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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 100 year Return Period (+45%)

Half Drain Time : 214 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	0.2	0.2	112.9242	0.6543	2.3	O K
30 Summer	0.2	0.2	113.1493	0.8793	3.1	O K
60 Summer	0.2	0.2	113.3718	1.1018	3.9	O K
120 Summer	0.2	0.2	113.5382	1.2683	4.5	O K
180 Summer	0.2	0.2	113.5797	1.3097	4.6	O K
240 Summer	0.2	0.2	113.5972	1.3272	4.7	O K
360 Summer	0.2	0.2	113.6042	1.3342	4.7	O K
480 Summer	0.2	0.2	113.5872	1.3172	4.7	O K
600 Summer	0.2	0.2	113.5592	1.2892	4.6	O K
720 Summer	0.2	0.2	113.5267	1.2568	4.4	O K
960 Summer	0.2	0.2	113.4593	1.1893	4.2	O K
1440 Summer	0.2	0.2	113.3353	1.0653	3.8	O K
2160 Summer	0.2	0.2	113.1773	0.9073	3.2	O K
2880 Summer	0.2	0.2	113.0478	0.7778	2.8	O K
4320 Summer	0.1	0.1	112.8542	0.5843	2.1	O K
5760 Summer	0.1	0.1	112.7162	0.4462	1.6	O K
7200 Summer	0.1	0.1	112.6122	0.3422	1.2	O K
8640 Summer	0.1	0.1	112.5312	0.2612	0.9	O K
10080 Summer	0.1	0.1	112.4677	0.1977	0.7	O K
15 Winter	0.2	0.2	113.0053	0.7353	2.6	O K
30 Winter	0.2	0.2	113.2608	0.9908	3.5	O K
60 Winter	0.2	0.2	113.5153	1.2453	4.4	O K
120 Winter	0.2	0.2	113.7157	1.4457	5.1	FLOOD RISK
180 Winter	0.3	0.3	113.7682	1.4982	5.3	FLOOD RISK

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	89.23	18
30 Summer	61.54	33
60 Summer	40.51	62
120 Summer	25.63	120
180 Summer	19.23	156
240 Summer	15.63	188
360 Summer	11.65	254
480 Summer	9.44	324
600 Summer	8.01	392
720 Summer	7.00	462
960 Summer	5.65	598
1440 Summer	4.17	866
2160 Summer	3.07	1256
2880 Summer	2.46	1640
4320 Summer	1.81	2376
5760 Summer	1.45	3112
7200 Summer	1.23	3824
8640 Summer	1.07	4576
10080 Summer	0.95	5248
15 Winter	89.23	18
30 Winter	61.54	32
60 Winter	40.51	60
120 Winter	25.63	118
180 Winter	19.23	170

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Summary of Results for 100 year Return Period (+45%)

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	0.3	0.3	113.7817	1.5117	5.3	FLOOD RISK
360 Winter	0.3	0.3	113.7837	1.5137	5.4	FLOOD RISK
480 Winter	0.3	0.3	113.7527	1.4827	5.2	FLOOD RISK
600 Winter	0.2	0.2	113.7082	1.4382	5.1	FLOOD RISK
720 Winter	0.2	0.2	113.6577	1.3877	4.9	FLOOD RISK
960 Winter	0.2	0.2	113.5527	1.2828	4.5	O K
1440 Winter	0.2	0.2	113.3683	1.0983	3.9	O K
2160 Winter	0.2	0.2	113.1483	0.8783	3.1	O K
2880 Winter	0.2	0.2	112.9788	0.7088	2.5	O K
4320 Winter	0.1	0.1	112.7397	0.4697	1.7	O K
5760 Winter	0.1	0.1	112.5807	0.3107	1.1	O K
7200 Winter	0.1	0.1	112.4682	0.1982	0.7	O K
8640 Winter	0.1	0.1	112.3862	0.1163	0.4	O K
10080 Winter	0.1	0.1	112.3292	0.0592	0.2	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
240 Winter	15.63	194
360 Winter	11.65	270
480 Winter	9.44	348
600 Winter	8.01	422
720 Winter	7.00	498
960 Winter	5.65	642
1440 Winter	4.17	922
2160 Winter	3.07	1320
2880 Winter	2.46	1704
4320 Winter	1.81	2464
5760 Winter	1.45	3176
7200 Winter	1.23	3896
8640 Winter	1.07	4584
10080 Winter	0.95	5240

Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	100	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 %	+45
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.010

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

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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		