

### Design Settings

|                       |                   |                                      |               |
|-----------------------|-------------------|--------------------------------------|---------------|
| Rainfall Methodology  | FSR               | Maximum Time of Concentration (mins) | 30.00         |
| Return Period (years) | 10                | Maximum Rainfall (mm/hr)             | 50.0          |
| Additional Flow (%)   | 0                 | Minimum Velocity (m/s)               | 1.00          |
| FSR Region            | England and Wales | Connection Type                      | Level Soffits |
| M5-60 (mm)            | 20.000            | Minimum Backdrop Height (m)          | 0.200         |
| Ratio-R               | 0.400             | Preferred Cover Depth (m)            | 1.200         |
| CV                    | 0.750             | Include Intermediate Ground          | ✓             |
| Time of Entry (mins)  | 5.00              | Enforce best practice design rules   | ✓             |

### Nodes

| Name   | Area (ha) | T of E (mins) | Cover Level (m) | Diameter (mm) | Width (mm) | Depth (m) |
|--------|-----------|---------------|-----------------|---------------|------------|-----------|
| 1.14   | 0.008     | 5.00          | 15.050          | 450           |            | 1.050     |
| 1.15   | 0.000     |               | 15.050          | 450           |            | 1.220     |
| 1.16   | 0.011     | 5.00          | 15.123          | 450           |            | 1.453     |
| RE1.4  | 0.003     | 5.00          | 15.046          | 450           |            | 1.396     |
| 1.23   | 0.004     | 5.00          | 15.120          | 450           |            | 1.570     |
| 1.17   |           |               | 15.082          | 450           |            | 1.757     |
| 1.25   | 0.006     | 5.00          | 15.148          | 600           | 450        | 1.698     |
| 1.26   | 0.006     | 5.00          | 15.125          | 450           |            | 1.775     |
| 1.24   | 0.006     | 5.00          | 15.157          | 450           |            | 1.657     |
| 1.18   | 0.000     |               | 14.949          | 1200          |            | 1.724     |
| 1.19   | 0.025     | 5.00          | 14.787          | 1200          |            | 1.737     |
| 1.20   | 0.019     | 5.00          | 14.899          | 1200          |            | 2.729     |
| RE1.2  | 0.003     | 5.00          | 15.048          | 250           |            | 1.348     |
| RE1.3  | 0.004     | 5.00          | 15.125          | 250           |            | 1.425     |
| 1.27   | 0.006     | 5.00          | 14.993          | 450           |            | 1.693     |
| NODE-2 | 0.014     | 5.00          | 14.909          | 250           |            | 2.776     |
| 1.21   | 0.018     | 5.00          | 14.640          | 1200          |            | 2.670     |
| 1.22   | 0.016     | 5.00          | 14.778          | 1200          |            | 2.908     |
| 1.01   | 0.006     | 5.00          | 15.165          | 450           |            | 0.815     |
| 1.02   | 0.003     | 5.00          | 15.065          | 450           |            | 1.035     |
| 1.09   | 0.003     | 5.00          | 15.141          | 450           |            | 0.791     |
| 1.03   | 0.000     |               | 15.065          | 450           |            | 1.135     |
| 1.10   | 0.009     | 5.00          | 15.148          | 450           |            | 0.628     |
| 1.11   | 0.004     | 5.00          | 15.148          | 450           |            | 0.798     |
| NODE-1 | 0.000     |               | 15.065          | 300           |            | 1.304     |
| 1.12   | 0.005     | 5.00          | 15.164          | 450           |            | 1.144     |
| 1.04   | 0.000     |               | 15.065          | 450           |            | 1.365     |
| 1.05   | 0.000     |               | 15.119          | 450           |            | 1.609     |
| 1.06   | 0.008     | 5.00          | 15.052          | 450           |            | 1.642     |
| RE1.1  | 0.002     | 5.00          | 15.085          | 250           |            | 0.785     |
| 1.13   | 0.005     | 5.00          | 15.090          | 450           |            | 0.720     |
| 1.07   | 0.000     |               | 14.960          | 1200          |            | 1.730     |
| 1.08   | 0.013     | 5.00          | 14.925          | 1200          |            | 3.055     |
| CS1    | 0.000     |               | 14.867          | 1200          |            | 3.047     |
| DMH    |           |               | 14.834          | 300           |            | 3.024     |

