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| RPS P&D | | Page 1 |
| 20 Milton Park Abingdon Oxfordshire OX14 4SH | Land North of Green Lane Chesterton Basin 1 (Infiltration) |  |
| Date 28/11/2016 File Basin 1 - Infiltration.... | Designed by CA Checked by HSS | |
| Causeway | | Source Control 2014.1.1 |

Summary of Results for 1 year Return Period

Half Drain Time : 25 minutes.

| Storm Event | Max Level (m) | Max Depth (m) | Max Infiltration (l/s) | Max Volume (m ³) | Status |
|------------------|---------------|---------------|------------------------|------------------------------|--------|
| 15 min Summer | 75.870 | 0.050 | 6.6 | 10.2 | O K |
| 30 min Summer | 75.879 | 0.059 | 6.8 | 12.0 | O K |
| 60 min Summer | 75.882 | 0.062 | 6.8 | 12.6 | O K |
| 120 min Summer | 75.878 | 0.058 | 6.7 | 11.8 | O K |
| 180 min Summer | 75.872 | 0.052 | 6.6 | 10.6 | O K |
| 240 min Summer | 75.868 | 0.048 | 6.3 | 9.7 | O K |
| 360 min Summer | 75.861 | 0.041 | 5.4 | 8.3 | O K |
| 480 min Summer | 75.856 | 0.036 | 4.7 | 7.3 | O K |
| 600 min Summer | 75.853 | 0.033 | 4.2 | 6.5 | O K |
| 720 min Summer | 75.850 | 0.030 | 3.8 | 5.9 | O K |
| 960 min Summer | 75.845 | 0.025 | 3.2 | 5.0 | O K |
| 1440 min Summer | 75.840 | 0.020 | 2.5 | 3.9 | O K |
| 2160 min Summer | 75.835 | 0.015 | 1.9 | 3.0 | O K |
| 2880 min Summer | 75.833 | 0.013 | 1.6 | 2.5 | O K |
| 4320 min Summer | 75.830 | 0.010 | 1.2 | 1.9 | O K |
| 5760 min Summer | 75.828 | 0.008 | 1.0 | 1.5 | O K |
| 7200 min Summer | 75.827 | 0.007 | 0.8 | 1.3 | O K |
| 8640 min Summer | 75.826 | 0.006 | 0.8 | 1.2 | O K |
| 10080 min Summer | 75.825 | 0.005 | 0.6 | 1.0 | O K |
| 15 min Winter | 75.876 | 0.056 | 6.7 | 11.5 | O K |


| Storm Event | Rain (mm/hr) | Flooded Volume (m ³) | Time-Peak (mins) |
|------------------|--------------|----------------------------------|------------------|
| 15 min Summer | 30.991 | 0.0 | 20 |
| 30 min Summer | 20.215 | 0.0 | 29 |
| 60 min Summer | 12.800 | 0.0 | 46 |
| 120 min Summer | 7.942 | 0.0 | 78 |
| 180 min Summer | 5.979 | 0.0 | 108 |
| 240 min Summer | 4.882 | 0.0 | 140 |
| 360 min Summer | 3.646 | 0.0 | 200 |
| 480 min Summer | 2.956 | 0.0 | 262 |
| 600 min Summer | 2.511 | 0.0 | 322 |
| 720 min Summer | 2.199 | 0.0 | 382 |
| 960 min Summer | 1.782 | 0.0 | 502 |
| 1440 min Summer | 1.326 | 0.0 | 744 |
| 2160 min Summer | 0.988 | 0.0 | 1108 |
| 2880 min Summer | 0.800 | 0.0 | 1472 |
| 4320 min Summer | 0.595 | 0.0 | 2168 |
| 5760 min Summer | 0.483 | 0.0 | 2936 |
| 7200 min Summer | 0.410 | 0.0 | 3672 |
| 8640 min Summer | 0.359 | 0.0 | 4368 |
| 10080 min Summer | 0.322 | 0.0 | 5136 |
| 15 min Winter | 30.991 | 0.0 | 21 |

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| Date 28/11/2016 File Basin 1 - Infiltration.... | Designed by CA Checked by HSS | |
| Causeway Source Control 2014.1.1 | | |

