## Summary of Results for 30 year Return Period

Half Drain Time : 93 minutes.

| Storm Event | Max Level (m) | Max Depth (m) | Max Infiltration (l/s) | Max Volume (m³) | Status |
|---|---|---|---|---|---|
| 15 min Summer | 59.454 | 0.504 | 0.2 | 1.4 | O K |
| 30 min Summer | 59.580 | 0.630 | 0.2 | 1.8 | O K |
| 60 min Summer | 59.665 | 0.715 | 0.2 | 2.0 | O K |
| 120 min Summer | 59.699 | 0.749 | 0.3 | 2.1 | O K |
| 180 min Summer | 59.695 | 0.745 | 0.3 | 2.1 | O K |
| 240 min Summer | 59.675 | 0.725 | 0.2 | 2.1 | O K |
| 360 min Summer | 59.627 | 0.677 | 0.2 | 1.9 | O K |
| 480 min Summer | 59.581 | 0.631 | 0.2 | 1.8 | O K |
| 600 min Summer | 59.538 | 0.588 | 0.2 | 1.7 | O K |
| 720 min Summer | 59.499 | 0.549 | 0.2 | 1.6 | O K |
| 960 min Summer | 59.431 | 0.481 | 0.2 | 1.4 | O K |
| 1440 min Summer | 59.323 | 0.373 | 0.2 | 1.1 | O K |
| 2160 min Summer | 59.210 | 0.260 | 0.1 | 0.7 | O K |
| 2880 min Summer | 59.133 | 0.183 | 0.1 | 0.5 | O K |
| 4320 min Summer | 59.037 | 0.087 | 0.1 | 0.2 | O K |
| 5760 min Summer | 58.998 | 0.048 | 0.1 | 0.1 | O K |
| 7200 min Summer | 58.991 | 0.041 | 0.1 | 0.1 | O K |
| 8640 min Summer | 58.985 | 0.035 | 0.1 | 0.1 | O K |
| 10080 min Summer | 58.982 | 0.032 | 0.1 | 0.1 | O K |
| 15 min Winter | 59.517 | 0.567 | 0.2 | 1.6 | O K |

| Storm Event | Rain (mm/hr) | Flooded Volume (m³) | Time-Peak (mins) |
|---|---|---|---|
| 15 min Summer | 69.884 | 0.0 | 18 |
| 30 min Summer | 46.187 | 0.0 | 32 |
| 60 min Summer | 29.238 | 0.0 | 60 |
| 120 min Summer | 17.975 | 0.0 | 90 |
| 180 min Summer | 13.378 | 0.0 | 124 |
| 240 min Summer | 10.798 | 0.0 | 158 |
| 360 min Summer | 7.956 | 0.0 | 228 |
| 480 min Summer | 6.404 | 0.0 | 296 |
| 600 min Summer | 5.409 | 0.0 | 362 |
| 720 min Summer | 4.710 | 0.0 | 428 |
| 960 min Summer | 3.783 | 0.0 | 556 |
| 1440 min Summer | 2.775 | 0.0 | 808 |
| 2160 min Summer | 2.033 | 0.0 | 1168 |
| 2880 min Summer | 1.629 | 0.0 | 1528 |
| 4320 min Summer | 1.191 | 0.0 | 2244 |
| 5760 min Summer | 0.952 | 0.0 | 2936 |
| 7200 min Summer | 0.801 | 0.0 | 3608 |
| 8640 min Summer | 0.695 | 0.0 | 4400 |
| 10080 min Summer | 0.616 | 0.0 | 5120 |
| 15 min Winter | 69.884 | 0.0 | 18 |

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## Summary of Results for 30 year Return Period

| Storm Event | Max Level (m) | Max Depth (m) | Max Infiltration (l/s) | Max Volume (m³) | Status |
|---|---|---|---|---|---|
| 30 min Winter | 59.663 | 0.713 | 0.2 | 2.0 | O K |
| 60 min Winter | 59.772 | 0.822 | 0.3 | 2.3 | O K |
| 120 min Winter | 59.911 | 0.961 | 0.3 | 2.4 | O K |
| 180 min Winter | 59.875 | 0.925 | 0.3 | 2.4 | O K |
| 240 min Winter | 59.760 | 0.810 | 0.3 | 2.3 | O K |
| 360 min Winter | 59.685 | 0.735 | 0.3 | 2.1 | O K |
| 480 min Winter | 59.616 | 0.666 | 0.2 | 1.9 | O K |
| 600 min Winter | 59.554 | 0.604 | 0.2 | 1.7 | O K |
| 720 min Winter | 59.499 | 0.549 | 0.2 | 1.6 | O K |
| 960 min Winter | 59.405 | 0.455 | 0.2 | 1.3 | O K |
| 1440 min Winter | 59.268 | 0.318 | 0.2 | 0.9 | O K |
| 2160 min Winter | 59.134 | 0.184 | 0.1 | 0.5 | O K |
| 2880 min Winter | 59.050 | 0.100 | 0.1 | 0.3 | O K |
| 4320 min Winter | 58.994 | 0.044 | 0.1 | 0.1 | O K |
| 5760 min Winter | 58.985 | 0.035 | 0.1 | 0.1 | O K |
| 7200 min Winter | 58.980 | 0.030 | 0.1 | 0.1 | O K |
| 8640 min Winter | 58.976 | 0.026 | 0.0 | 0.1 | O K |
| 10080 min Winter | 58.973 | 0.023 | 0.0 | 0.1 | O K |

| Storm Event | Rain (mm/hr) | Flooded Volume (m³) | Time-Peak (mins) |
|---|---|---|---|
| 30 min Winter | 46.187 | 0.0 | 31 |
| 60 min Winter | 29.238 | 0.0 | 58 |
| 120 min Winter | 17.975 | 0.0 | 96 |
| 180 min Winter | 13.378 | 0.0 | 134 |
| 240 min Winter | 10.798 | 0.0 | 172 |
| 360 min Winter | 7.956 | 0.0 | 244 |
| 480 min Winter | 6.404 | 0.0 | 314 |
| 600 min Winter | 5.409 | 0.0 | 384 |
| 720 min Winter | 4.710 | 0.0 | 450 |
| 960 min Winter | 3.783 | 0.0 | 584 |
| 1440 min Winter | 2.775 | 0.0 | 838 |
| 2160 min Winter | 2.033 | 0.0 | 1208 |
| 2880 min Winter | 1.629 | 0.0 | 1556 |
| 4320 min Winter | 1.191 | 0.0 | 2156 |
| 5760 min Winter | 0.952 | 0.0 | 2888 |
| 7200 min Winter | 0.801 | 0.0 | 3608 |
| 8640 min Winter | 0.695 | 0.0 | 4304 |
| 10080 min Winter | 0.616 | 0.0 | 5080 |

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## 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) | 19.000 | Shortest Storm (mins) | 15 |
| Ratio R | 0.366 | Longest Storm (mins) | 10080 |
| Summer Storms | Yes | Climate Change % | +0 |

## Time Area Diagram

Total Area (ha) 0.012

| Time (mins) From: | To: | Area (ha) |
|---|---|---|
| 0 | 4 | 0.012 |

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## Model Details

Storage is Online Cover Level (m) 61.000

## Cellular Storage Structure

Invert Level (m) 58.950 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.20412 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.20412

| Depth (m) | Area (m²) | Inf. Area (m²) | Depth (m) | Area (m²) | Inf. Area (m²) |
|---|---|---|---|---|---|
| 0.000 | 3.0 | 3.0 | 0.900 | 0.0 | 9.4 |
| 0.800 | 3.0 | 9.4 | | | |

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