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

Half Drain Time : 12 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	5.709	0.239	23.5	18.8	Flood Risk
30 min Summer	5.726	0.256	23.5	21.5	Flood Risk
60 min Summer	5.719	0.249	23.5	20.3	Flood Risk
120 min Summer	5.689	0.219	22.1	15.9	O K
180 min Summer	5.664	0.194	19.5	12.4	O K
240 min Summer	5.643	0.173	17.4	9.9	O K
360 min Summer	5.613	0.143	14.4	6.7	O K
480 min Summer	5.592	0.122	12.2	4.9	O K
600 min Summer	5.576	0.106	10.7	3.7	O K
720 min Summer	5.564	0.094	9.5	2.9	O K
960 min Summer	5.548	0.078	7.8	2.0	O K
1440 min Summer	5.527	0.057	5.8	1.1	O K
2160 min Summer	5.516	0.046	4.2	0.7	O K
2880 min Summer	5.511	0.041	3.4	0.6	O K
4320 min Summer	5.505	0.035	2.4	0.4	O K
5760 min Summer	5.501	0.031	2.0	0.3	O K
7200 min Summer	5.499	0.029	1.7	0.3	O K
8640 min Summer	5.497	0.027	1.4	0.2	O K
10080 min Summer	5.495	0.025	1.2	0.2	O K
15 min Winter	5.727	0.257	23.5	21.6	Flood Risk

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
15 min Summer	124.633	0.0	13
30 min Summer	83.789	0.0	22
60 min Summer	53.779	0.0	38
120 min Summer	33.337	0.0	70
180 min Summer	24.832	0.0	100
240 min Summer	20.006	0.0	130
360 min Summer	14.706	0.0	190
480 min Summer	11.818	0.0	250
600 min Summer	9.966	0.0	308
720 min Summer	8.665	0.0	370
960 min Summer	6.943	0.0	490
1440 min Summer	5.071	0.0	734
2160 min Summer	3.696	0.0	1084
2880 min Summer	2.949	0.0	1448
4320 min Summer	2.142	0.0	2200
5760 min Summer	1.705	0.0	2928
7200 min Summer	1.427	0.0	3560
8640 min Summer	1.235	0.0	4352
10080 min Summer	1.093	0.0	4952
15 min Winter	124.633	0.0	14

©1982-2016 XP Solutions

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	5.742	0.272	23.5	24.0	Flood Risk
60 min Winter	5.724	0.254	23.5	21.1	Flood Risk
120 min Winter	5.679	0.209	21.0	14.4	O K
180 min Winter	5.645	0.175	17.6	10.2	O K
240 min Winter	5.620	0.150	15.1	7.4	O K
360 min Winter	5.586	0.116	11.7	4.4	O K
480 min Winter	5.565	0.095	9.6	3.0	O K
600 min Winter	5.551	0.081	8.1	2.2	O K
720 min Winter	5.541	0.071	7.1	1.6	O K
960 min Winter	5.527	0.057	5.7	1.1	O K
1440 min Winter	5.516	0.046	4.2	0.7	O K
2160 min Winter	5.509	0.039	3.1	0.5	O K
2880 min Winter	5.505	0.035	2.4	0.4	O K
4320 min Winter	5.500	0.030	1.8	0.3	O K
5760 min Winter	5.497	0.027	1.4	0.2	O K
7200 min Winter	5.494	0.024	1.2	0.2	O K
8640 min Winter	5.493	0.023	1.0	0.2	O K
10080 min Winter	5.491	0.021	0.9	0.2	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	83.789	0.0	23
60 min Winter	53.779	0.0	42
120 min Winter	33.337	0.0	72
180 min Winter	24.832	0.0	104
240 min Winter	20.006	0.0	134
360 min Winter	14.706	0.0	192
480 min Winter	11.818	0.0	250
600 min Winter	9.966	0.0	310
720 min Winter	8.665	0.0	368
960 min Winter	6.943	0.0	490
1440 min Winter	5.071	0.0	730
2160 min Winter	3.696	0.0	1096
2880 min Winter	2.949	0.0	1468
4320 min Winter	2.142	0.0	2100
5760 min Winter	1.705	0.0	2904
7200 min Winter	1.427	0.0	3512
8640 min Winter	1.235	0.0	4432
10080 min Winter	1.093	0.0	5104

©1982-2016 XP Solutions

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

©1982-2016 XP Solutions

Model Details

Storage is Online Cover Level (m) 6.000

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.24692
Membrane Percolation (mm/hr)	1000
Max Percolation (l/s)	143.0
Safety Factor	1.5
Porosity	0.30
Invert Level (m)	5.470
Width (m)	22.0
Length (m)	23.4
Slope (1:X)	100.0
Depression Storage (mm)	5
Evaporation (mm/day)	3
Membrane Depth (m)	0

©1982-2016 XP Solutions