



Polypipe Civils		Page 1
Charnwood Business Park Loughborough Leicestershire LE11 1LE	69521 142b High St, Hanham 3m x 2.5m x 0.4m	
Date 11/08/2021 File T-MD-69521_TR_M1 (1 in ...	Designed by TR Checked by	
Micro Drainage	Source Control 2020.1.3	

Summary of Results for 30 year Return Period (+40%)

Half Drain Time : 433 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	98.756	0.156	0.0	1.1	O K
30 min Summer	98.804	0.204	0.0	1.5	O K
60 min Summer	98.853	0.253	0.1	1.8	O K
120 min Summer	98.897	0.297	0.1	2.1	O K
180 min Summer	98.916	0.316	0.1	2.2	O K
240 min Summer	98.924	0.324	0.1	2.3	O K
360 min Summer	98.928	0.328	0.1	2.3	O K
480 min Summer	98.928	0.328	0.1	2.3	O K
600 min Summer	98.926	0.326	0.1	2.3	O K
720 min Summer	98.922	0.322	0.1	2.3	O K
960 min Summer	98.913	0.313	0.1	2.2	O K
1440 min Summer	98.891	0.291	0.1	2.1	O K
2160 min Summer	98.857	0.257	0.1	1.8	O K
2880 min Summer	98.826	0.226	0.1	1.6	O K
4320 min Summer	98.773	0.173	0.0	1.2	O K
5760 min Summer	98.731	0.131	0.0	0.9	O K
7200 min Summer	98.699	0.099	0.0	0.7	O K
8640 min Summer	98.675	0.075	0.0	0.5	O K
10080 min Summer	98.659	0.059	0.0	0.4	O K
15 min Winter	98.775	0.175	0.0	1.2	O K


Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	101.754	0.0	19
30 min Summer	67.708	0.0	33
60 min Summer	43.136	0.0	62
120 min Summer	26.651	0.0	122
180 min Summer	19.868	0.0	182
240 min Summer	16.054	0.0	240
360 min Summer	11.891	0.0	322
480 min Summer	9.596	0.0	382
600 min Summer	8.121	0.0	446
720 min Summer	7.083	0.0	512
960 min Summer	5.703	0.0	652
1440 min Summer	4.198	0.0	924
2160 min Summer	3.085	0.0	1336
2880 min Summer	2.477	0.0	1728
4320 min Summer	1.816	0.0	2468
5760 min Summer	1.456	0.0	3224
7200 min Summer	1.227	0.0	3896
8640 min Summer	1.067	0.0	4584
10080 min Summer	0.948	0.0	5240
15 min Winter	101.754	0.0	18

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Summary of Results for 30 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
30 min Winter	98.830	0.230	0.1	1.6	O K
60 min Winter	98.885	0.285	0.1	2.0	O K
120 min Winter	98.936	0.336	0.1	2.4	O K
180 min Winter	98.959	0.359	0.1	2.6	O K
240 min Winter	98.971	0.371	0.1	2.6	O K
360 min Winter	98.979	0.379	0.1	2.7	O K
480 min Winter	98.976	0.376	0.1	2.7	O K
600 min Winter	98.973	0.373	0.1	2.7	O K
720 min Winter	98.968	0.368	0.1	2.6	O K
960 min Winter	98.954	0.354	0.1	2.5	O K
1440 min Winter	98.921	0.321	0.1	2.3	O K
2160 min Winter	98.869	0.269	0.1	1.9	O K
2880 min Winter	98.823	0.223	0.1	1.6	O K
4320 min Winter	98.747	0.147	0.0	1.0	O K
5760 min Winter	98.691	0.091	0.0	0.7	O K
7200 min Winter	98.656	0.056	0.0	0.4	O K
8640 min Winter	98.646	0.046	0.0	0.3	O K
10080 min Winter	98.641	0.041	0.0	0.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
30 min Winter	67.708	0.0	33
60 min Winter	43.136	0.0	62
120 min Winter	26.651	0.0	120
180 min Winter	19.868	0.0	178
240 min Winter	16.054	0.0	234
360 min Winter	11.891	0.0	344
480 min Winter	9.596	0.0	436
600 min Winter	8.121	0.0	472
720 min Winter	7.083	0.0	548
960 min Winter	5.703	0.0	704
1440 min Winter	4.198	0.0	1008
2160 min Winter	3.085	0.0	1428
2880 min Winter	2.477	0.0	1844
4320 min Winter	1.816	0.0	2596
5760 min Winter	1.456	0.0	3288
7200 min Winter	1.227	0.0	3888
8640 min Winter	1.067	0.0	4488
10080 min Winter	0.948	0.0	5152

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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 %	+40

Time Area Diagram

Total Area (ha) 0.006

Time (mins)		Area
From:	To:	(ha)
0	4	0.006

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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) 0.03636 Porosity 0.95
 Infiltration Coefficient Side (m/hr) 0.03636

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	7.5	7.5	0.500	0.0	11.9
0.400	7.5	11.9			