### Links

| Name  | US Node | DS Node | Length (m) | ks (mm) / n | US IL (m) | DS IL (m) | Fall (m) | Slope (1:X) | Dia (mm) | T of C (mins) |
|-------|---------|---------|------------|-------------|-----------|-----------|----------|-------------|----------|---------------|
| 1.000 | 1.14    | 1.15    | 2.126      | 0.600       | 14.000    | 13.900    | 0.100    | 21.3        | 150      | 5.02          |
| 1.001 | 1.15    | 1.16    | 3.831      | 0.600       | 13.830    | 13.740    | 0.090    | 42.6        | 150      | 5.06          |
| 1.002 | 1.16    | 1.17    | 3.397      | 0.600       | 13.670    | 13.400    | 0.270    | 12.6        | 150      | 5.08          |
| 2.000 | RE1.4   | 1.23    | 5.320      | 0.600       | 13.650    | 13.550    | 0.100    | 53.2        | 150      | 5.06          |
| 2.001 | 1.23    | 1.17    | 2.963      | 0.600       | 13.550    | 13.400    | 0.150    | 19.8        | 150      | 5.09          |
| 1.003 | 1.17    | 1.18    | 9.627      | 0.600       | 13.325    | 13.225    | 0.100    | 96.3        | 150      | 5.24          |
| 3.000 | 1.25    | 1.26    | 5.591      | 0.600       | 13.450    | 13.350    | 0.100    | 55.9        | 150      | 5.07          |

| Name  | US Node | DS Node | Vel (m/s) | Cap (l/s) | Flow (l/s) | US Depth (m) | DS Depth (m) | Σ Area (ha) | Pro Depth (mm) | Pro Velocity (m/s) |
|-------|---------|---------|-----------|-----------|------------|--------------|--------------|-------------|----------------|--------------------|
| 1.000 | 1.14    | 1.15    | 2.194     | 38.8      | 1.1        | 0.900        | 1.000        | 0.008       | 17             | 0.961              |
| 1.001 | 1.15    | 1.16    | 1.547     | 27.3      | 1.1        | 1.070        | 1.233        | 0.008       | 20             | 0.747              |
| 1.002 | 1.16    | 1.17    | 2.856     | 50.5      | 2.6        | 1.303        | 1.532        | 0.019       | 23             | 1.508              |
| 2.000 | RE1.4   | 1.23    | 1.382     | 24.4      | 0.4        | 1.246        | 1.420        | 0.003       | 14             | 0.519              |
| 2.001 | 1.23    | 1.17    | 2.276     | 40.2      | 0.9        | 1.420        | 1.532        | 0.007       | 16             | 0.953              |
| 1.003 | 1.17    | 1.18    | 1.024     | 18.1      | 3.5        | 1.607        | 1.574        | 0.026       | 45             | 0.795              |
| 3.000 | 1.25    | 1.26    | 1.348     | 23.8      | 0.8        | 1.548        | 1.625        | 0.006       | 19             | 0.626              |

