

|                                            |                               |                                                                                     |
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| 11 Hawthorn Drive<br>Towcester<br>NN12 7AE | Roseway<br>Stoke Golding      |  |
| Date 01.07.22<br>File 1716.SIM             | Designed By ndp<br>Checked By |                                                                                     |
| Micro Drainage                             | Simulation W.11.2             |                                                                                     |

#### Global Variables

|                                            |                       |
|--------------------------------------------|-----------------------|
| Region                                     | FSR - England & Wales |
| Return Period (yrs)                        | 2                     |
| M5-60 (mm)                                 | 19.000                |
| Ratio R                                    | 0.400                 |
| Volumetric Runoff Coef                     | 0.840                 |
| Profile Type                               | Winter                |
| PIMP (%)                                   | 100                   |
| Areal Reduction Factor                     | 1.000                 |
| Storm Duration (mins)                      | 600                   |
| Hot Start (mins)                           | 0                     |
| Hot Start Level (mm)                       | 0                     |
| Manhole Headloss Coefficient               | 0.500                 |
| MADD Factor * 10m <sup>3</sup> /ha Storage | 0.000                 |
| Foul Sewage/Hectare (l/s)                  | 0.00                  |
| Additional Flow - % of Total Flow          | 0                     |
| Number of Input Hydrographs                | 0                     |
| Number of Time/Area Diagrams               | 0                     |
| Number of Bifurcations                     | 0                     |
| Number of Overflows                        | 0                     |
| Number of Off-Line Controls                | 0                     |
| Number of On-Line Controls                 | 1                     |

Starting Storm file name

P:\DATA\1716.SWS

#### Freely Discharging Outfalls

| Outfall<br>Pipe Number | Outfall<br>MH/No | C.Level<br>(m) | I.Level<br>(m) | D,L<br>(mm) | B<br>(mm) |
|------------------------|------------------|----------------|----------------|-------------|-----------|
| 1.010                  | 1402             | 102.910        | 100.930        | 1200        | 0         |

|                                            |                               |                                                                                     |
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| Micro Drainage                             | Simulation W.11.2             |                                                                                     |

**On-Line Controls (Head/Flow)**

| US/PN | Volume<br>(m <sup>3</sup> ) | Ctrl<br>MH Name | Invert<br>(m) | Headloss<br>(m) | Flow<br>(l/s) |
|-------|-----------------------------|-----------------|---------------|-----------------|---------------|
| 1.008 | 0.748                       | 12              | 104.450       | 0.1             | 5.6650        |
|       |                             |                 |               | 0.2             | 11.6810       |
|       |                             |                 |               | 0.3             | 12.2440       |
|       |                             |                 |               | 0.4             | 12.2510       |
|       |                             |                 |               | 0.5             | 12.0470       |
|       |                             |                 |               | 0.6             | 11.7150       |
|       |                             |                 |               | 0.7             | 11.0410       |
|       |                             |                 |               | 0.8             | 10.3670       |
|       |                             |                 |               | 0.9             | 10.9570       |
|       |                             |                 |               | 1.0             | 11.5130       |
|       |                             |                 |               | 1.2             | 12.5470       |
|       |                             |                 |               | 1.4             | 13.0310       |
|       |                             |                 |               | 1.6             | 13.0310       |
|       |                             |                 |               | 1.8             | 13.0310       |
|       |                             |                 |               | 2.0             | 13.0310       |
|       |                             |                 |               | 2.2             | 13.0310       |

|                                            |                               |                                                                                     |
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| Micro Drainage                             | Simulation W.11.2             |                                                                                     |

