

J D P Limited						Page 2	
Townfoot			Plot 3 'Dalelands' Whitehaven				
Longtown, Carlisle			JDP project Ref: 2504-a128				
Cumbria CA6 5LY			Tank Size: 6.0 x 4.8 x 0.42m				
Date 28-04-2025			Designed by JC				
File 2504-a128 Plot 3 'Dalel...			Checked by				
Micro Drainage			Source Control 2014.1				
<u>Summary of Results for 100 year Return Period (+50%)</u>							
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
30 min Winter	73.326	0.196	0.0	0.2	0.2	5.4	O K
60 min Winter	73.391	0.261	0.0	0.2	0.2	7.1	O K
120 min Winter	73.458	0.328	0.0	0.2	0.2	9.0	O K
180 min Winter	73.492	0.362	0.0	0.3	0.3	9.9	O K
240 min Winter	73.509	0.379	0.0	0.3	0.3	10.4	O K
360 min Winter	73.525	0.395	0.0	0.3	0.3	10.8	O K
480 min Winter	73.532	0.402	0.0	0.3	0.3	11.0	O K
600 min Winter	73.535	0.405	0.0	0.3	0.3	11.1	O K
720 min Winter	73.535	0.405	0.0	0.3	0.3	11.1	O K
960 min Winter	73.528	0.398	0.0	0.3	0.3	10.9	O K
1440 min Winter	73.503	0.373	0.0	0.3	0.3	10.2	O K
2160 min Winter	73.460	0.330	0.0	0.2	0.2	9.0	O K
2880 min Winter	73.420	0.290	0.0	0.2	0.2	7.9	O K
4320 min Winter	73.357	0.227	0.0	0.2	0.2	6.2	O K
5760 min Winter	73.310	0.180	0.0	0.2	0.2	4.9	O K
7200 min Winter	73.276	0.146	0.0	0.2	0.2	4.0	O K
8640 min Winter	73.249	0.119	0.0	0.2	0.2	3.3	O K
10080 min Winter	73.228	0.098	0.0	0.1	0.1	2.7	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)			
30 min Winter	75.035	0.0	5.6	33			
60 min Winter	51.237	0.0	7.7	62			
120 min Winter	33.830	0.0	10.1	120			
180 min Winter	26.075	0.0	11.7	176			
240 min Winter	21.461	0.0	12.9	232			
360 min Winter	16.237	0.0	14.6	338			
480 min Winter	13.310	0.0	16.0	386			
600 min Winter	11.393	0.0	17.1	462			
720 min Winter	10.026	0.0	18.0	540			
960 min Winter	8.182	0.0	19.6	694			
1440 min Winter	6.126	0.0	22.0	994			
2160 min Winter	4.570	0.0	24.7	1424			
2880 min Winter	3.704	0.0	26.7	1820			
4320 min Winter	2.756	0.0	29.8	2596			
5760 min Winter	2.237	0.0	32.2	3352			
7200 min Winter	1.903	0.0	34.3	4104			
8640 min Winter	1.670	0.0	36.1	4840			
10080 min Winter	1.495	0.0	37.7	5544			
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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	1.000
Region	England and Wales	Cv (Winter)	1.000
M5-60 (mm)	17.000	Shortest Storm (mins)	15
Ratio R	0.254	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+50

Time Area Diagram

Total Area (ha) 0.015

Time (mins) Area

From: To: (ha)

0 4 0.015

Time Area Diagram

Total Area (ha) 0.000

Time (mins) Area

From: To: (ha)

0 4 0.000

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Model Details

Storage is Online Cover Level (m) 74.000

Cellular Storage Structure

Invert Level (m) 73.130 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00000

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	28.8	28.8	0.421	0.0	37.4
0.420	28.8	37.4			

Orifice Outflow Control

Diameter (m) 0.014 Discharge Coefficient 0.600 Invert Level (m) 73.100