

Paul Basham Associates				Page 1																																																																																																																																																																																																																			
Lancaster Court Fareham Hampshire, PO15 5TU			06																																																																																																																																																																																																																				
Date 24/04/2019			Designed by JB																																																																																																																																																																																																																				
File 06 Plots 22-23. lin10 p...			Checked by AS																																																																																																																																																																																																																				
Innovyze			Source Control 2018.1.1																																																																																																																																																																																																																				
<p>Summary of Results for 10 year Return Period (+30%)</p> <p>Half Drain Time : 365 minutes.</p> <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>-1.214</td><td>0.286</td><td>0.1</td><td>1.5</td><td>O K</td></tr><tr><td>30 min Summer</td><td>-1.129</td><td>0.371</td><td>0.1</td><td>2.0</td><td>O K</td></tr><tr><td>60 min Summer</td><td>-1.045</td><td>0.455</td><td>0.1</td><td>2.5</td><td>O K</td></tr><tr><td>120 min Summer</td><td>-0.969</td><td>0.531</td><td>0.1</td><td>2.9</td><td>O K</td></tr><tr><td>180 min Summer</td><td>-0.937</td><td>0.563</td><td>0.1</td><td>3.0</td><td>O K</td></tr><tr><td>240 min Summer</td><td>-0.924</td><td>0.576</td><td>0.1</td><td>3.1</td><td>O K</td></tr><tr><td>360 min Summer</td><td>-0.915</td><td>0.585</td><td>0.1</td><td>3.2</td><td>O K</td></tr><tr><td>480 min Summer</td><td>-0.913</td><td>0.587</td><td>0.1</td><td>3.2</td><td>O K</td></tr><tr><td>600 min Summer</td><td>-0.916</td><td>0.584</td><td>0.1</td><td>3.2</td><td>O K</td></tr><tr><td>720 min Summer</td><td>-0.922</td><td>0.578</td><td>0.1</td><td>3.1</td><td>O K</td></tr><tr><td>960 min Summer</td><td>-0.937</td><td>0.563</td><td>0.1</td><td>3.0</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>-0.973</td><td>0.527</td><td>0.1</td><td>2.8</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>-1.026</td><td>0.474</td><td>0.1</td><td>2.6</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>-1.075</td><td>0.425</td><td>0.1</td><td>2.3</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>-1.159</td><td>0.341</td><td>0.1</td><td>1.8</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>-1.227</td><td>0.273</td><td>0.1</td><td>1.5</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>-1.282</td><td>0.218</td><td>0.1</td><td>1.2</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>-1.326</td><td>0.174</td><td>0.1</td><td>0.9</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>-1.363</td><td>0.137</td><td>0.1</td><td>0.7</td><td>O K</td></tr><tr><td>15 min Winter</td><td>-1.179</td><td>0.321</td><td>0.1</td><td>1.7</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>70.770</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>46.698</td><td>0.0</td><td>33</td></tr><tr><td>60 min Summer</td><td>29.629</td><td>0.0</td><td>62</td></tr><tr><td>120 min Summer</td><td>18.344</td><td>0.0</td><td>122</td></tr><tr><td>180 min Summer</td><td>13.747</td><td>0.0</td><td>180</td></tr><tr><td>240 min Summer</td><td>11.169</td><td>0.0</td><td>240</td></tr><tr><td>360 min Summer</td><td>8.317</td><td>0.0</td><td>298</td></tr><tr><td>480 min Summer</td><td>6.743</td><td>0.0</td><td>362</td></tr><tr><td>600 min Summer</td><td>5.728</td><td>0.0</td><td>428</td></tr><tr><td>720 min Summer</td><td>5.011</td><td>0.0</td><td>498</td></tr><tr><td>960 min Summer</td><td>4.057</td><td>0.0</td><td>636</td></tr><tr><td>1440 min Summer</td><td>3.009</td><td>0.0</td><td>910</td></tr><tr><td>2160 min Summer</td><td>2.231</td><td>0.0</td><td>1320</td></tr><tr><td>2880 min Summer</td><td>1.803</td><td>0.0</td><td>1704</td></tr><tr><td>4320 min Summer</td><td>1.335</td><td>0.0</td><td>2468</td></tr><tr><td>5760 min Summer</td><td>1.078</td><td>0.0</td><td>3224</td></tr><tr><td>7200 min Summer</td><td>0.913</td><td>0.0</td><td>3960</td></tr><tr><td>8640 min Summer</td><td>0.798</td><td>0.0</td><td>4672</td></tr><tr><td>10080 min Summer</td><td>0.711</td><td>0.0</td><td>5352</td></tr><tr><td>15 min Winter</td><td>70.770</td><td>0.0</td><td>18</td></tr></tbody></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	-1.214	0.286	0.1	1.5	O K	30 min Summer	-1.129	0.371	0.1	2.0	O K	60 min Summer	-1.045	0.455	0.1	2.5	O K	120 min Summer	-0.969	0.531	0.1	2.9	O K	180 min Summer	-0.937	0.563	0.1	3.0	O K	240 min Summer	-0.924	0.576	0.1	3.1	O K	360 min Summer	-0.915	0.585	0.1	3.2	O K	480 min Summer	-0.913	0.587	0.1	3.2	O K	600 min Summer	-0.916	0.584	0.1	3.2	O K	720 min Summer	-0.922	0.578	0.1	3.1	O K	960 min Summer	-0.937	0.563	0.1	3.0	O K	1440 min Summer	-0.973	0.527	0.1	2.8	O K	2160 min Summer	-1.026	0.474	0.1	2.6	O K	2880 