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

Half Drain Time : 356 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	6.722	0.062	0.1	1.8	O K
30 min Summer	6.748	0.088	0.1	2.5	O K
60 min Summer	6.774	0.114	0.1	3.3	O K
120 min Summer	6.797	0.137	0.1	4.0	O K
180 min Summer	6.808	0.148	0.1	4.3	Flood Risk
240 min Summer	6.812	0.152	0.1	4.4	Flood Risk
360 min Summer	6.814	0.154	0.1	4.4	Flood Risk
480 min Summer	6.814	0.154	0.1	4.4	Flood Risk
600 min Summer	6.813	0.153	0.1	4.4	Flood Risk
720 min Summer	6.811	0.151	0.1	4.4	Flood Risk
960 min Summer	6.806	0.146	0.1	4.2	Flood Risk
1440 min Summer	6.792	0.132	0.1	3.8	O K
2160 min Summer	6.770	0.110	0.1	3.2	O K
2880 min Summer	6.750	0.090	0.1	2.6	O K
4320 min Summer	6.722	0.062	0.1	1.8	O K
5760 min Summer	6.708	0.048	0.1	1.4	O K
7200 min Summer	6.701	0.041	0.1	1.2	O K
8640 min Summer	6.697	0.037	0.1	1.1	O K
10080 min Summer	6.693	0.033	0.1	0.9	O K
15 min Winter	6.732	0.072	0.1	2.1	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
15 min Summer	124.633	0.0	18
30 min Summer	83.789	0.0	33
60 min Summer	53.779	0.0	62
120 min Summer	33.337	0.0	122
180 min Summer	24.832	0.0	182
240 min Summer	20.006	0.0	240
360 min Summer	14.706	0.0	308
480 min Summer	11.818	0.0	370
600 min Summer	9.966	0.0	434
720 min Summer	8.665	0.0	500
960 min Summer	6.943	0.0	636
1440 min Summer	5.071	0.0	908
2160 min Summer	3.696	0.0	1296
2880 min Summer	2.949	0.0	1672
4320 min Summer	2.142	0.0	2336
5760 min Summer	1.705	0.0	3000
7200 min Summer	1.427	0.0	3744
8640 min Summer	1.235	0.0	4488
10080 min Summer	1.093	0.0	5152
15 min Winter	124.633	0.0	18

©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	6.761	0.101	0.1	2.9	O K
60 min Winter	6.790	0.130	0.1	3.8	O K
120 min Winter	6.818	0.158	0.1	4.5	Flood Risk
180 min Winter	6.830	0.170	0.1	4.9	Flood Risk
240 min Winter	6.836	0.176	0.1	5.1	Flood Risk
360 min Winter	6.839	0.179	0.1	5.1	Flood Risk
480 min Winter	6.837	0.177	0.1	5.1	Flood Risk
600 min Winter	6.835	0.175	0.1	5.0	Flood Risk
720 min Winter	6.832	0.172	0.1	4.9	Flood Risk
960 min Winter	6.823	0.163	0.1	4.7	Flood Risk
1440 min Winter	6.800	0.140	0.1	4.0	Flood Risk
2160 min Winter	6.766	0.106	0.1	3.1	O K
2880 min Winter	6.738	0.078	0.1	2.2	O K
4320 min Winter	6.707	0.047	0.1	1.4	O K
5760 min Winter	6.698	0.038	0.1	1.1	O K
7200 min Winter	6.692	0.032	0.1	0.9	O K
8640 min Winter	6.688	0.028	0.1	0.8	O K
10080 min Winter	6.685	0.025	0.1	0.7	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	83.789	0.0	33
60 min Winter	53.779	0.0	62
120 min Winter	33.337	0.0	120
180 min Winter	24.832	0.0	178
240 min Winter	20.006	0.0	234
360 min Winter	14.706	0.0	342
480 min Winter	11.818	0.0	398
600 min Winter	9.966	0.0	466
720 min Winter	8.665	0.0	542
960 min Winter	6.943	0.0	694
1440 min Winter	5.071	0.0	982
2160 min Winter	3.696	0.0	1384
2880 min Winter	2.949	0.0	1732
4320 min Winter	2.142	0.0	2332
5760 min Winter	1.705	0.0	3056
7200 min Winter	1.427	0.0	3752
8640 min Winter	1.235	0.0	4504
10080 min Winter	1.093	0.0	5240

©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) 0.010

Time (mins) From:	To:	Area (ha)
0	4	0.010

©1982-2016 XP Solutions

Model Details

Storage is Online Cover Level (m) 7.100

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.01824	Width (m)	4.0
Membrane Percolation (mm/hr)	1000	Length (m)	24.0
Max Percolation (l/s)	26.7	Slope (1:X)	0.0
Safety Factor	4.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	6.660	Membrane Depth (m)	0

©1982-2016 XP Solutions