**Storage Pond at pipe 1.007 USMH HW1**

**Storage Pond Invert Level (m) 104.510**

| Depth<br>(m) | Area<br>(m <sup>2</sup> ) | Depth<br>(m) | Area<br>(m <sup>2</sup> ) | Depth<br>(m) | Area<br>(m <sup>2</sup> ) | Depth<br>(m) | Area<br>(m <sup>2</sup> ) | Depth<br>(m) | Area<br>(m <sup>2</sup> ) | Depth<br>(m) | Area<br>(m <sup>2</sup> ) |
|--------------|---------------------------|--------------|---------------------------|--------------|---------------------------|--------------|---------------------------|--------------|---------------------------|--------------|---------------------------|
| 0.0          | 510.0                     | 0.5          | 660.0                     | 1.0          | 830.0                     | 1.5          | 1010.0                    | 2.0          | 0.0                       | 2.5          | 0.0                       |
| 0.1          | 535.0                     | 0.6          | 700.0                     | 1.1          | 865.0                     | 1.6          | 0.0                       | 2.1          | 0.0                       |              |                           |
| 0.2          | 565.0                     | 0.7          | 730.0                     | 1.2          | 900.0                     | 1.7          | 0.0                       | 2.2          | 0.0                       |              |                           |
| 0.3          | 600.0                     | 0.8          | 760.0                     | 1.3          | 935.0                     | 1.8          | 0.0                       | 2.3          | 0.0                       |              |                           |
| 0.4          | 630.0                     | 0.9          | 800.0                     | 1.4          | 975.0                     | 1.9          | 0.0                       | 2.4          | 0.0                       |              |                           |

|                                            |                               |                                                                                     |
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| Micro Drainage                             | Simulation W.11.2             |                                                                                     |

### Summary of Results

|                                    |        |                    |      |
|------------------------------------|--------|--------------------|------|
| Return Period (years)              | 2      | Analysis Time Step | Fine |
| Storm Duration (mins)              | 600    | DTS Status         | ON   |
| Profile Type                       | Winter | DVD Status         | OFF  |
| Margin for Flood Risk warning (mm) | 300    | Inertia Status     | OFF  |

| PN    | Water Lev.<br>(m) | Surcharged<br>Depth (m) | Flooded<br>Vol (m <sup>3</sup> ) | Flow/<br>Capacity | Overflow<br>(l/s) | Pipe Flow<br>(l/s) | Status |
|-------|-------------------|-------------------------|----------------------------------|-------------------|-------------------|--------------------|--------|
| 1.000 | 109.237           | -0.263                  | 0.000                            | 0.04              | 0.0               | 2.9                | 0 K    |
| 1.001 | 109.104           | -0.256                  | 0.000                            | 0.05              | 0.0               | 4.1                | 0 K    |
| 1.002 | 108.869           | -0.316                  | 0.000                            | 0.06              | 0.0               | 6.9                | 0 K    |
| 1.003 | 108.788           | -0.312                  | 0.000                            | 0.07              | 0.0               | 11.1               | 0 K    |
| 2.000 | 108.733           | -0.267                  | 0.000                            | 0.03              | 0.0               | 1.8                | 0 K    |
| 2.001 | 108.595           | -0.255                  | 0.000                            | 0.05              | 0.0               | 3.5                | 0 K    |
| 1.004 | 108.361           | -0.324                  | 0.000                            | 0.05              | 0.0               | 17.0               | 0 K    |
| 1.005 | 106.276           | -0.324                  | 0.000                            | 0.04              | 0.0               | 19.5               | 0 K    |
| 3.000 | 106.308           | -0.192                  | 0.000                            | 0.05              | 0.0               | 2.2                | 0 K    |
| 3.001 | 106.000           | -0.200                  | 0.000                            | 0.03              | 0.0               | 3.7                | 0 K    |
| 1.006 | 104.860           | -0.340                  | 0.000                            | 0.14              | 0.0               | 24.5               | 0 K    |
| 1.007 | 104.757           | -1.024                  | 0.000                            | 0.00              | 0.0               | 15.4               | 0 K    |
| 1.008 | 104.767           | -0.183                  | 0.000                            | 0.08              | 0.0               | 12.8               | 0 K    |
| 1.009 | 104.765           | -0.135                  | 0.000                            | 0.04              | 0.0               | 12.2               | 0 K    |
| 1.010 | 104.234           | -0.416                  | 0.000                            | 0.02              | 0.0               | 12.4               | 0 K    |