## Links

| Name   | US Node | DS Node | Length (m) | ks (mm) / n | US IL (m) | DS IL (m) | Fall (m) | Slope (1:X) | Dia (mm) | T of C (mins) |
|--------|---------|---------|------------|-------------|-----------|-----------|----------|-------------|----------|---------------|
| 3.001  | 1.26    | 1.18    | 4.834      | 0.600       | 13.350    | 13.225    | 0.125    | 38.7        | 150      | 5.12          |
| 4.000  | 1.24    | 1.18    | 4.093      | 0.600       | 13.500    | 13.225    | 0.275    | 14.9        | 150      | 5.03          |
| 1.004  | 1.18    | 1.19    | 7.282      | 0.600       | 13.225    | 13.125    | 0.100    | 72.8        | 150      | 5.35          |
| 1.005  | 1.19    | 1.20    | 24.622     | 0.600       | 13.050    | 12.170    | 0.880    | 28.0        | 225      | 5.51          |
| 1.006  | 1.20    | NODE-2  | 5.601      | 0.600       | 12.170    | 12.133    | 0.037    | 150.0       | 225      | 5.60          |
| 5.000  | RE1.2   | 1.27    | 16.994     | 0.600       | 13.700    | 13.370    | 0.330    | 51.5        | 150      | 5.20          |
| 6.000  | RE1.3   | 1.27    | 9.612      | 0.600       | 13.700    | 13.370    | 0.330    | 29.1        | 150      | 5.09          |
| 5.001  | 1.27    | NODE-2  | 6.060      | 0.600       | 13.300    | 12.208    | 1.092    | 5.5         | 150      | 5.23          |
| 1.007  | NODE-2  | 1.21    | 24.246     | 0.600       | 12.133    | 11.970    | 0.163    | 148.7       | 225      | 5.98          |
| 1.008  | 1.21    | 1.22    | 12.149     | 0.600       | 11.970    | 11.870    | 0.100    | 121.5       | 225      | 6.15          |
| 1.009  | 1.22    | CS1     | 4.721      | 0.600       | 11.870    | 11.820    | 0.050    | 94.4        | 225      | 6.21          |
| 7.000  | 1.01    | 1.02    | 3.989      | 0.600       | 14.350    | 14.100    | 0.250    | 16.0        | 150      | 5.03          |
| 7.001  | 1.02    | 1.03    | 5.582      | 0.600       | 14.030    | 13.930    | 0.100    | 55.8        | 150      | 5.10          |
| 8.000  | 1.09    | 1.03    | 2.812      | 0.600       | 14.350    | 14.000    | 0.350    | 8.0         | 150      | 5.01          |
| 7.002  | 1.03    | NODE-1  | 17.618     | 0.600       | 13.930    | 13.761    | 0.169    | 104.2       | 150      | 5.39          |
| 9.000  | 1.10    | 1.11    | 3.539      | 0.600       | 14.520    | 14.420    | 0.100    | 35.4        | 150      | 5.03          |
| 9.001  | 1.11    | NODE-1  | 4.104      | 0.600       | 14.350    | 13.761    | 0.589    | 7.0         | 150      | 5.05          |
| 7.003  | NODE-1  | 1.04    | 6.275      | 0.600       | 13.761    | 13.700    | 0.061    | 102.9       | 150      | 5.50          |
| 10.000 | 1.12    | 1.04    | 2.827      | 0.600       | 14.020    | 13.770    | 0.250    | 11.3        | 150      | 5.02          |
| 7.004  | 1.04    | 1.05    | 8.704      | 0.600       | 13.700    | 13.510    | 0.190    | 45.8        | 150      | 5.60          |
| 7.005  | 1.05    | 1.06    | 8.294      | 0.600       | 13.510    | 13.410    | 0.100    | 82.9        | 150      | 5.72          |
| 7.006  | 1.06    | 1.07    | 6.592      | 0.600       | 13.410    | 13.305    | 0.105    | 62.8        | 150      | 5.81          |
| 11.000 | RE1.1   | 1.07    | 7.970      | 0.600       | 14.300    | 14.170    | 0.130    | 61.3        | 150      | 5.10          |
| 12.000 | 1.13    | 1.07    | 3.825      | 0.600       | 14.370    | 14.170    | 0.200    | 19.1        | 150      | 5.03          |
| 7.007  | 1.07    | 1.08    | 22.215     | 0.600       | 13.230    | 13.080    | 0.150    | 148.1       | 225      | 6.15          |
| 7.008  | 1.08    | CS1     | 3.828      | 0.600       | 11.870    | 11.820    | 0.050    | 76.6        | 225      | 6.20          |
| 1.010  | CS1     | DMH     | 1.417      | 0.600       | 11.820    | 11.810    | 0.010    | 141.7       | 225      | 6.23          |

