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

Half Drain Time : 66 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	5.640	0.170	5.9	26.2	O K
30 min Summer	5.690	0.220	5.9	33.9	O K
60 min Summer	5.721	0.251	5.9	38.8	Flood Risk
120 min Summer	5.730	0.260	5.9	40.2	Flood Risk
180 min Summer	5.720	0.250	5.9	38.6	Flood Risk
240 min Summer	5.704	0.234	5.9	36.1	Flood Risk
360 min Summer	5.669	0.199	5.9	30.8	O K
480 min Summer	5.638	0.168	5.9	25.9	O K
600 min Summer	5.609	0.139	5.9	21.5	O K
720 min Summer	5.584	0.114	5.9	17.7	O K
960 min Summer	5.547	0.077	5.9	11.9	O K
1440 min Summer	5.517	0.047	5.5	7.2	O K
2160 min Summer	5.505	0.035	4.1	5.4	O K
2880 min Summer	5.498	0.028	3.3	4.3	O K
4320 min Summer	5.491	0.021	2.4	3.2	O K
5760 min Summer	5.487	0.017	2.0	2.6	O K
7200 min Summer	5.484	0.014	1.6	2.1	O K
8640 min Summer	5.482	0.012	1.4	1.9	O K
10080 min Summer	5.481	0.011	1.3	1.6	O K
15 min Winter	5.664	0.194	5.9	30.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
15 min Summer	124.633	0.0	17
30 min Summer	83.789	0.0	31
60 min Summer	53.779	0.0	56
120 min Summer	33.337	0.0	88
180 min Summer	24.832	0.0	122
240 min Summer	20.006	0.0	156
360 min Summer	14.706	0.0	224
480 min Summer	11.818	0.0	288
600 min Summer	9.966	0.0	348
720 min Summer	8.665	0.0	406
960 min Summer	6.943	0.0	520
1440 min Summer	5.071	0.0	736
2160 min Summer	3.696	0.0	1100
2880 min Summer	2.949	0.0	1468
4320 min Summer	2.142	0.0	2172
5760 min Summer	1.705	0.0	2928
7200 min Summer	1.427	0.0	3600
8640 min Summer	1.235	0.0	4400
10080 min Summer	1.093	0.0	5104
15 min Winter	124.633	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	5.722	0.252	5.9	38.9	Flood Risk
60 min Winter	5.762	0.292	5.9	45.2	Flood Risk
120 min Winter	5.769	0.299	5.9	46.1	Flood Risk
180 min Winter	5.752	0.282	5.9	43.6	Flood Risk
240 min Winter	5.727	0.257	5.9	39.7	Flood Risk
360 min Winter	5.673	0.203	5.9	31.4	O K
480 min Winter	5.624	0.154	5.9	23.7	O K
600 min Winter	5.581	0.111	5.9	17.2	O K
720 min Winter	5.548	0.078	5.9	12.0	O K
960 min Winter	5.518	0.048	5.6	7.3	O K
1440 min Winter	5.505	0.035	4.1	5.4	O K
2160 min Winter	5.496	0.026	3.0	3.9	O K
2880 min Winter	5.491	0.021	2.4	3.2	O K
4320 min Winter	5.485	0.015	1.8	2.3	O K
5760 min Winter	5.482	0.012	1.4	1.8	O K
7200 min Winter	5.480	0.010	1.2	1.5	O K
8640 min Winter	5.479	0.009	1.0	1.3	O K
10080 min Winter	5.478	0.008	0.9	1.2	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	83.789	0.0	31
60 min Winter	53.779	0.0	58
120 min Winter	33.337	0.0	94
180 min Winter	24.832	0.0	134
240 min Winter	20.006	0.0	170
360 min Winter	14.706	0.0	240
480 min Winter	11.818	0.0	304
600 min Winter	9.966	0.0	362
720 min Winter	8.665	0.0	414
960 min Winter	6.943	0.0	500
1440 min Winter	5.071	0.0	736
2160 min Winter	3.696	0.0	1100
2880 min Winter	2.949	0.0	1496
4320 min Winter	2.142	0.0	2200
5760 min Winter	1.705	0.0	2936
7200 min Winter	1.427	0.0	3648
8640 min Winter	1.235	0.0	4328
10080 min Winter	1.093	0.0	5168

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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	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.140

Time (mins) From:	To:	Area (ha)
0	4	0.140

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Model Details

Storage is Online Cover Level (m) 6.000

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.12348
Membrane Percolation (mm/hr)	1000
Max Percolation (l/s)	143.0
Safety Factor	3.0
Porosity	0.30
Invert Level (m)	5.470
Width (m)	22.0
Length (m)	23.4
Slope (1:X)	0.0
Depression Storage (mm)	5
Evaporation (mm/day)	3
Membrane Depth (m)	0

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