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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 1 year Return Period

Half Drain Time : 84 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	0.1	0.1	112.4022	0.1323	0.5	O K
30 Summer	0.1	0.1	112.4397	0.1697	0.6	O K
60 Summer	0.1	0.1	112.4722	0.2022	0.7	O K
120 Summer	0.1	0.1	112.4967	0.2267	0.8	O K
180 Summer	0.1	0.1	112.5057	0.2357	0.8	O K
240 Summer	0.1	0.1	112.5067	0.2367	0.8	O K
360 Summer	0.1	0.1	112.5002	0.2302	0.8	O K
480 Summer	0.1	0.1	112.4897	0.2197	0.8	O K
600 Summer	0.1	0.1	112.4787	0.2087	0.7	O K
720 Summer	0.1	0.1	112.4667	0.1967	0.7	O K
960 Summer	0.1	0.1	112.4442	0.1742	0.6	O K
1440 Summer	0.1	0.1	112.4032	0.1333	0.5	O K
2160 Summer	0.1	0.1	112.3587	0.0888	0.3	O K
2880 Summer	0.1	0.1	112.3307	0.0608	0.2	O K
4320 Summer	0.1	0.1	112.3137	0.0437	0.2	O K
5760 Summer	0.1	0.1	112.3062	0.0362	0.1	O K
7200 Summer	0.1	0.1	112.3018	0.0317	0.1	O K
8640 Summer	0.0	0.0	112.2982	0.0282	0.1	O K
10080 Summer	0.0	0.0	112.2952	0.0252	0.1	O K
15 Winter	0.1	0.1	112.4197	0.1497	0.5	O K
30 Winter	0.1	0.1	112.4627	0.1927	0.7	O K
60 Winter	0.1	0.1	112.5022	0.2322	0.8	O K
120 Winter	0.1	0.1	112.5287	0.2587	0.9	O K
180 Winter	0.1	0.1	112.5367	0.2667	0.9	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	56
120 Summer	8.41	90
180 Summer	6.56	124
240 Summer	5.47	160
360 Summer	4.21	230
480 Summer	3.50	298
600 Summer	3.03	364
720 Summer	2.70	428
960 Summer	2.25	558
1440 Summer	1.73	806
2160 Summer	1.33	1152
2880 Summer	1.11	1500
4320 Summer	0.85	2204
5760 Summer	0.71	2936
7200 Summer	0.61	3664
8640 Summer	0.54	4384
10080 Summer	0.49	5032
15 Winter	28.17	17
30 Winter	19.18	31
60 Winter	12.80	58
120 Winter	8.41	96
180 Winter	6.56	134

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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	0.1	0.1	112.5347	0.2647	0.9	O K
360 Winter	0.1	0.1	112.5192	0.2492	0.9	O K
480 Winter	0.1	0.1	112.4997	0.2297	0.8	O K
600 Winter	0.1	0.1	112.4797	0.2097	0.7	O K
720 Winter	0.1	0.1	112.4602	0.1902	0.7	O K
960 Winter	0.1	0.1	112.4242	0.1543	0.5	O K
1440 Winter	0.1	0.1	112.3652	0.0953	0.3	O K
2160 Winter	0.1	0.1	112.3192	0.0493	0.2	O K
2880 Winter	0.1	0.1	112.3112	0.0412	0.1	O K
4320 Winter	0.1	0.1	112.3018	0.0317	0.1	O K
5760 Winter	0.0	0.0	112.2962	0.0262	0.1	O K
7200 Winter	0.0	0.0	112.2927	0.0227	0.1	O K
8640 Winter	0.0	0.0	112.2902	0.0202	0.1	O K
10080 Winter	0.0	0.0	112.2882	0.0183	0.1	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
240 Winter	5.47	174
360 Winter	4.21	248
480 Winter	3.50	320
600 Winter	3.03	388
720 Winter	2.70	456
960 Winter	2.25	586
1440 Winter	1.73	824
2160 Winter	1.33	1108
2880 Winter	1.11	1472
4320 Winter	0.85	2204
5760 Winter	0.71	2944
7200 Winter	0.61	3672
8640 Winter	0.54	4472
10080 Winter	0.49	5128

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) = 0.010

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		