

J D P Limited				Page 1																																																																																																																																																																																																																			
Townfoot Longtown, Carlisle Cumbria CA6 5LY		LRO - The Laurels, Hereford Plot 3 Tank - 6.6m x 2.4m x 0.84m																																																																																																																																																																																																																					
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<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 829 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>8.795</td><td>0.295</td><td>0.1</td><td>4.5</td><td>O K</td></tr><tr><td>30 min Summer</td><td>8.888</td><td>0.388</td><td>0.1</td><td>5.9</td><td>O K</td></tr><tr><td>60 min Summer</td><td>8.983</td><td>0.483</td><td>0.1</td><td>7.3</td><td>O K</td></tr><tr><td>120 min Summer</td><td>9.074</td><td>0.574</td><td>0.1</td><td>8.7</td><td>O K</td></tr><tr><td>180 min Summer</td><td>9.119</td><td>0.619</td><td>0.1</td><td>9.4</td><td>O K</td></tr><tr><td>240 min Summer</td><td>9.145</td><td>0.645</td><td>0.1</td><td>9.8</td><td>O K</td></tr><tr><td>360 min Summer</td><td>9.168</td><td>0.668</td><td>0.1</td><td>10.2</td><td>O K</td></tr><tr><td>480 min 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J D P Limited				Page 2	
Townfoot Longtown, Carlisle Cumbria CA6 5LY		LRO - The Laurels, Hereford Plot 3 Tank - 6.6m x 2.4m x 0.84m			
Date 14/07/2020 08:06 File 2007-48 Site 1, The Lau...		Designed by THo Checked by			
Micro Drainage		Source Control 2016.1.1			
<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	8.936	0.436	0.1	6.6	O K
60 min Winter	9.043	0.543	0.1	8.3	O K
120 min Winter	9.147	0.647	0.1	9.8	O K
180 min Winter	9.200	0.700	0.1	10.6	O K
240 min Winter	9.231	0.731	0.1	11.1	O K
360 min Winter	9.262	0.762	0.1	11.6	O K
480 min Winter	9.275	0.775	0.1	11.8	O K
600 min Winter	9.277	0.777	0.1	11.8	O K
720 min Winter	9.273	0.773	0.1	11.8	O K
960 min Winter	9.256	0.756	0.1	11.5	O K
1440 min Winter	9.222	0.722	0.1	11.0	O K
2160 min Winter	9.160	0.660	0.1	10.0	O K
2880 min Winter	9.098	0.598	0.1	9.1	O K
4320 min Winter	8.987	0.487	0.1	7.4	O K
5760 min Winter	8.892	0.392	0.1	6.0	O K
7200 min Winter	8.811	0.311	0.1	4.7	O K
8640 min Winter	8.743	0.243	0.1	3.7	O K
10080 min Winter	8.685	0.185	0.1	2.8	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	84.957	0.0	33		
60 min Winter	53.779	0.0	62		
120 min Winter	32.908	0.0	122		
180 min Winter	24.359	0.0	180		
240 min Winter	19.556	0.0	238		
360 min Winter	14.269	0.0	352		
480 min Winter	11.414	0.0	466		
600 min Winter	9.592	0.0	576		
720 min Winter	8.317	0.0	680		
960 min Winter	6.636	0.0	788		
1440 min Winter	4.819	0.0	1082		
2160 min Winter	3.493	0.0	1540		
2880 min Winter	2.777	0.0	1988		
4320 min Winter	2.007	0.0	2852		
5760 min Winter	1.592	0.0	3640		
7200 min Winter	1.329	0.0	4464		
8640 min Winter	1.147	0.0	5184		
10080 min Winter	1.012	0.0	5856		
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J D P Limited		Page 3
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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	0.378	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.019

Time (mins)	Area
From:	To: (ha)
0	4 0.019

J D P Limited		Page 4
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Model Details

Storage is Online Cover Level (m) 10.000

Cellular Storage Structure

Invert Level (m) 8.500 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.03364 Porosity 0.96
Infiltration Coefficient Side (m/hr) 0.03364

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	15.8	15.8	0.841	0.0	30.2
0.840	15.8	30.2			