| Name   | US Node | DS Node | Vel (m/s) | Cap (l/s) | Flow (l/s) | US Depth (m) | DS Depth (m) | Σ Area (ha) | Pro Depth (mm) | Pro Velocity (m/s) |
|--------|---------|---------|-----------|-----------|------------|--------------|--------------|-------------|----------------|--------------------|
| 3.001  | 1.26    | 1.18    | 1.623     | 28.7      | 1.6        | 1.625        | 1.574        | 0.012       | 24             | 0.882              |
| 4.000  | 1.24    | 1.18    | 2.624     | 46.4      | 0.8        | 1.507        | 1.574        | 0.006       | 14             | 0.992              |
| 1.004  | 1.18    | 1.19    | 1.179     | 20.8      | 6.0        | 1.574        | 1.512        | 0.044       | 55             | 1.019              |
| 1.005  | 1.19    | 1.20    | 2.483     | 98.7      | 9.4        | 1.512        | 2.504        | 0.069       | 46             | 1.569              |
| 1.006  | 1.20    | NODE-2  | 1.065     | 42.3      | 11.9       | 2.504        | 2.551        | 0.088       | 81             | 0.917              |
| 5.000  | RE1.2   | 1.27    | 1.405     | 24.8      | 0.4        | 1.198        | 1.473        | 0.003       | 13             | 0.512              |
| 6.000  | RE1.3   | 1.27    | 1.872     | 33.1      | 0.5        | 1.275        | 1.473        | 0.004       | 13             | 0.685              |
| 5.001  | 1.27    | NODE-2  | 4.306     | 76.1      | 1.8        | 1.543        | 2.551        | 0.013       | 16             | 1.767              |
| 1.007  | NODE-2  | 1.21    | 1.070     | 42.5      | 15.6       | 2.551        | 2.445        | 0.115       | 94             | 0.990              |
| 1.008  | 1.21    | 1.22    | 1.185     | 47.1      | 18.0       | 2.445        | 2.683        | 0.133       | 96             | 1.107              |
| 1.009  | 1.22    | CS1     | 1.346     | 53.5      | 20.2       | 2.683        | 2.822        | 0.149       | 95             | 1.251              |
| 7.000  | 1.01    | 1.02    | 2.534     | 44.8      | 0.8        | 0.665        | 0.815        | 0.006       | 14             | 0.985              |
| 7.001  | 1.02    | 1.03    | 1.349     | 23.8      | 1.2        | 0.885        | 0.985        | 0.009       | 23             | 0.709              |
| 8.000  | 1.09    | 1.03    | 3.577     | 63.2      | 0.4        | 0.641        | 0.915        | 0.003       | 8              | 0.977              |
| 7.002  | 1.03    | NODE-1  | 0.984     | 17.4      | 1.6        | 0.985        | 1.154        | 0.012       | 31             | 0.615              |
| 9.000  | 1.10    | 1.11    | 1.697     | 30.0      | 1.2        | 0.478        | 0.578        | 0.009       | 21             | 0.836              |
| 9.001  | 1.11    | NODE-1  | 3.841     | 67.9      | 1.8        | 0.648        | 1.154        | 0.013       | 17             | 1.651              |
| 7.003  | NODE-1  | 1.04    | 0.990     | 17.5      | 3.4        | 1.154        | 1.215        | 0.025       | 45             | 0.769              |
| 10.000 | 1.12    | 1.04    | 3.012     | 53.2      | 0.7        | 0.994        | 1.145        | 0.005       | 12             | 1.041              |
| 7.004  | 1.04    | 1.05    | 1.490     | 26.3      | 4.1        | 1.215        | 1.459        | 0.030       | 40             | 1.081              |
| 7.005  | 1.05    | 1.06    | 1.104     | 19.5      | 4.1        | 1.459        | 1.492        | 0.030       | 47             | 0.876              |
| 7.006  | 1.06    | 1.07    | 1.271     | 22.5      | 5.1        | 1.492        | 1.505        | 0.038       | 49             | 1.035              |
| 11.000 | RE1.1   | 1.07    | 1.286     | 22.7      | 0.3        | 0.635        | 0.640        | 0.002       | 11             | 0.425              |
| 12.000 | 1.13    | 1.07    | 2.313     | 40.9      | 0.7        | 0.570        | 0.640        | 0.005       | 14             | 0.874              |
| 7.007  | 1.07    | 1.08    | 1.072     | 42.6      | 6.1        | 1.505        | 1.620        | 0.045       | 58             | 0.767              |
| 7.008  | 1.08    | CS1     | 1.496     | 59.5      | 7.9        | 2.830        | 2.822        | 0.058       | 55             | 1.043              |
| 1.010  | CS1     | DMH     | 1.096     | 43.6      | 28.1       | 2.822        | 2.799        | 0.207       | 131            | 1.162              |

## Manhole Schedule

| Node | CL (m) | Depth (m) | Dia (mm) | Width (mm) | Node Type | Connections                                                                         | Link  | IL (m) | Dia (mm) |
|------|--------|-----------|----------|------------|-----------|-------------------------------------------------------------------------------------|-------|--------|----------|
| 1.14 | 15.050 | 1.050     | 450      |            | Manhole   |                                                                                     |       |        |          |
|      |        |           |          |            |           |  |       |        |          |
|      |        |           |          |            |           | 0                                                                                   | 1.000 | 14.000 | 150      |
| 1.15 | 15.050 | 1.220     | 450      |            | Manhole   |                                                                                     |       |        |          |
|      |        |           |          |            |           |  |       |        |          |
|      |        |           |          |            |           | 1                                                                                   | 1.000 | 13.900 | 150      |
|      |        |           |          |            |           | 0                                                                                   | 1.001 | 13.830 | 150      |

