																																																			
8640 min Summer	13.955	0.355	0.4	4.6	O K																																																																																																																																																																																																																			
10080 min Summer	13.920	0.320	0.3	4.1	O K																																																																																																																																																																																																																			
15 min Winter	14.397	0.797	0.8	10.2	O K																																																																																																																																																																																																																			
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																					
15 min Summer	128.238	0.0	19																																																																																																																																																																																																																					
30 min Summer	86.178	0.0	33																																																																																																																																																																																																																					
60 min Summer	55.250	0.0	62																																																																																																																																																																																																																					
120 min Summer	34.177	0.0	120																																																																																																																																																																																																																					
180 min Summer	25.410	0.0	148																																																																																																																																																																																																																					
240 min Summer	20.436	0.0	180																																																																																																																																																																																																																					
360 min Summer	15.037	0.0	248																																																																																																																																																																																																																					
480 min Summer	12.081	0.0	316																																																																																																																																																																																																																					
600 min Summer	10.185	0.0	382																																																																																																																																																																																																																					
720 min Summer	8.854	0.0	450																																																																																																																																																																																																																					
960 min Summer	7.093	0.0	578																																																																																																																																																																																																																					
1440 min Summer	5.178	0.0	822																																																																																																																																																																																																																					
2160 min Summer	3.772	0.0	1192																																																																																																																																																																																																																					
2880 min Summer	3.009	0.0	1556																																																																																																																																																																																																																					
4320 min Summer	2.184	0.0	2292																																																																																																																																																																																																																					
5760 min Summer	1.738	0.0	3000																																																																																																																																																																																																																					
7200 min Summer	1.455	0.0	3744																																																																																																																																																																																																																					
8640 min Summer	1.260	0.0	4488																																																																																																																																																																																																																					
10080 min Summer	1.115	0.0	5152																																																																																																																																																																																																																					
15 min Winter	128.238	0.0	19																																																																																																																																																																																																																					
©1982-2020 Innovyze																																																																																																																																																																																																																								

The Civil Engineering Practice					Page 2	
11 Tungsten Building George Street Fishersgate BN41 1RA			Manor Nursery Angmering West Sussex			
Date 23/09/2020			Designed by S Burgess			
File Soakaway 3 Factor Safet...			Checked by SRD			
Innovyze			Source Control 2020.1			
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	14.645	1.045	0.9	13.4	O K	
60 min Winter	14.882	1.282	0.9	16.4	O K	
120 min Winter	15.059	1.459	0.9	18.7	O K	
180 min Winter	15.099	1.499	0.9	19.2	O K	
240 min Winter	15.096	1.496	0.9	19.2	O K	
360 min Winter	15.067	1.467	0.9	18.8	O K	
480 min Winter	15.009	1.409	0.9	18.1	O K	
600 min Winter	14.937	1.337	0.9	17.1	O K	
720 min Winter	14.860	1.260	0.9	16.2	O K	
960 min Winter	14.710	1.110	0.9	14.2	O K	
1440 min Winter	14.484	0.884	0.9	11.3	O K	
2160 min Winter	14.313	0.713	0.8	9.1	O K	
2880 min Winter	14.199	0.599	0.6	7.7	O K	
4320 min Winter	14.057	0.457	0.5	5.9	O K	
5760 min Winter	13.972	0.372	0.4	4.8	O K	
7200 min Winter	13.916	0.316	0.3	4.0	O K	
8640 min Winter	13.876	0.276	0.3	3.5	O K	
10080 min Winter	13.845	0.245	0.3	3.1	O K	
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)			
30 min Winter	86.178	0.0	33			
60 min Winter	55.250	0.0	62			
120 min Winter	34.177	0.0	118			
180 min Winter	25.410	0.0	170			
240 min Winter	20.436	0.0	192			
360 min Winter	15.037	0.0	268			
480 min Winter	12.081	0.0	344			
600 min Winter	10.185	0.0	416			
720 min Winter	8.854	0.0	486			
960 min Winter	7.093	0.0	616			
1440 min Winter	5.178	0.0	852			
2160 min Winter	3.772	0.0	1232			
2880 min Winter	3.009	0.0	1588			
4320 min Winter	2.184	0.0	2332			
5760 min Winter	1.738	0.0	3056			
7200 min Winter	1.455	0.0	3752			
8640 min Winter	1.260	0.0	4496			
10080 min Winter	1.115	0.0	5240			
©1982-2020 Innovyze						

The Civil Engineering Practice		Page 4																				
11 Tungsten Building George Street Fishersgate BN41 1RA	Manor Nursery Angmering West Sussex																					
Date 23/09/2020 File Soakaway 3 Factor Safet...	Designed by S Burgess Checked by SRD																					
Innovyze Source Control 2020.1																						
<u>Model Details</u> Storage is Online Cover Level (m) 16.400 <u>Infiltration Trench Structure</u> <table> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.00000</td> <td>Trench Width (m)</td> <td>1.5</td> </tr> <tr> <td>Infiltration Coefficient Side (m/hr)</td> <td>0.72360</td> <td>Trench Length (m)</td> <td>9.0</td> </tr> <tr> <td>Safety Factor</td> <td>4.0</td> <td>Slope (1:X)</td> <td>0.0</td> </tr> <tr> <td>Porosity</td> <td>0.95</td> <td>Cap Volume Depth (m)</td> <td>1.600</td> </tr> <tr> <td>Invert Level (m)</td> <td>13.600</td> <td>Cap Infiltration Depth (m)</td> <td>0.900</td> </tr> </table>			Infiltration Coefficient Base (m/hr)	0.00000	Trench Width (m)	1.5	Infiltration Coefficient Side (m/hr)	0.72360	Trench Length (m)	9.0	Safety Factor	4.0	Slope (1:X)	0.0	Porosity	0.95	Cap Volume Depth (m)	1.600	Invert Level (m)	13.600	Cap Infiltration Depth (m)	0.900
Infiltration Coefficient Base (m/hr)	0.00000	Trench Width (m)	1.5																			
Infiltration Coefficient Side (m/hr)	0.72360	Trench Length (m)	9.0																			
Safety Factor	4.0	Slope (1:X)	0.0																			
Porosity	0.95	Cap Volume Depth (m)	1.600																			
Invert Level (m)	13.600	Cap Infiltration Depth (m)	0.900																			
©1982-2020 Innovyze																						