

Summary of Results for 100 year Return Period (+30%)

Half Drain Time : 690 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	38.250	0.250	0.3	9.0	O K
30 min Summer	38.338	0.338	0.3	12.2	O K
60 min Summer	38.432	0.432	0.3	15.6	O K
120 min Summer	38.525	0.525	0.3	19.0	O K
180 min Summer	38.571	0.571	0.3	20.6	O K
240 min Summer	38.595	0.595	0.3	21.5	O K
360 min Summer	38.621	0.621	0.3	22.4	O K
480 min Summer	38.629	0.629	0.3	22.7	O K
600 min Summer	38.628	0.628	0.3	22.7	O K
720 min Summer	38.625	0.625	0.3	22.6	O K
960 min Summer	38.615	0.615	0.3	22.2	O K
1440 min Summer	38.589	0.589	0.3	21.3	O K
2160 min Summer	38.545	0.545	0.3	19.7	O K
2880 min Summer	38.502	0.502	0.3	18.1	O K
4320 min Summer	38.421	0.421	0.3	15.2	O K
5760 min Summer	38.349	0.349	0.3	12.6	O K
7200 min Summer	38.287	0.287	0.3	10.4	O K
8640 min Summer	38.234	0.234	0.3	8.5	O K
10080 min Summer	38.189	0.189	0.3	6.8	O K
15 min Winter	38.281	0.281	0.3	10.1	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	112.032	0.0	19
30 min Summer	76.515	0.0	34
60 min Summer	49.937	0.0	64
120 min Summer	31.438	0.0	122
180 min Summer	23.589	0.0	182
240 min Summer	19.078	0.0	242
360 min Summer	14.159	0.0	360
480 min Summer	11.440	0.0	480
600 min Summer	9.687	0.0	536
720 min Summer	8.450	0.0	598
960 min Summer	6.805	0.0	722
1440 min Summer	5.004	0.0	994
2160 min Summer	3.670	0.0	1408
2880 min Summer	2.941	0.0	1816
4320 min Summer	2.148	0.0	2596
5760 min Summer	1.718	0.0	3400
7200 min Summer	1.446	0.0	4112
8640 min Summer	1.256	0.0	4848
10080 min Summer	1.116	0.0	5552
15 min Winter	112.032	0.0	19

Alexander House
 Excelsior Road
 Cardiff CF14 3AT



Date 03/01/2017 12:07

Designed by SJones

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Micro Drainage

Source Control 2014.1.1

Summary of Results for 100 year Return Period (+30%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
30 min Winter	38.380	0.380	0.3	13.7	O K
60 min Winter	38.487	0.487	0.3	17.6	O K
120 min Winter	38.593	0.593	0.3	21.4	O K
180 min Winter	38.648	0.648	0.3	23.4	O K
240 min Winter	38.678	0.678	0.3	24.5	O K
360 min Winter	38.713	0.713	0.3	25.7	O K
480 min Winter	38.728	0.728	0.3	26.3	O K
600 min Winter	38.730	0.730	0.3	26.4	O K
720 min Winter	38.726	0.726	0.3	26.2	O K
960 min Winter	38.712	0.712	0.3	25.7	O K
1440 min Winter	38.677	0.677	0.3	24.4	O K
2160 min Winter	38.612	0.612	0.3	22.1	O K
2880 min Winter	38.546	0.546	0.3	19.7	O K
4320 min Winter	38.424	0.424	0.3	15.3	O K
5760 min Winter	38.319	0.319	0.3	11.5	O K
7200 min Winter	38.233	0.233	0.3	8.4	O K
8640 min Winter	38.161	0.161	0.3	5.8	O K
10080 min Winter	38.105	0.105	0.3	3.8	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
30 min Winter	76.515	0.0	33
60 min Winter	49.937	0.0	62
120 min Winter	31.438	0.0	120
180 min Winter	23.589	0.0	180
240 min Winter	19.078	0.0	238
360 min Winter	14.159	0.0	352
480 min Winter	11.440	0.0	462
600 min Winter	9.687	0.0	572
720 min Winter	8.450	0.0	672
960 min Winter	6.805	0.0	762
1440 min Winter	5.004	0.0	1068
2160 min Winter	3.670	0.0	1532
2880 min Winter	2.941	0.0	1964
4320 min Winter	2.148	0.0	2808
5760 min Winter	1.718	0.0	3576
7200 min Winter	1.446	0.0	4328
8640 min Winter	1.256	0.0	5016
10080 min Winter	1.116	0.0	5648

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.319	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+30

Time Area Diagram

Total Area (ha) 0.044

Time (mins)		Area
From:	To:	(ha)
0	4	0.044

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Model Details

Storage is Online Cover Level (m) 39.600

Cellular Storage Structure

Invert Level (m) 38.000 Safety Factor 2.0
 Infiltration Coefficient Base (m/hr) 0.04460 Porosity 0.95
 Infiltration Coefficient Side (m/hr) 0.04446

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	38.0	38.0	0.801	0.0	57.7
0.800	38.0	57.7			