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

Half Drain Time : 919 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	3.058	0.058	0.0	0.6	0.6	20.4	O K
30 min Summer	3.084	0.084	0.0	0.6	0.6	29.1	O K
60 min Summer	3.110	0.110	0.0	0.6	0.6	38.3	O K
120 min Summer	3.136	0.136	0.0	0.6	0.6	47.3	O K
180 min Summer	3.149	0.149	0.0	0.6	0.6	51.9	O K
240 min Summer	3.157	0.157	0.0	0.6	0.6	54.5	O K
360 min Summer	3.166	0.166	0.0	0.6	0.6	57.7	O K
480 min Summer	3.170	0.170	0.0	0.6	0.6	59.1	O K
600 min Summer	3.171	0.171	0.0	0.6	0.6	59.4	O K
720 min Summer	3.170	0.170	0.0	0.6	0.6	59.1	O K
960 min Summer	3.167	0.167	0.0	0.6	0.6	58.1	O K
1440 min Summer	3.158	0.158	0.0	0.6	0.6	55.1	O K
2160 min Summer	3.146	0.146	0.0	0.6	0.6	50.9	O K
2880 min Summer	3.135	0.135	0.0	0.6	0.6	46.8	O K
4320 min Summer	3.112	0.112	0.0	0.6	0.6	39.1	O K
5760 min Summer	3.092	0.092	0.0	0.6	0.6	32.0	O K
7200 min Summer	3.074	0.074	0.0	0.6	0.6	25.6	O K
8640 min Summer	3.058	0.058	0.0	0.6	0.6	20.1	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	128.960	0.0	20.6	19
30 min Summer	86.656	0.0	29.7	34
60 min Summer	55.544	0.0	39.7	64
120 min Summer	34.343	0.0	50.4	122
180 min Summer	25.523	0.0	56.7	182
240 min Summer	20.520	0.0	61.1	242
360 min Summer	15.103	0.0	67.9	362
480 min Summer	12.133	0.0	72.9	480
600 min Summer	10.229	0.0	77.0	600
720 min Summer	8.892	0.0	80.3	700
960 min Summer	7.122	0.0	85.7	806
1440 min Summer	5.200	0.0	93.5	1054
2160 min Summer	3.787	0.0	101.3	1468
2880 min Summer	3.021	0.0	106.7	1872
4320 min Summer	2.193	0.0	113.9	2680
5760 min Summer	1.744	0.0	118.3	3464
7200 min Summer	1.461	0.0	121.2	4184
8640 min Summer	1.265	0.0	123.5	4928

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

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
10080 min Summer	3.044	0.044	0.0	0.6	0.6	15.4	O K
15 min Winter	3.068	0.068	0.0	0.6	0.6	23.5	O K
30 min Winter	3.096	0.096	0.0	0.6	0.6	33.3	O K
60 min Winter	3.126	0.126	0.0	0.6	0.6	43.7	O K
120 min Winter	3.155	0.155	0.0	0.6	0.6	54.0	O K
180 min Winter	3.171	0.171	0.0	0.6	0.6	59.4	O K
240 min Winter	3.180	0.180	0.0	0.7	0.7	62.5	O K
360 min Winter	3.191	0.191	0.0	0.7	0.7	66.5	O K
480 min Winter	3.197	0.197	0.0	0.7	0.7	68.5	O K
600 min Winter	3.199	0.199	0.0	0.7	0.7	69.4	O K
720 min Winter	3.200	0.200	0.0	0.7	0.7	69.5	O K
960 min Winter	3.197	0.197	0.0	0.7	0.7	68.5	O K
1440 min Winter	3.186	0.186	0.0	0.7	0.7	64.8	O K
2160 min Winter	3.169	0.169	0.0	0.6	0.6	59.0	O K
2880 min Winter	3.152	0.152	0.0	0.6	0.6	52.9	O K
4320 min Winter	3.118	0.118	0.0	0.6	0.6	41.1	O K
5760 min Winter	3.087	0.087	0.0	0.6	0.6	30.4	O K
7200 min Winter	3.061	0.061	0.0	0.6	0.6	21.2	O K
8640 min Winter	3.039	0.039	0.0	0.6	0.6	13.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
10080 min Summer	1.120	0.0	124.8	5648
15 min Winter	128.960	0.0	23.8	19
30 min Winter	86.656	0.0	34.0	33
60 min Winter	55.544	0.0	45.2	62
120 min Winter	34.343	0.0	57.2	122
180 min Winter	25.523	0.0	64.3	180
240 min Winter	20.520	0.0	69.3	238
360 min Winter	15.103	0.0	76.9	354
480 min Winter	12.133	0.0	82.6	468
600 min Winter	10.229	0.0	87.1	582
720 min Winter	8.892	0.0	90.9	692
960 min Winter	7.122	0.0	97.0	904
1440 min Winter	5.200	0.0	97.0	1126
2160 min Winter	3.787	0.0	114.8	1580
2880 min Winter	3.021	0.0	121.2	2044
4320 min Winter	2.193	0.0	129.6	2896
5760 min Winter	1.744	0.0	135.0	3688
7200 min Winter	1.461	0.0	138.9	4464
8640 min Winter	1.265	0.0	141.8	5112

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

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
10080 min Winter	3.021	0.021	0.0	0.6	0.6	7.4	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
10080 min Winter	1.120	0.0	143.9	5752

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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)	19.600	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.110

Time (mins) From:	To:	Area (ha)
0	4	0.110

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Model Details

Storage is Online Cover Level (m) 3.600

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	20.0
Membrane Percolation (mm/hr)	1000	Length (m)	58.0
Max Percolation (l/s)	322.2	Slope (1:X)	0.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	3.000	Cap Volume Depth (m)	0.370

Orifice Outflow Control

Diameter (m) 0.020 Discharge Coefficient 0.600 Invert Level (m) 2.561

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