**Manhole Schedule**

| Node   | CL<br>(m) | Depth<br>(m) | Dia<br>(mm) | Width<br>(mm) | Node<br>Type | Connections                                                                         | Link | IL<br>(m) | Dia<br>(mm) |     |
|--------|-----------|--------------|-------------|---------------|--------------|-------------------------------------------------------------------------------------|------|-----------|-------------|-----|
| 1.16   | 15.123    | 1.453        | 450         |               | Manhole      |    | 1    | 1.001     | 13.740      | 150 |
| RE1.4  | 15.046    | 1.396        | 450         |               | Manhole      |    | 0    | 1.002     | 13.670      | 150 |
|        |           |              |             |               |              |    | 0    | 2.000     | 13.650      | 150 |
| 1.23   | 15.120    | 1.570        | 450         |               | Manhole      |    | 1    | 2.000     | 13.550      | 150 |
| 1.17   | 15.082    | 1.757        | 450         |               | Manhole      |    | 0    | 2.001     | 13.550      | 150 |
|        |           |              |             |               |              |    | 1    | 2.001     | 13.400      | 150 |
|        |           |              |             |               |              |    | 2    | 1.002     | 13.400      | 150 |
| 1.25   | 15.148    | 1.698        | 600         | 450           | Manhole      |    | 0    | 1.003     | 13.325      | 150 |
| 1.26   | 15.125    | 1.775        | 450         |               | Manhole      |    | 1    | 3.000     | 13.350      | 150 |
| 1.24   | 15.157    | 1.657        | 450         |               | Manhole      |    | 0    | 3.001     | 13.350      | 150 |
|        |           |              |             |               |              |  | 0    | 4.000     | 13.500      | 150 |
| 1.18   | 14.949    | 1.724        | 1200        |               | Manhole      |  | 1    | 4.000     | 13.225      | 150 |
| 1.19   | 14.787    | 1.737        | 1200        |               | Manhole      |  | 2    | 3.001     | 13.225      | 150 |
|        |           |              |             |               |              |  | 3    | 1.003     | 13.225      | 150 |
|        |           |              |             |               |              |  | 0    | 1.004     | 13.225      | 150 |
|        |           |              |             |               |              |  | 0    | 1.004     | 13.125      | 150 |
| 1.20   | 14.899    | 2.729        | 1200        |               | Manhole      |  | 1    | 1.005     | 13.050      | 225 |
| RE1.2  | 15.048    | 1.348        | 250         |               | Manhole      |  | 1    | 1.005     | 12.170      | 225 |
|        |           |              |             |               |              |  | 0    | 1.006     | 12.170      | 225 |
| RE1.3  | 15.125    | 1.425        | 250         |               | Manhole      |  | 0    | 5.000     | 13.700      | 150 |
| 1.27   | 14.993    | 1.693        | 450         |               | Manhole      |  | 1    | 6.000     | 13.370      | 150 |
| NODE-2 | 14.909    | 2.776        | 250         |               | Manhole      |  | 2    | 5.000     | 13.370      | 150 |
|        |           |              |             |               |              |  | 0    | 5.001     | 13.300      | 150 |
|        |           |              |             |               |              |  | 1    | 5.001     | 12.208      | 150 |
|        |           |              |             |               |              |  | 2    | 1.006     | 12.133      | 225 |
| 1.21   | 14.640    | 2.670        | 1200        |               | Manhole      |  | 1    | 1.007     | 12.133      | 225 |
| 1.22   | 14.778    | 2.908        | 1200        |               | Manhole      |  | 1    | 1.007     | 11.970      | 225 |
|        |           |              |             |               |              |  | 0    | 1.008     | 11.970      | 225 |
| 1.01   | 15.165    | 0.815        | 450         |               | Manhole      |  | 1    | 1.008     | 11.870      | 225 |
| 1.01   | 15.165    | 0.815        | 450         |               | Manhole      |  | 0    | 1.009     | 11.870      | 225 |
|        |           |              |             |               |              |  | 0    | 7.000     | 14.350      | 150 |

