

T J Booth Associates		Page 1
104 Yorkshire St Rochdale Lancashire OL16 1JY	SW soakaway (individual) 1leveltd aspinall st - heywood	
Date jul 2023 File calc-tjba-1leveltd-aspinall st-soaka...	Designed By ds Checked By	
Micro Drainage	Source Control W.10.4	

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

Half Drain Time : 196 minutes

Storm Duration (mins)	Maximum Filtration (1/s)	Maximum Outflow (1/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m ³)	Status
15 Summer	0.1	0.1	112.7542	0.4842	1.7	O K
30 Summer	0.2	0.2	112.9118	0.6418	2.3	O K
60 Summer	0.2	0.2	113.0633	0.7933	2.8	O K
120 Summer	0.2	0.2	113.1728	0.9028	3.2	O K
180 Summer	0.2	0.2	113.2038	0.9338	3.3	O K
240 Summer	0.2	0.2	113.2168	0.9468	3.4	O K
360 Summer	0.2	0.2	113.2203	0.9503	3.4	O K
480 Summer	0.2	0.2	113.2058	0.9358	3.3	O K
600 Summer	0.2	0.2	113.1848	0.9148	3.2	O K
720 Summer	0.2	0.2	113.1618	0.8918	3.2	O K
960 Summer	0.2	0.2	113.1138	0.8438	3.0	O K
1440 Summer	0.2	0.2	113.0223	0.7523	2.7	O K
2160 Summer	0.1	0.1	112.9023	0.6323	2.2	O K
2880 Summer	0.1	0.1	112.8032	0.5332	1.9	O K
4320 Summer	0.1	0.1	112.6527	0.3827	1.4	O K
5760 Summer	0.1	0.1	112.5457	0.2757	1.0	O K
7200 Summer	0.1	0.1	112.4672	0.1972	0.7	O K
8640 Summer	0.1	0.1	112.4082	0.1383	0.5	O K
10080 Summer	0.1	0.1	112.3633	0.0933	0.3	O K
15 Winter	0.1	0.1	112.8147	0.5447	1.9	O K
30 Winter	0.2	0.2	112.9938	0.7238	2.6	O K
60 Winter	0.2	0.2	113.1688	0.8988	3.2	O K
120 Winter	0.2	0.2	113.3038	1.0338	3.7	O K
180 Winter	0.2	0.2	113.3388	1.0688	3.8	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	68.99	18
30 Summer	47.08	33
60 Summer	30.81	62
120 Summer	19.53	120
180 Summer	14.75	150
240 Summer	12.05	182
360 Summer	9.05	250
480 Summer	7.38	320
600 Summer	6.29	388
720 Summer	5.52	458
960 Summer	4.49	596
1440 Summer	3.35	864
2160 Summer	2.49	1252
2880 Summer	2.02	1616
4320 Summer	1.50	2376
5760 Summer	1.21	3104
7200 Summer	1.03	3816
8640 Summer	0.90	4496
10080 Summer	0.81	5240
15 Winter	68.99	18
30 Winter	47.08	32
60 Winter	30.81	60
120 Winter	19.53	116
180 Winter	14.75	168

T J Booth Associates		Page 2
104 Yorkshire St Rochdale Lancashire OL16 1JY	SW soakaway (individual) 1leveltd aspinall st - heywood	
Date jul 2023 File calc-tjba-1leveltd-aspinall st-soaka...	Designed By ds Checked By	
Micro Drainage	Source Control W.10.4	

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

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	0.2	0.2	113.3518	1.0818	3.8	O K
360 Winter	0.2	0.2	113.3498	1.0798	3.8	O K
480 Winter	0.2	0.2	113.3238	1.0538	3.7	O K
600 Winter	0.2	0.2	113.2878	1.0178	3.6	O K
720 Winter	0.2	0.2	113.2488	0.9788	3.5	O K
960 Winter	0.2	0.2	113.1718	0.9018	3.2	O K
1440 Winter	0.2	0.2	113.0328	0.7628	2.7	O K
2160 Winter	0.1	0.1	112.8633	0.5933	2.1	O K
2880 Winter	0.1	0.1	112.7322	0.4622	1.6	O K
4320 Winter	0.1	0.1	112.5477	0.2777	1.0	O K
5760 Winter	0.1	0.1	112.4262	0.1563	0.6	O K
7200 Winter	0.1	0.1	112.3452	0.0753	0.3	O K
8640 Winter	0.1	0.1	112.3172	0.0472	0.2	O K
10080 Winter	0.1	0.1	112.3122	0.0422	0.1	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
240 Winter	12.05	190
360 Winter	9.05	268
480 Winter	7.38	344
600 Winter	6.29	418
720 Winter	5.52	492
960 Winter	4.49	636
1440 Winter	3.35	910
2160 Winter	2.49	1300
2880 Winter	2.02	1700
4320 Winter	1.50	2424
5760 Winter	1.21	3168
7200 Winter	1.03	3816
8640 Winter	0.90	4408
10080 Winter	0.81	5136

Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	30	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 %	+40
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.010

Time	(mins)	Area
from:	to:	(ha)
0	4	0.010

T J Booth Associates		Page 4
104 Yorkshire St Rochdale Lancashire OL16 1JY	SW soakaway (individual) 1leveltd aspinall st - heywood	
Date jul 2023 File calc-tjba-1leveltd-aspinall st-soaka...	Designed By ds Checked By	
Micro Drainage	Source Control W.10.4	

Lined Soakaway Details

Infil Coef - Base (m/hr)	0.091000	Pit Multiplier	2.0
Infil Coef - Sides (m/hr)	0.091000	Number Required	1
Safety Factor	2.0	Invert Level (m)	112.270
Porosity	0.52	Cover Level (m)	113.850
Ring Diameter (m)	1.2		