

T J Booth Associates		Page 1
104 Yorkshire St Rochdale Lancashire OL16 1JY	full site SW soakaway iqbal belfield lane	
Date nov 2023 File calc-tjba-iqbal-belfield lane-full site ...	Designed By ds Checked By	
Micro Drainage	Source Control W.10.4	

Summary of Results for 1 year Return Period

Half Drain Time : 94 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m ³)	Status
15 Summer	1.0	1.0	97.5698	0.0798	5.1	O K
30 Summer	1.0	1.0	97.5933	0.1033	6.6	O K
60 Summer	1.0	1.0	97.6148	0.1248	8.0	O K
120 Summer	1.0	1.0	97.6317	0.1418	9.0	O K
180 Summer	1.0	1.0	97.6392	0.1492	9.5	O K
240 Summer	1.0	1.0	97.6413	0.1512	9.6	O K
360 Summer	1.0	1.0	97.6382	0.1482	9.5	O K
480 Summer	1.0	1.0	97.6328	0.1428	9.1	O K
600 Summer	1.0	1.0	97.6258	0.1358	8.7	O K
720 Summer	1.0	1.0	97.6183	0.1283	8.2	O K
960 Summer	1.0	1.0	97.6038	0.1138	7.2	O K
1440 Summer	1.0	1.0	97.5773	0.0873	5.5	O K
2160 Summer	1.0	1.0	97.5498	0.0598	3.8	O K
2880 Summer	0.9	0.9	97.5378	0.0477	3.1	O K
4320 Summer	0.7	0.7	97.5282	0.0382	2.4	O K
5760 Summer	0.6	0.6	97.5223	0.0322	2.0	O K
7200 Summer	0.5	0.5	97.5178	0.0277	1.8	O K
8640 Summer	0.5	0.5	97.5148	0.0247	1.6	O K
10080 Summer	0.4	0.4	97.5128	0.0227	1.4	O K
15 Winter	1.0	1.0	97.5803	0.0903	5.8	O K
30 Winter	1.0	1.0	97.6073	0.1173	7.5	O K
60 Winter	1.0	1.0	97.6333	0.1433	9.1	O K
120 Winter	1.0	1.0	97.6518	0.1617	10.3	O K
180 Winter	1.0	1.0	97.6593	0.1692	10.8	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	28.17	17
30 Summer	19.18	31
60 Summer	12.80	60
120 Summer	8.41	92
180 Summer	6.56	128
240 Summer	5.47	162
360 Summer	4.21	232
480 Summer	3.50	300
600 Summer	3.03	368
720 Summer	2.70	434
960 Summer	2.25	560
1440 Summer	1.73	806
2160 Summer	1.33	1144
2880 Summer	1.11	1472
4320 Summer	0.85	2204
5760 Summer	0.71	2936
7200 Summer	0.61	3672
8640 Summer	0.54	4408
10080 Summer	0.49	5136
15 Winter	28.17	17
30 Winter	19.18	31
60 Winter	12.80	60
120 Winter	8.41	100
180 Winter	6.56	138

T J Booth Associates		Page 2
104 Yorkshire St Rochdale Lancashire OL16 1JY	full site SW soakaway iqbal belfield lane	
Date nov 2023 File calc-tjba-iqbal-belfield lane-full site ...	Designed By ds Checked By	
Micro Drainage	Source Control W.10.4	

Summary of Results for 1 year Return Period

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m ³)	Status
240 Winter	1.0	1.0	97.6593	0.1692	10.8	O K
360 Winter	1.0	1.0	97.6518	0.1617	10.3	O K
480 Winter	1.0	1.0	97.6403	0.1503	9.6	O K
600 Winter	1.0	1.0	97.6273	0.1373	8.8	O K
720 Winter	1.0	1.0	97.6143	0.1243	7.9	O K
960 Winter	1.0	1.0	97.5898	0.0998	6.4	O K
1440 Winter	1.0	1.0	97.5513	0.0613	3.9	O K
2160 Winter	0.8	0.8	97.5333	0.0432	2.8	O K
2880 Winter	0.7	0.7	97.5268	0.0367	2.3	O K
4320 Winter	0.5	0.5	97.5183	0.0282	1.8	O K
5760 Winter	0.5	0.5	97.5138	0.0237	1.5	O K
7200 Winter	0.4	0.4	97.5103	0.0202	1.3	O K
8640 Winter	0.3	0.3	97.5083	0.0183	1.1	O K
10080 Winter	0.3	0.3	97.5063	0.0163	1.0	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
240 Winter	5.47	178
360 Winter	4.21	254
480 Winter	3.50	326
600 Winter	3.03	394
720 Winter	2.70	462
960 Winter	2.25	588
1440 Winter	1.73	808
2160 Winter	1.33	1128
2880 Winter	1.11	1492
4320 Winter	0.85	2208
5760 Winter	0.71	2920
7200 Winter	0.61	3680
8640 Winter	0.54	4336
10080 Winter	0.49	5144

Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	1	Longest Storm (mins)	10080
M5-60 (mm)	20.000	Summer Storms	Yes
Ratio-R	0.300	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+0
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.108

Time	(mins)	Area
from:	to:	(ha)
0	4	0.108

Cellular Storage Details

Infil Coef - Base (m/hr) 0.100000 Porosity 0.95
Infil Coef - Sides (m/hr) 0.100000 Invert Level (m) 97.490
Safety Factor 2.0 Ground Level (m) 100.000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.00	67.1	0.50	67.1	1.00	67.1	1.50	67.1	2.00	67.1	2.50	67.1
0.10	67.1	0.60	67.1	1.10	67.1	1.60	67.1	2.10	67.1		
0.20	67.1	0.70	67.1	1.20	67.1	1.70	67.1	2.20	67.1		
0.30	67.1	0.80	67.1	1.30	67.1	1.80	67.1	2.30	67.1		
0.40	67.1	0.90	67.1	1.40	67.1	1.90	67.1	2.40	67.1		