**Manhole Schedule**

| Node   | CL<br>(m) | Depth<br>(m) | Dia<br>(mm) | Width<br>(mm) | Node<br>Type | Connections                                                                         | Link | IL<br>(m) | Dia<br>(mm) |     |
|--------|-----------|--------------|-------------|---------------|--------------|-------------------------------------------------------------------------------------|------|-----------|-------------|-----|
| 1.02   | 15.065    | 1.035        | 450         |               | Manhole      |    | 1    | 7.000     | 14.100      | 150 |
|        |           |              |             |               |              |    | 0    | 7.001     | 14.030      | 150 |
| 1.09   | 15.141    | 0.791        | 450         |               | Manhole      |    |      |           |             |     |
|        |           |              |             |               |              |    | 0    | 8.000     | 14.350      | 150 |
| 1.03   | 15.065    | 1.135        | 450         |               | Manhole      |    | 1    | 8.000     | 14.000      | 150 |
|        |           |              |             |               |              |    | 2    | 7.001     | 13.930      | 150 |
|        |           |              |             |               |              |    | 0    | 7.002     | 13.930      | 150 |
| 1.10   | 15.148    | 0.628        | 450         |               | Manhole      |    |      |           |             |     |
|        |           |              |             |               |              |   | 0    | 9.000     | 14.520      | 150 |
| 1.11   | 15.148    | 0.798        | 450         |               | Manhole      |  | 1    | 9.000     | 14.420      | 150 |
|        |           |              |             |               |              |  | 0    | 9.001     | 14.350      | 150 |
|        |           |              |             |               |              |  | 1    | 9.001     | 13.761      | 150 |
| NODE-1 | 15.065    | 1.304        | 300         |               | Manhole      |  | 2    | 7.002     | 13.761      | 150 |
|        |           |              |             |               |              |  | 0    | 7.003     | 13.761      | 150 |
| 1.12   | 15.164    | 1.144        | 450         |               | Manhole      |  |      |           |             |     |
|        |           |              |             |               |              |  | 0    | 10.000    | 14.020      | 150 |
| 1.04   | 15.065    | 1.365        | 450         |               | Manhole      |  | 1    | 10.000    | 13.770      | 150 |
|        |           |              |             |               |              |  | 2    | 7.003     | 13.700      | 150 |
|        |           |              |             |               |              |  | 0    | 7.004     | 13.700      | 150 |
| 1.05   | 15.119    | 1.609        | 450         |               | Manhole      |  | 1    | 7.004     | 13.510      | 150 |
|        |           |              |             |               |              |  | 0    | 7.005     | 13.510      | 150 |
| 1.06   | 15.052    | 1.642        | 450         |               | Manhole      |  | 1    | 7.005     | 13.410      | 150 |
|        |           |              |             |               |              |  | 0    | 7.006     | 13.410      | 150 |
| RE1.1  | 15.085    | 0.785        | 250         |               | Manhole      |  |      |           |             |     |
|        |           |              |             |               |              |  | 0    | 11.000    | 14.300      | 150 |
| 1.13   | 15.090    | 0.720        | 450         |               | Manhole      |  |      |           |             |     |
|        |           |              |             |               |              |  | 0    | 12.000    | 14.370      | 150 |
| 1.07   | 14.960    | 1.730        | 1200        |               | Manhole      |  | 1    | 12.000    | 14.170      | 150 |
|        |           |              |             |               |              |  | 2    | 11.000    | 14.170      | 150 |
|        |           |              |             |               |              |  | 3    | 7.006     | 13.305      | 150 |
|        |           |              |             |               |              |  | 0    | 7.007     | 13.230      | 225 |
| 1.08   | 14.925    | 3.055        | 1200        |               | Manhole      |  | 1    | 7.007     | 13.080      | 225 |
|        |           |              |             |               |              |  | 0    | 7.008     | 11.870      | 225 |
| CS1    | 14.867    | 3.047        | 1200        |               | Manhole      |  | 1    | 7.008     | 11.820      | 225 |
|        |           |              |             |               |              |  | 2    | 1.009     | 11.820      | 225 |
| DMH    | 14.834    | 3.024        | 300         |               | Manhole      |  |      |           |             |     |
|        |           |              |             |               |              |  | 0    | 1.010     | 11.820      | 225 |
|        |           |              |             |               |              |  | 1    | 1.010     | 11.810      | 225 |

