

|                                            |                               |                                                                                     |
|--------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------|
| <b>Preece Consultants</b>                  |                               | <b>Page 1</b>                                                                       |
| 11 Hawthorn Drive<br>Towcester<br>NN12 7AE | Roseway<br>Stoke Golding      |  |
| Date 01.12.22<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)                        | 100                   |
| M5-60 (mm)                                 | 19.000                |
| Ratio R                                    | 0.400                 |
| Volumetric Runoff Coef                     | 0.850                 |
| Profile Type                               | Winter                |
| PIMP (%)                                   | 100                   |
| Areal Reduction Factor                     | 1.000                 |
| Storm Duration (mins)                      | 360                   |
| 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          | 40                    |
| 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         |

**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       |

**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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| Date 01.12.22<br>File 1716.SIM             | Designed By ndp<br>Checked By |                                                                                     |
| Micro Drainage                             | Simulation W.11.2             |                                                                                     |

### Summary of Results

|       |                                    |                         |                     |                   |                   |                    |          |
|-------|------------------------------------|-------------------------|---------------------|-------------------|-------------------|--------------------|----------|
|       | Return Period (years)              | 100                     | Analysis Time Step  |                   | Fine              |                    |          |
|       | Storm Duration (mins)              | 360                     | 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 (m³) | Flow/<br>Capacity | Overflow<br>(l/s) | Pipe Flow<br>(l/s) | Status   |
| 1.000 | 109.285                            | -0.215                  | 0.000               | 0.18              | 0.0               | 14.3               | 0 K      |
| 1.001 | 109.162                            | -0.198                  | 0.000               | 0.25              | 0.0               | 20.1               | 0 K      |
| 1.002 | 108.949                            | -0.236                  | 0.000               | 0.30              | 0.0               | 34.0               | 0 K      |
| 1.003 | 108.873                            | -0.227                  | 0.000               | 0.33              | 0.0               | 54.7               | 0 K      |
| 2.000 | 108.773                            | -0.227                  | 0.000               | 0.14              | 0.0               | 8.7                | 0 K      |
| 2.001 | 108.655                            | -0.195                  | 0.000               | 0.27              | 0.0               | 17.3               | 0 K      |
| 1.004 | 108.346                            | -0.339                  | 0.000               | 0.14              | 0.0               | 83.5               | 0 K      |
| 1.005 | 106.263                            | -0.337                  | 0.000               | 0.14              | 0.0               | 95.7               | 0 K      |
| 3.000 | 106.351                            | -0.149                  | 0.000               | 0.25              | 0.0               | 10.6               | 0 K      |
| 3.001 | 106.032                            | -0.168                  | 0.000               | 0.15              | 0.0               | 18.1               | 0 K      |
| 1.006 | 105.578                            | 0.378                   | 0.000               | 0.67              | 0.0               | 120.1              | SURCH'ED |
| 1.007 | 105.575                            | -0.206                  | 0.000               | 0.01              | 0.0               | 48.5               | 0 K      |
| 1.008 | 105.572                            | 0.622                   | 0.000               | 0.10              | 0.0               | 17.3               | SURCH'ED |
| 1.009 | 105.540                            | 0.640                   | 0.000               | 0.04              | 0.0               | 12.2               | SURCH'ED |
| 1.010 | 104.236                            | -0.414                  | 0.000               | 0.02              | 0.0               | 13.3               | 0 K      |