

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

Half Drain Time : 6 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	11.881	0.160	15.8	7.3	O K
30 min Summer	11.894	0.173	17.1	8.7	O K
60 min Summer	11.890	0.169	16.7	8.2	O K
120 min Summer	11.868	0.147	14.5	6.2	O K
180 min Summer	11.849	0.128	12.6	4.7	O K
240 min Summer	11.833	0.112	11.1	3.6	O K
360 min Summer	11.811	0.090	8.9	2.3	O K
480 min Summer	11.796	0.075	7.4	1.6	O K
600 min Summer	11.786	0.065	6.4	1.2	O K
720 min Summer	11.778	0.057	5.6	0.9	O K
960 min Summer	11.770	0.049	4.7	0.7	O K
1440 min Summer	11.763	0.042	3.4	0.5	O K
2160 min Summer	11.757	0.036	2.5	0.4	O K
2880 min Summer	11.753	0.032	2.0	0.3	O K
4320 min Summer	11.748	0.027	1.5	0.2	O K
5760 min Summer	11.745	0.024	1.2	0.2	O K
7200 min Summer	11.743	0.022	1.0	0.1	O K
8640 min Summer	11.742	0.021	0.8	0.1	O K
10080 min Summer	11.740	0.019	0.7	0.1	O K
15 min Winter	11.892	0.171	16.9	8.5	O K
30 min Winter	11.905	0.184	17.3	9.8	O K
60 min Winter	11.891	0.170	16.8	8.3	O K
120 min Winter	11.857	0.136	13.4	5.4	O K
180 min Winter	11.832	0.111	11.0	3.6	O K
240 min Winter	11.814	0.093	9.2	2.5	O K
360 min Winter	11.792	0.071	7.0	1.4	O K
480 min Winter	11.778	0.057	5.6	0.9	O K
600 min Winter	11.770	0.049	4.8	0.7	O K
720 min Winter	11.767	0.046	4.2	0.6	O K
960 min Winter	11.762	0.041	3.4	0.5	O K
1440 min Winter	11.756	0.035	2.5	0.4	O K
2160 min Winter	11.751	0.030	1.8	0.3	O K
2880 min Winter	11.748	0.027	1.5	0.2	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
15 min Summer	117.683	0.0	19
30 min Summer	79.091	0.0	27
60 min Summer	50.812	0.0	42
120 min Summer	31.590	0.0	72
180 min Summer	23.602	0.0	102
240 min Summer	19.071	0.0	132
360 min Summer	14.006	0.0	192
480 min Summer	11.257	0.0	252
600 min Summer	9.495	0.0	312
720 min Summer	8.257	0.0	370
960 min Summer	6.618	0.0	488
1440 min Summer	4.836	0.0	736
2160 min Summer	3.526	0.0	1076
2880 min Summer	2.815	0.0	1460
4320 min Summer	2.045	0.0	2160
5760 min Summer	1.629	0.0	2856
7200 min Summer	1.364	0.0	3656
8640 min Summer	1.179	0.0	4400
10080 min Summer	1.043	0.0	4984
15 min Winter	117.683	0.0	19
30 min Winter	79.091	0.0	28
60 min Winter	50.812	0.0	44
120 min Winter	31.590	0.0	74
180 min Winter	23.602	0.0	104
240 min Winter	19.071	0.0	134
360 min Winter	14.006	0.0	192
480 min Winter	11.257	0.0	250
600 min Winter	9.495	0.0	310
720 min Winter	8.257	0.0	362
960 min Winter	6.618	0.0	484
1440 min Winter	4.836	0.0	726
2160 min Winter	3.526	0.0	1100
2880 min Winter	2.815	0.0	1428

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
4320 min Winter	11.744	0.023	1.1	0.2	O K
5760 min Winter	11.742	0.021	0.8	0.1	O K
7200 min Winter	11.740	0.019	0.7	0.1	O K
8640 min Winter	11.739	0.018	0.6	0.1	O K
10080 min Winter	11.738	0.017	0.6	0.1	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
4320 min Winter	2.045	0.0	2156
5760 min Winter	1.629	0.0	2808
7200 min Winter	1.364	0.0	3656
8640 min Winter	1.179	0.0	4392
10080 min Winter	1.043	0.0	5136

Rainfall Details

Rainfall Model FSR Ratio R 0.352 Cv (Winter) 0.840
Return Period (years) 100 Summer Storms Yes Shortest Storm (mins) 15
Region England and Wales Winter Storms Yes Longest Storm (mins) 10080
M5-60 (mm) 18.000 Cv (Summer) 0.750 Climate Change % +40

Time Area Diagram

Total Area (ha) 0.086

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)	From: To:	(ha)
0 4	0.029	4 8	0.029	8 12	0.029

Model Details

Storage is Online Cover Level (m) 12.600

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.37008	Porosity	0.30	Slope (1:X)	400.0
Membrane Percolation (mm/hr)	1000	Invert Level (m)	11.721	Depression Storage (mm)	5
Max Percolation (l/s)	93.3	Width (m)	4.8	Evaporation (mm/day)	3
Safety Factor	2.0	Length (m)	70.0	Membrane Depth (m)	0