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

Half Drain Time : 66 minutes.

| Storm Event | Max Level (m) | Max Depth (m) | Max Infiltration (l/s) | Max Volume (m³) | Status |
|---|---|---|---|---|---|
| 15 min Summer | 99.318 | 0.318 | 2.2 | 10.5 | O K |
| 30 min Summer | 99.356 | 0.356 | 2.5 | 13.1 | O K |
| 60 min Summer | 99.378 | 0.378 | 2.6 | 14.8 | O K |
| 120 min Summer | 99.386 | 0.386 | 2.7 | 15.4 | O K |
| 180 min Summer | 99.380 | 0.380 | 2.6 | 15.0 | O K |
| 240 min Summer | 99.371 | 0.371 | 2.6 | 14.3 | O K |
| 360 min Summer | 99.352 | 0.352 | 2.4 | 12.9 | O K |
| 480 min Summer | 99.334 | 0.334 | 2.3 | 11.6 | O K |
| 600 min Summer | 99.317 | 0.317 | 2.2 | 10.5 | O K |
| 720 min Summer | 99.302 | 0.302 | 2.1 | 9.5 | O K |
| 960 min Summer | 99.276 | 0.276 | 1.9 | 7.9 | O K |
| 1440 min Summer | 99.236 | 0.236 | 1.6 | 5.8 | O K |
| 2160 min Summer | 99.193 | 0.193 | 1.3 | 3.9 | O K |
| 2880 min Summer | 99.164 | 0.164 | 1.1 | 2.8 | O K |
| 4320 min Summer | 99.127 | 0.127 | 0.9 | 1.7 | O K |
| 5760 min Summer | 99.103 | 0.103 | 0.7 | 1.1 | O K |
| 7200 min Summer | 99.087 | 0.087 | 0.6 | 0.8 | O K |
| 8640 min Summer | 99.076 | 0.076 | 0.5 | 0.6 | O K |
| 10080 min Summer | 99.067 | 0.067 | 0.5 | 0.5 | O K |
| 15 min Winter | 99.338 | 0.338 | 2.3 | 11.9 | O K |

| Storm Event | Rain (mm/hr) | Flooded Volume (m³) | Time-Peak (mins) |
|---|---|---|---|
| 15 min Summer | 127.204 | 0.0 | 17 |
| 30 min Summer | 85.821 | 0.0 | 31 |
| 60 min Summer | 55.250 | 0.0 | 50 |
| 120 min Summer | 34.307 | 0.0 | 84 |
| 180 min Summer | 25.552 | 0.0 | 118 |
| 240 min Summer | 20.570 | 0.0 | 152 |
| 360 min Summer | 15.173 | 0.0 | 220 |
| 480 min Summer | 12.206 | 0.0 | 284 |
| 600 min Summer | 10.302 | 0.0 | 348 |
| 720 min Summer | 8.963 | 0.0 | 410 |
| 960 min Summer | 7.189 | 0.0 | 532 |
| 1440 min Summer | 5.257 | 0.0 | 778 |
| 2160 min Summer | 3.836 | 0.0 | 1128 |
| 2880 min Summer | 3.063 | 0.0 | 1496 |
| 4320 min Summer | 2.226 | 0.0 | 2204 |
| 5760 min Summer | 1.773 | 0.0 | 2936 |
| 7200 min Summer | 1.487 | 0.0 | 3672 |
| 8640 min Summer | 1.289 | 0.0 | 4400 |
| 10080 min Summer | 1.142 | 0.0 | 5136 |
| 15 min Winter | 127.204 | 0.0 | 17 |

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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 Volume (m³) | Status |
|---|---|---|---|---|---|
| 30 min Winter | 99.379 | 0.379 | 2.6 | 14.9 | O K |
| 60 min Winter | 99.403 | 0.403 | 2.8 | 16.9 | O K |
| 120 min Winter | 99.409 | 0.409 | 2.8 | 17.4 | O K |
| 180 min Winter | 99.400 | 0.400 | 2.8 | 16.6 | O K |
| 240 min Winter | 99.386 | 0.386 | 2.7 | 15.4 | O K |
| 360 min Winter | 99.358 | 0.358 | 2.5 | 13.3 | O K |
| 480 min Winter | 99.332 | 0.332 | 2.3 | 11.5 | O K |
| 600 min Winter | 99.309 | 0.309 | 2.1 | 9.9 | O K |
| 720 min Winter | 99.289 | 0.289 | 2.0 | 8.7 | O K |
| 960 min Winter | 99.254 | 0.254 | 1.8 | 6.7 | O K |
| 1440 min Winter | 99.204 | 0.204 | 1.4 | 4.3 | O K |
| 2160 min Winter | 99.157 | 0.157 | 1.1 | 2.6 | O K |
| 2880 min Winter | 99.128 | 0.128 | 0.9 | 1.7 | O K |
| 4320 min Winter | 99.095 | 0.095 | 0.7 | 0.9 | O K |
| 5760 min Winter | 99.076 | 0.076 | 0.5 | 0.6 | O K |
| 7200 min Winter | 99.064 | 0.064 | 0.4 | 0.4 | O K |
| 8640 min Winter | 99.055 | 0.055 | 0.4 | 0.3 | O K |
| 10080 min Winter | 99.050 | 0.050 | 0.3 | 0.3 | O K |

| Storm Event | Rain (mm/hr) | Flooded Volume (m³) | Time-Peak (mins) |
|---|---|---|---|
| 30 min Winter | 85.821 | 0.0 | 31 |
| 60 min Winter | 55.250 | 0.0 | 56 |
| 120 min Winter | 34.307 | 0.0 | 90 |
| 180 min Winter | 25.552 | 0.0 | 128 |
| 240 min Winter | 20.570 | 0.0 | 164 |
| 360 min Winter | 15.173 | 0.0 | 234 |
| 480 min Winter | 12.206 | 0.0 | 300 |
| 600 min Winter | 10.302 | 0.0 | 364 |
| 720 min Winter | 8.963 | 0.0 | 428 |
| 960 min Winter | 7.189 | 0.0 | 550 |
| 1440 min Winter | 5.257 | 0.0 | 792 |
| 2160 min Winter | 3.836 | 0.0 | 1144 |
| 2880 min Winter | 3.063 | 0.0 | 1496 |
| 4320 min Winter | 2.226 | 0.0 | 2204 |
| 5760 min Winter | 1.773 | 0.0 | 2936 |
| 7200 min Winter | 1.487 | 0.0 | 3664 |
| 8640 min Winter | 1.289 | 0.0 | 4336 |
| 10080 min Winter | 1.142 | 0.0 | 5120 |

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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) | 19.500 | Shortest Storm (mins) | 15 |
| Ratio R | 0.342 | Longest Storm (mins) | 10080 |
| Summer Storms | Yes | Climate Change % | +40 |

## Time Area Diagram

Total Area (ha) 0.050

| Time (mins) From: | To: | Area (ha) |
|---|---|---|
| 0 | 4 | 0.050 |

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## Model Details

Storage is Online Cover Level (m) 100.000

## Porous Car Park Structure

| | | | |
|---|---|---|---|
| Infiltration Coefficient Base (m/hr) | 0.07200 | Width (m) | 17.3 |
| Membrane Percolation (mm/hr) | 1000 | Length (m) | 17.3 |
| Max Percolation (l/s) | 83.1 | Slope (1:X) | 40.0 |
| Safety Factor | 2.0 | Depression Storage (mm) | 0 |
| Porosity | 0.30 | Evaporation (mm/day) | 3 |
| Invert Level (m) | 99.000 | Cap Volume Depth (m) | 0.500 |

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