Summary of Results for 1 year Return Period

| Storm Event | Max Level (m) | Max Depth (m) | Max Infiltration (l/s) | Max Volume (m ³) | Status |
|------------------|---------------|---------------|------------------------|------------------------------|--------|
| 30 min Winter | 75.886 | 0.066 | 6.9 | 13.5 | O K |
| 60 min Winter | 75.887 | 0.067 | 6.9 | 13.9 | O K |
| 120 min Winter | 75.879 | 0.059 | 6.8 | 12.0 | O K |
| 180 min Winter | 75.870 | 0.050 | 6.6 | 10.1 | O K |
| 240 min Winter | 75.864 | 0.044 | 5.8 | 9.0 | O K |
| 360 min Winter | 75.856 | 0.036 | 4.7 | 7.3 | O K |
| 480 min Winter | 75.851 | 0.031 | 3.9 | 6.2 | O K |
| 600 min Winter | 75.847 | 0.027 | 3.5 | 5.4 | O K |
| 720 min Winter | 75.844 | 0.024 | 3.1 | 4.8 | O K |
| 960 min Winter | 75.840 | 0.020 | 2.5 | 4.0 | O K |
| 1440 min Winter | 75.835 | 0.015 | 1.9 | 3.0 | O K |
| 2160 min Winter | 75.832 | 0.012 | 1.5 | 2.3 | O K |
| 2880 min Winter | 75.829 | 0.009 | 1.1 | 1.9 | O K |
| 4320 min Winter | 75.827 | 0.007 | 0.9 | 1.4 | O K |
| 5760 min Winter | 75.826 | 0.006 | 0.7 | 1.1 | O K |
| 7200 min Winter | 75.825 | 0.005 | 0.6 | 1.0 | O K |
| 8640 min Winter | 75.824 | 0.004 | 0.5 | 0.8 | O K |
| 10080 min Winter | 75.824 | 0.004 | 0.5 | 0.8 | O K |

| Storm Event | Rain (mm/hr) | Flooded Volume (m ³) | Time-Peak (mins) |
|------------------|--------------|----------------------------------|------------------|
| 30 min Winter | 20.215 | 0.0 | 31 |
| 60 min Winter | 12.800 | 0.0 | 48 |
| 120 min Winter | 7.942 | 0.0 | 82 |
| 180 min Winter | 5.979 | 0.0 | 112 |
| 240 min Winter | 4.882 | 0.0 | 144 |
| 360 min Winter | 3.646 | 0.0 | 206 |
| 480 min Winter | 2.956 | 0.0 | 268 |
| 600 min Winter | 2.511 | 0.0 | 326 |
| 720 min Winter | 2.199 | 0.0 | 386 |
| 960 min Winter | 1.782 | 0.0 | 502 |
| 1440 min Winter | 1.326 | 0.0 | 746 |
| 2160 min Winter | 0.988 | 0.0 | 1096 |
| 2880 min Winter | 0.800 | 0.0 | 1500 |
| 4320 min Winter | 0.595 | 0.0 | 2164 |
| 5760 min Winter | 0.483 | 0.0 | 2904 |
| 7200 min Winter | 0.410 | 0.0 | 3656 |
| 8640 min Winter | 0.359 | 0.0 | 4408 |
| 10080 min Winter | 0.322 | 0.0 | 5160 |

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Rainfall Details

| | | | |
|-----------------------|-------------------|-----------------------|-------|
| Rainfall Model | FSR | Winter Storms | Yes |
| Return Period (years) | 1 | Cv (Summer) | 0.750 |
| Region | England and Wales | Cv (Winter) | 0.840 |
| M5-60 (mm) | 20.000 | Shortest Storm (mins) | 15 |
| Ratio R | 0.400 | Longest Storm (mins) | 10080 |
| Summer Storms | Yes | Climate Change % | +0 |

Time Area Diagram

Total Area (ha) 0.246

| Time (mins) | | Area | Time (mins) | | Area | Time (mins) | | Area |
|-------------|-----|-------|-------------|-----|-------|-------------|-----|-------|
| From: | To: | (ha) | From: | To: | (ha) | From: | To: | (ha) |
| 0 | 4 | 0.082 | 4 | 8 | 0.082 | 8 | 12 | 0.082 |

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Model Details

Storage is Online Cover Level (m) 76.820

Infiltration Basin Structure

Invert Level (m) 75.820 Safety Factor 2.0
 Infiltration Coefficient Base (m/hr) 0.20664 Porosity 1.00
 Infiltration Coefficient Side (m/hr) 0.20664

| Depth (m) | Area (m ²) | Depth (m) | Area (m ²) | Depth (m) | Area (m ²) | Depth (m) | Area (m ²) |
|-----------|------------------------|-----------|------------------------|-----------|------------------------|-----------|------------------------|
| 0.000 | 195.0 | 1.200 | 0.0 | 2.800 | 0.0 | 4.200 | 0.0 |
| 0.200 | 266.0 | 1.600 | 0.0 | 3.000 | 0.0 | 4.400 | 0.0 |
| 0.400 | 342.0 | 1.800 | 0.0 | 3.200 | 0.0 | 4.600 | 0.0 |
| 0.410 | 422.0 | 2.000 | 0.0 | 3.400 | 0.0 | 4.800 | 0.0 |
| 0.600 | 506.0 | 2.200 | 0.0 | 3.600 | 0.0 | 5.000 | 0.0 |
| 0.800 | 593.0 | 2.400 | 0.0 | 3.800 | 0.0 | | |
| 1.000 | 685.0 | 2.600 | 0.0 | 4.000 | 0.0 | | |