min Summer	-1.075	0.425	0.1	2.3	O K	4320 min Summer	-1.159	0.341	0.1	1.8	O K	5760 min Summer	-1.227	0.273	0.1	1.5	O K	7200 min Summer	-1.282	0.218	0.1	1.2	O K	8640 min Summer	-1.326	0.174	0.1	0.9	O K	10080 min Summer	-1.363	0.137	0.1	0.7	O K	15 min Winter	-1.179	0.321	0.1	1.7	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	70.770	0.0	19	30 min Summer	46.698	0.0	33	60 min Summer	29.629	0.0	62	120 min Summer	18.344	0.0	122	180 min Summer	13.747	0.0	180	240 min Summer	11.169	0.0	240	360 min Summer	8.317	0.0	298	480 min Summer	6.743	0.0	362	600 min Summer	5.728	0.0	428	720 min Summer	5.011	0.0	498	960 min Summer	4.057	0.0	636	1440 min Summer	3.009	0.0	910	2160 min Summer	2.231	0.0	1320	2880 min Summer	1.803	0.0	1704	4320 min Summer	1.335	0.0	2468	5760 min Summer	1.078	0.0	3224	7200 min Summer	0.913	0.0	3960	8640 min Summer	0.798	0.0	4672	10080 min Summer	0.711	0.0	5352	15 min Winter	70.770	0.0	18
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
15 min Summer	-1.214	0.286	0.1	1.5	O K																																																																																																																																																																																																																		
30 min Summer	-1.129	0.371	0.1	2.0	O K																																																																																																																																																																																																																		
60 min Summer	-1.045	0.455	0.1	2.5	O K																																																																																																																																																																																																																		
120 min Summer	-0.969	0.531	0.1	2.9	O K																																																																																																																																																																																																																		
180 min Summer	-0.937	0.563	0.1	3.0	O K																																																																																																																																																																																																																		
240 min Summer	-0.924	0.576	0.1	3.1	O K																																																																																																																																																																																																																		
360 min Summer	-0.915	0.585	0.1	3.2	O K																																																																																																																																																																																																																		
480 min Summer	-0.913	0.587	0.1	3.2	O K																																																																																																																																																																																																																		
600 min Summer	-0.916	0.584	0.1	3.2	O K																																																																																																																																																																																																																		
720 min Summer	-0.922	0.578	0.1	3.1	O K																																																																																																																																																																																																																		
960 min Summer	-0.937	0.563	0.1	3.0	O K																																																																																																																																																																																																																		
1440 min Summer	-0.973	0.527	0.1	2.8	O K																																																																																																																																																																																																																		
2160 min Summer	-1.026	0.474	0.1	2.6	O K																																																																																																																																																																																																																		
2880 min Summer	-1.075	0.425	0.1	2.3	O K																																																																																																																																																																																																																		
4320 min Summer	-1.159	0.341	0.1	1.8	O K																																																																																																																																																																																																																		
5760 min Summer	-1.227	0.273	0.1	1.5	O K																																																																																																																																																																																																																		
7200 min Summer	-1.282	0.218	0.1	1.2	O K																																																																																																																																																																																																																		
