Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 90 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	99.210	0.210	0.5	2.9	O K
30 min Summer	99.265	0.265	0.5	3.7	O K
60 min Summer	99.303	0.303	0.5	4.3	O K
120 min Summer	99.311	0.311	0.5	4.4	O K
180 min Summer	99.301	0.301	0.5	4.3	O K
240 min Summer	99.286	0.286	0.5	4.1	O K
360 min Summer	99.257	0.257	0.5	3.6	O K
480 min Summer	99.227	0.227	0.5	3.2	O K
600 min Summer	99.198	0.198	0.5	2.8	O K
720 min Summer	99.172	0.172	0.5	2.4	O K
960 min Summer	99.127	0.127	0.5	1.7	O K
1440 min Summer	99.068	0.068	0.5	0.8	O K
2160 min Summer	99.043	0.043	0.4	0.5	O K
2880 min Summer	99.035	0.035	0.3	0.4	O K
4320 min Summer	99.026	0.026	0.3	0.2	O K
5760 min Summer	99.021	0.021	0.2	0.2	O K
7200 min Summer	99.019	0.019	0.2	0.1	O K
8640 min Summer	99.018	0.018	0.2	0.1	O K
10080 min Summer	99.017	0.017	0.1	0.1	O K
15 min Winter	99.237	0.237	0.5	3.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
15 min Summer	127.204	0.0	17
30 min Summer	85.821	0.0	32
60 min Summer	55.250	0.0	60
120 min Summer	34.307	0.0	96
180 min Summer	25.552	0.0	128
240 min Summer	20.570	0.0	162
360 min Summer	15.173	0.0	230
480 min Summer	12.206	0.0	296
600 min Summer	10.302	0.0	362
720 min Summer	8.963	0.0	424
960 min Summer	7.189	0.0	540
1440 min Summer	5.257	0.0	764
2160 min Summer	3.836	0.0	1104
2880 min Summer	3.063	0.0	1468
4320 min Summer	2.226	0.0	2204
5760 min Summer	1.773	0.0	2904
7200 min Summer	1.487	0.0	3664
8640 min Summer	1.289	0.0	4352
10080 min Summer	1.142	0.0	5032
15 min Winter	127.204	0.0	17

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	99.301	0.301	0.5	4.3	O K
60 min Winter	99.350	0.350	0.5	5.0	O K
120 min Winter	99.361	0.361	0.5	5.2	O K
180 min Winter	99.347	0.347	0.5	5.0	O K
240 min Winter	99.325	0.325	0.5	4.6	O K
360 min Winter	99.278	0.278	0.5	3.9	O K
480 min Winter	99.230	0.230	0.5	3.2	O K
600 min Winter	99.186	0.186	0.5	2.6	O K
720 min Winter	99.146	0.146	0.5	2.0	O K
960 min Winter	99.083	0.083	0.5	1.1	O K
1440 min Winter	99.044	0.044	0.4	0.5	O K
2160 min Winter	99.032	0.032	0.3	0.3	O K
2880 min Winter	99.026	0.026	0.3	0.2	O K
4320 min Winter	99.020	0.020	0.2	0.1	O K
5760 min Winter	99.017	0.017	0.1	0.1	O K
7200 min Winter	99.016	0.016	0.1	0.1	O K
8640 min Winter	99.015	0.015	0.1	0.1	O K
10080 min Winter	99.014	0.014	0.1	0.1	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	85.821	0.0	31
60 min Winter	55.250	0.0	60
120 min Winter	34.307	0.0	116
180 min Winter	25.552	0.0	138
240 min Winter	20.570	0.0	178
360 min Winter	15.173	0.0	250
480 min Winter	12.206	0.0	320
600 min Winter	10.302	0.0	386
720 min Winter	8.963	0.0	446
960 min Winter	7.189	0.0	550
1440 min Winter	5.257	0.0	738
2160 min Winter	3.836	0.0	1100
2880 min Winter	3.063	0.0	1468
4320 min Winter	2.226	0.0	2208
5760 min Winter	1.773	0.0	2936
7200 min Winter	1.487	0.0	3680
8640 min Winter	1.289	0.0	4400
10080 min Winter	1.142	0.0	5208

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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)	19.500	Shortest Storm (mins)	15
Ratio R	0.342	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.014

Time (mins) From:	To:	Area (ha)
0	4	0.014

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Model Details

Storage is Online Cover Level (m) 100.000

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.07200	Width (m)	4.9
Membrane Percolation (mm/hr)	1000	Length (m)	10.0
Max Percolation (l/s)	13.6	Slope (1:X)	500.0
Safety Factor	2.0	Depression Storage (mm)	0
Porosity	0.30	Evaporation (mm/day)	0
Invert Level (m)	99.000	Cap Volume Depth (m)	0.500

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