Summary of Results for 30 year Return Period (+40%)

Half Drain Time : 65 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	24.844	0.244	4.3	19.6	O K
30 min Summer	24.878	0.278	4.9	25.3	O K
60 min Summer	24.898	0.298	5.2	28.5	O K
120 min Summer	24.905	0.305	5.4	29.8	Flood Risk
180 min Summer	24.902	0.302	5.3	29.3	Flood Risk
240 min Summer	24.895	0.295	5.2	28.1	O K
360 min Summer	24.878	0.278	4.9	25.3	O K
480 min Summer	24.862	0.262	4.6	22.6	O K
600 min Summer	24.848	0.248	4.4	20.2	O K
720 min Summer	24.835	0.235	4.1	18.2	O K
960 min Summer	24.812	0.212	3.7	14.9	O K
1440 min Summer	24.778	0.178	3.1	10.5	O K
2160 min Summer	24.744	0.144	2.5	6.8	O K
2880 min Summer	24.720	0.120	2.1	4.8	O K
4320 min Summer	24.691	0.091	1.6	2.7	O K
5760 min Summer	24.673	0.073	1.3	1.8	O K
7200 min Summer	24.661	0.061	1.1	1.2	O K
8640 min Summer	24.652	0.052	0.9	0.9	O K
10080 min Summer	24.648	0.048	0.8	0.8	O K
15 min Winter	24.864	0.264	4.6	22.9	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
15 min Summer	110.664	0.0	17
30 min Summer	71.049	0.0	31
60 min Summer	43.574	0.0	52
120 min Summer	25.944	0.0	84
180 min Summer	18.965	0.0	118
240 min Summer	15.125	0.0	152
360 min Summer	10.960	0.0	220
480 min Summer	8.720	0.0	284
600 min Summer	7.299	0.0	348
720 min Summer	6.310	0.0	410
960 min Summer	5.012	0.0	530
1440 min Summer	3.619	0.0	768
2160 min Summer	2.610	0.0	1128
2880 min Summer	2.069	0.0	1476
4320 min Summer	1.490	0.0	2204
5760 min Summer	1.180	0.0	2936
7200 min Summer	0.984	0.0	3672
8640 min Summer	0.849	0.0	4400
10080 min Summer	0.748	0.0	5112
15 min Winter	110.664	0.0	17

Summary of Results for 30 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	24.903	0.303	5.3	29.4	Flood Risk
60 min Winter	24.925	0.325	5.7	33.0	Flood Risk
120 min Winter	24.929	0.329	5.8	33.8	Flood Risk
180 min Winter	24.921	0.321	5.6	32.3	Flood Risk
240 min Winter	24.908	0.308	5.4	30.3	Flood Risk
360 min Winter	24.883	0.283	5.0	26.0	O K
480 min Winter	24.860	0.260	4.6	22.3	O K
600 min Winter	24.840	0.240	4.2	19.1	O K
720 min Winter	24.823	0.223	3.9	16.4	O K
960 min Winter	24.794	0.194	3.4	12.5	O K
1440 min Winter	24.753	0.153	2.7	7.7	O K
2160 min Winter	24.716	0.116	2.0	4.4	O K
2880 min Winter	24.693	0.093	1.6	2.8	O K
4320 min Winter	24.667	0.067	1.2	1.5	O K
5760 min Winter	24.653	0.053	0.9	0.9	O K
7200 min Winter	24.647	0.047	0.8	0.7	O K
8640 min Winter	24.643	0.043	0.7	0.6	O K
10080 min Winter	24.640	0.040	0.6	0.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	71.049	0.0	31
60 min Winter	43.574	0.0	58
120 min Winter	25.944	0.0	90
180 min Winter	18.965	0.0	128
240 min Winter	15.125	0.0	164
360 min Winter	10.960	0.0	234
480 min Winter	8.720	0.0	300
600 min Winter	7.299	0.0	364
720 min Winter	6.310	0.0	426
960 min Winter	5.012	0.0	548
1440 min Winter	3.619	0.0	782
2160 min Winter	2.610	0.0	1128
2880 min Winter	2.069	0.0	1496
4320 min Winter	1.490	0.0	2204
5760 min Winter	1.180	0.0	2912
7200 min Winter	0.984	0.0	3664
8640 min Winter	0.849	0.0	4320
10080 min Winter	0.748	0.0	5112

Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.200	Shortest Storm (mins)	15
Ratio R	0.435	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

Model Details

Storage is Online Cover Level (m) 25.200

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.05760	Width (m)	22.0
Membrane Percolation (mm/hr)	1000	Length (m)	65.0
Max Percolation (l/s)	397.2	Slope (1:X)	100.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	24.600	Cap Volume Depth (m)	0.250