8640 min Summer	-1.326	0.174	0.1	0.9	O K																																																																																																																																																																																																																		
10080 min Summer	-1.363	0.137	0.1	0.7	O K																																																																																																																																																																																																																		
15 min Winter	-1.179	0.321	0.1	1.7	O K																																																																																																																																																																																																																		
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																				
15 min Summer	70.770	0.0	19																																																																																																																																																																																																																				
30 min Summer	46.698	0.0	33																																																																																																																																																																																																																				
60 min Summer	29.629	0.0	62																																																																																																																																																																																																																				
120 min Summer	18.344	0.0	122																																																																																																																																																																																																																				
180 min Summer	13.747	0.0	180																																																																																																																																																																																																																				
240 min Summer	11.169	0.0	240																																																																																																																																																																																																																				
360 min Summer	8.317	0.0	298																																																																																																																																																																																																																				
480 min Summer	6.743	0.0	362																																																																																																																																																																																																																				
600 min Summer	5.728	0.0	428																																																																																																																																																																																																																				
720 min Summer	5.011	0.0	498																																																																																																																																																																																																																				
960 min Summer	4.057	0.0	636																																																																																																																																																																																																																				
1440 min Summer	3.009	0.0	910																																																																																																																																																																																																																				
2160 min Summer	2.231	0.0	1320																																																																																																																																																																																																																				
2880 min Summer	1.803	0.0	1704																																																																																																																																																																																																																				
4320 min Summer	1.335	0.0	2468																																																																																																																																																																																																																				
5760 min Summer	1.078	0.0	3224																																																																																																																																																																																																																				
7200 min Summer	0.913	0.0	3960																																																																																																																																																																																																																				
8640 min Summer	0.798	0.0	4672																																																																																																																																																																																																																				
10080 min Summer	0.711	0.0	5352																																																																																																																																																																																																																				
