



Polypipe Civils		Page 1
Charnwood Business Park Loughborough Leicestershire LE11 1LE	108886 Goldney Ave, Warmley 6.5m x 1m x 0.4m	
Date 04/03/2024 13:15 File T-MD-108886-MS-MD2 (6.5...	Designed by MS Checked by	
Micro Drainage	Source Control 2020.1.3	

Summary of Results for 30 year Return Period (+45%)

Half Drain Time : 109 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	98.805	0.205	0.2	1.3	O K
30 min Summer	98.860	0.260	0.2	1.6	O K
60 min Summer	98.902	0.302	0.2	1.9	O K
120 min Summer	98.919	0.319	0.2	2.0	O K
180 min Summer	98.919	0.319	0.2	2.0	O K
240 min Summer	98.912	0.312	0.2	1.9	O K
360 min Summer	98.894	0.294	0.2	1.8	O K
480 min Summer	98.875	0.275	0.2	1.7	O K
600 min Summer	98.856	0.256	0.2	1.6	O K
720 min Summer	98.838	0.238	0.2	1.5	O K
960 min Summer	98.805	0.205	0.2	1.3	O K
1440 min Summer	98.751	0.151	0.2	0.9	O K
2160 min Summer	98.696	0.096	0.1	0.6	O K
2880 min Summer	98.662	0.062	0.1	0.4	O K
4320 min Summer	98.642	0.042	0.1	0.3	O K
5760 min Summer	98.634	0.034	0.1	0.2	O K
7200 min Summer	98.629	0.029	0.1	0.2	O K
8640 min Summer	98.625	0.025	0.1	0.2	O K
10080 min Summer	98.623	0.023	0.1	0.1	O K
15 min Winter	98.831	0.231	0.2	1.4	O K


Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	105.388	0.0	18
30 min Summer	70.126	0.0	32
60 min Summer	44.676	0.0	60
120 min Summer	27.603	0.0	96
180 min Summer	20.577	0.0	128
240 min Summer	16.627	0.0	164
360 min Summer	12.315	0.0	232
480 min Summer	9.939	0.0	300
600 min Summer	8.411	0.0	368
720 min Summer	7.335	0.0	434
960 min Summer	5.907	0.0	560
1440 min Summer	4.348	0.0	808
2160 min Summer	3.195	0.0	1168
2880 min Summer	2.566	0.0	1500
4320 min Summer	1.881	0.0	2204
5760 min Summer	1.508	0.0	2936
7200 min Summer	1.271	0.0	3672
8640 min Summer	1.105	0.0	4400
10080 min Summer	0.982	0.0	5112
15 min Winter	105.388	0.0	18

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Summary of Results for 30 year Return Period (+45%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m <sup>3</sup> )	Status
30 min Winter	98.895	0.295	0.2	1.8	O K
60 min Winter	98.945	0.345	0.2	2.1	O K
120 min Winter	98.965	0.365	0.2	2.3	O K
180 min Winter	98.963	0.363	0.2	2.2	O K
240 min Winter	98.952	0.352	0.2	2.2	O K
360 min Winter	98.924	0.324	0.2	2.0	O K
480 min Winter	98.894	0.294	0.2	1.8	O K
600 min Winter	98.865	0.265	0.2	1.6	O K
720 min Winter	98.838	0.238	0.2	1.5	O K
960 min Winter	98.791	0.191	0.2	1.2	O K
1440 min Winter	98.718	0.118	0.1	0.7	O K
2160 min Winter	98.654	0.054	0.1	0.3	O K
2880 min Winter	98.642	0.042	0.1	0.3	O K
4320 min Winter	98.631	0.031	0.1	0.2	O K
5760 min Winter	98.625	0.025	0.1	0.2	O K
7200 min Winter	98.621	0.021	0.1	0.1	O K
8640 min Winter	98.618	0.018	0.0	0.1	O K
10080 min Winter	98.616	0.016	0.0	0.1	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Time-Peak (mins)
30 min Winter	70.126	0.0	32
60 min Winter	44.676	0.0	60
120 min Winter	27.603	0.0	100
180 min Winter	20.577	0.0	138
240 min Winter	16.627	0.0	176
360 min Winter	12.315	0.0	252
480 min Winter	9.939	0.0	324
600 min Winter	8.411	0.0	394
720 min Winter	7.335	0.0	462
960 min Winter	5.907	0.0	594
1440 min Winter	4.348	0.0	838
2160 min Winter	3.195	0.0	1148
2880 min Winter	2.566	0.0	1472
4320 min Winter	1.881	0.0	2204
5760 min Winter	1.508	0.0	2944
7200 min Winter	1.271	0.0	3608
8640 min Winter	1.105	0.0	4400
10080 min Winter	0.982	0.0	5048

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+45

Time Area Diagram

Total Area (ha) 0.007

Time (mins)		Area
From:	To:	(ha)
0	4	0.007

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Model Details

Storage is Online Cover Level (m) 100.000

Cellular Storage Structure

Invert Level (m) 98.600 Safety Factor 2.0  
 Infiltration Coefficient Base (m/hr) 0.12414 Porosity 0.95  
 Infiltration Coefficient Side (m/hr) 0.12414

Depth (m)	Area (m <sup>2</sup> )	Inf. Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Inf. Area (m <sup>2</sup> )
0.000	6.5	6.5	0.500	0.0	12.5
0.400	6.5	12.5			