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

Half Drain Time : 320 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	4.000	0.150	1.1	16.3	O K
30 min Summer	4.056	0.206	1.1	22.2	O K
60 min Summer	4.110	0.260	1.1	28.1	O K
120 min Summer	4.157	0.307	1.1	33.1	O K
180 min Summer	4.174	0.324	1.1	35.0	O K
240 min Summer	4.178	0.328	1.1	35.4	O K
360 min Summer	4.175	0.325	1.1	35.1	O K
480 min Summer	4.169	0.319	1.1	34.4	O K
600 min Summer	4.161	0.311	1.1	33.6	O K
720 min Summer	4.152	0.302	1.1	32.6	O K
960 min Summer	4.132	0.282	1.1	30.5	O K
1440 min Summer	4.092	0.242	1.1	26.2	O K
2160 min Summer	4.037	0.187	1.1	20.2	O K
2880 min Summer	3.991	0.141	1.1	15.3	O K
4320 min Summer	3.927	0.077	1.1	8.4	O K
5760 min Summer	3.900	0.050	1.1	5.4	O K
7200 min Summer	3.892	0.042	0.9	4.6	O K
8640 min Summer	3.887	0.037	0.8	4.0	O K
10080 min Summer	3.883	0.033	0.7	3.5	O K
15 min Winter	4.022	0.172	1.1	18.5	O K
30 min Winter	4.084	0.234	1.1	25.2	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
15 min Summer	115.731	0.0	25
30 min Summer	77.804	0.0	38
60 min Summer	49.937	0.0	68
120 min Summer	30.956	0.0	126
180 min Summer	23.058	0.0	182
240 min Summer	18.577	0.0	240
360 min Summer	13.656	0.0	300
480 min Summer	10.974	0.0	362
600 min Summer	9.254	0.0	428
720 min Summer	8.046	0.0	496
960 min Summer	6.447	0.0	632
1440 min Summer	4.709	0.0	900
2160 min Summer	3.432	0.0	1284
2880 min Summer	2.739	0.0	1648
4320 min Summer	1.989	0.0	2332
5760 min Summer	1.583	0.0	2944
7200 min Summer	1.325	0.0	3672
8640 min Summer	1.147	0.0	4408
10080 min Summer	1.015	0.0	5144
15 min Winter	115.731	0.0	25
30 min Winter	77.804	0.0	39

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

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
60 min Winter	4.146	0.296	1.1	32.0	O K
120 min Winter	4.201	0.351	1.1	37.9	O K
180 min Winter	4.223	0.373	1.1	40.3	O K
240 min Winter	4.231	0.381	1.1	41.1	O K
360 min Winter	4.228	0.378	1.1	40.9	O K
480 min Winter	4.219	0.369	1.1	39.8	O K
600 min Winter	4.208	0.358	1.1	38.6	O K
720 min Winter	4.195	0.345	1.1	37.2	O K
960 min Winter	4.165	0.315	1.1	34.0	O K
1440 min Winter	4.103	0.253	1.1	27.4	O K
2160 min Winter	4.019	0.169	1.1	18.3	O K
2880 min Winter	3.953	0.103	1.1	11.1	O K
4320 min Winter	3.897	0.047	1.0	5.0	O K
5760 min Winter	3.887	0.037	0.8	4.0	O K
7200 min Winter	3.881	0.031	0.7	3.4	O K
8640 min Winter	3.877	0.027	0.6	2.9	O K
10080 min Winter	3.874	0.024	0.5	2.6	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
60 min Winter	49.937	0.0	66
120 min Winter	30.956	0.0	124
180 min Winter	23.058	0.0	180
240 min Winter	18.577	0.0	236
360 min Winter	13.656	0.0	342
480 min Winter	10.974	0.0	388
600 min Winter	9.254	0.0	464
720 min Winter	8.046	0.0	540
960 min Winter	6.447	0.0	690
1440 min Winter	4.709	0.0	974
2160 min Winter	3.432	0.0	1364
2880 min Winter	2.739	0.0	1704
4320 min Winter	1.989	0.0	2248
5760 min Winter	1.583	0.0	2944
7200 min Winter	1.325	0.0	3672
8640 min Winter	1.147	0.0	4416
10080 min Winter	1.015	0.0	5144

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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 %	+30

Time Area Diagram

Total Area (ha) 0.088

Time From:	(mins) To:	Area (ha)	Time From:	(mins) To:	Area (ha)	Time From:	(mins) To:	Area (ha)
0	4	0.026	4	8	0.040	8	12	0.022

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Model Details

Storage is Online Cover Level (m) 4.300

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.02160	Width (m)	6.0
Membrane Percolation (mm/hr)	1000	Length (m)	60.0
Max Percolation (l/s)	100.0	Slope (1:X)	0.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	3.850	Membrane Depth (m)	0

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