15 min Winter	70.770	0.0	18																																																																																																																																																																																																																				
©1982-2018 Innovyze																																																																																																																																																																																																																							

Paul Basham Associates				Page 2	
Lancaster Court Fareham Hampshire, PO15 5TU		06			
Date 24/04/2019		Designed by JB			
File 06 Plots 22-23. lin10 p...		Checked by AS			
Innovyze		Source Control 2018.1.1			
Summary of Results for 10 year Return Period (+30%)					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	-1.083	0.417	0.1	2.3	O K
60 min Winter	-0.987	0.513	0.1	2.8	O K
120 min Winter	-0.898	0.602	0.1	3.2	O K
180 min Winter	-0.858	0.642	0.1	3.5	O K
240 min Winter	-0.839	0.661	0.1	3.6	O K
360 min Winter	-0.828	0.672	0.1	3.6	O K
480 min Winter	-0.828	0.672	0.1	3.6	O K
600 min Winter	-0.833	0.667	0.1	3.6	O K
720 min Winter	-0.842	0.658	0.1	3.6	O K
960 min Winter	-0.866	0.634	0.1	3.4	O K
1440 min Winter	-0.923	0.577	0.1	3.1	O K
2160 min Winter	-1.005	0.495	0.1	2.7	O K
2880 min Winter	-1.077	0.423	0.1	2.3	O K
4320 min Winter	-1.195	0.305	0.1	1.6	O K
5760 min Winter	-1.284	0.216	0.1	1.2	O K
7200 min Winter	-1.353	0.147	0.1	0.8	O K
8640 min Winter	-1.404	0.096	0.1	0.5	O K
10080 min Winter	-1.440	0.060	0.0	0.3	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	46.698	0.0	33		
60 min Winter	29.629	0.0	62		
120 min Winter	18.344	0.0	120		
180 min Winter	13.747	0.0	176		
240 min Winter	11.169	0.0	232		
360 min Winter	8.317	0.0	334		
480 min Winter	6.743	0.0	378		
600 min Winter	5.728	0.0	456		
720 min Winter	5.011	0.0	534		
960 min Winter	4.057	0.0	686		
1440 min Winter	3.009	0.0	982		
2160 min Winter	2.231	0.0	1408		
2880 min Winter	1.803	0.0	1816		
4320 min Winter	1.335	0.0	2596		
5760 min Winter	1.078	0.0	3344		
7200 min Winter	0.913	0.0	4040		
8640 min Winter	0.798	0.0	4752		
10080 min Winter	0.711	0.0	5344		
©1982-2018 Innovyze					

Paul Basham Associates		Page 3																																	
Lancaster Court Fareham Hampshire, PO15 5TU	06																																		
Date 24/04/2019	Designed by JB																																		
File 06 Plots 22-23. lin10 p...	Checked by AS																																		
Innovyze		Source Control 2018.1.1																																	
<p style="text-align: center;"><u>Rainfall Details</u></p> <table> <tr> <td>Rainfall Model</td> <td>FSR</td> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Return Period (years)</td> <td>10</td> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Region</td> <td>England and Wales</td> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>M5-60 (mm)</td> <td>19.000</td> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Ratio R</td> <td>0.350</td> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> <td>Climate Change %</td> <td>+30</td> </tr> </table> <p style="text-align: center;"><u>Time Area Diagram</u></p> <p>Total Area (ha) 0.012</p> <table> <tr> <th colspan="2">Time (mins)</th> <th>Area</th> </tr> <tr> <th>From:</th> <th>To:</th> <th>(ha)</th> </tr> <tr> <td>0</td> <td>4</td> <td>0.012</td> </tr> </table>			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 %	+30	Time (mins)		Area	From:	To:	(ha)	0	4	0.012
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 %	+30																																
Time (mins)		Area																																	
From:	To:	(ha)																																	
0	4	0.012																																	
©1982-2018 Innovyze																																			

Paul Basham Associates		Page 4																				
Lancaster Court Fareham Hampshire, PO15 5TU	06																					
Date 24/04/2019	Designed by JB																					
File 06 Plots 22-23. lin10 p...	Checked by AS																					
Innovyze		Source Control 2018.1.1																				
<p style="text-align: center;"><u>Model Details</u></p> <p style="text-align: center;">Storage is Online Cover Level (m) 0.000</p> <p style="text-align: center;"><u>Trench Soakaway Structure</u></p> <table> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.03499</td> <td>Trench Width (m)</td> <td>1.2</td> </tr> <tr> <td>Infiltration Coefficient Side (m/hr)</td> <td>0.03499</td> <td>Trench Length (m)</td> <td>15.0</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>0.30</td> <td>Cap Volume Depth (m)</td> <td>1.300</td> </tr> <tr> <td>Invert Level (m)</td> <td>-1.500</td> <td>Cap Infiltration Depth (m)</td> <td>1.300</td> </tr> </table>			Infiltration Coefficient Base (m/hr)	0.03499	Trench Width (m)	1.2	Infiltration Coefficient Side (m/hr)	0.03499	Trench Length (m)	15.0	Safety Factor	4.0	Slope (1:X)	0.0	Porosity	0.30	Cap Volume Depth (m)	1.300	Invert Level (m)	-1.500	Cap Infiltration Depth (m)	1.300
Infiltration Coefficient Base (m/hr)	0.03499	Trench Width (m)	1.2																			
Infiltration Coefficient Side (m/hr)	0.03499	Trench Length (m)	15.0																			
Safety Factor	4.0	Slope (1:X)	0.0																			
Porosity	0.30	Cap Volume Depth (m)	1.300																			
Invert Level (m)	-1.500	Cap Infiltration Depth (m)	1.300																			
©1982-2018 Innovyze																						