**Simulation Settings**

|                      |                   |                   |        |                            |      |
|----------------------|-------------------|-------------------|--------|----------------------------|------|
| Rainfall Methodology | FSR               | Summer CV         | 0.750  | Drain Down Time (mins)     | 240  |
| FSR Region           | England and Wales | Winter CV         | 0.840  | Additional Storage (m³/ha) | 20.0 |
| M5-60 (mm)           | 20.000            | Analysis Speed    | Normal | Check Discharge Rate(s)    | x    |
| Ratio-R              | 0.400             | Skip Steady State | ✓      | Check Discharge Volume     | x    |

| Depth | Area              | Inf Area          | Depth | Area              | Inf Area          | Depth | Area              | Inf Area          |
|-------|-------------------|-------------------|-------|-------------------|-------------------|-------|-------------------|-------------------|
| (m)   | (m <sup>2</sup> ) | (m <sup>2</sup> ) | (m)   | (m <sup>2</sup> ) | (m <sup>2</sup> ) | (m)   | (m <sup>2</sup> ) | (m <sup>2</sup> ) |
| 0.000 | 24.0              | 24.0              | 1.200 | 24.0              | 48.0              | 1.201 | 0.0               | 48.0              |

**Results for 1 year Critical Storm Duration. Lowest mass balance: 97.68%**

| Node Event       | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Flood (m³) | Status |
|------------------|---------|-------------|-----------|-----------|--------------|------------|--------|
| 15 minute winter | 1.14    | 10          | 14.019    | 0.019     | 1.1          | 0.0000     | OK     |
| 15 minute winter | 1.15    | 11          | 13.851    | 0.021     | 1.1          | 0.0000     | OK     |
| 15 minute winter | 1.16    | 10          | 13.695    | 0.025     | 2.7          | 0.0000     | OK     |
| 15 minute summer | RE1.4   | 11          | 13.663    | 0.013     | 0.4          | 0.0000     | OK     |
| 15 minute winter | 1.23    | 10          | 13.567    | 0.017     | 1.0          | 0.0000     | OK     |
| 15 minute winter | 1.17    | 10          | 13.372    | 0.047     | 3.7          | 0.0000     | OK     |
| 15 minute summer | 1.25    | 11          | 13.469    | 0.019     | 0.8          | 0.0000     | OK     |
| 15 minute summer | 1.26    | 11          | 13.374    | 0.024     | 1.6          | 0.0000     | OK     |
| 15 minute summer | 1.24    | 11          | 13.514    | 0.014     | 0.8          | 0.0000     | OK     |
| 15 minute winter | 1.18    | 11          | 13.284    | 0.059     | 6.0          | 0.0000     | OK     |
| 15 minute winter | 1.19    | 11          | 13.097    | 0.047     | 9.4          | 0.0000     | OK     |
| 15 minute winter | 1.20    | 11          | 12.265    | 0.095     | 12.0         | 0.0000     | OK     |
| 15 minute winter | RE1.2   | 11          | 13.713    | 0.013     | 0.4          | 0.0000     | OK     |
| 15 minute winter | RE1.3   | 10          | 13.714    | 0.014     | 0.6          | 0.0000     | OK     |
| 15 minute winter | 1.27    | 10          | 13.316    | 0.016     | 1.7          | 0.0000     | OK     |
| 15 minute winter | NODE-2  | 11          | 12.231    | 0.098     | 15.6         | 0.0000     | OK     |
| 15 minute winter | 1.21    | 11          | 12.075    | 0.105     | 18.0         | 0.0000     | OK     |
| 15 minute winter | 1.22    | 11          | 11.979    | 0.109     | 20.1         | 0.0000     | OK     |
| 15 minute summer | 1.01    | 11          | 14.364    | 0.014     | 0.8          | 0.0000     | OK     |
| 15 minute summer | 1.02    | 11          | 14.053    | 0.023     | 1.2          | 0.0000     | OK     |
| 15 minute summer | 1.09    | 11          | 14.359    | 0.009     | 0.4          | 0.0000     | OK     |
| 15 minute winter | 1.03    | 11          | 13.961    | 0.031     | 1.6          | 0.0000     | OK     |
| 15 minute winter | 1.10    | 10          | 14.542    | 0.022     | 1.3          | 0.0000     | OK     |
| 15 minute winter | 1.11    | 10          | 14.367    | 0.017     | 1.9          | 0.0000     | OK     |
| 15 minute winter | NODE-1  | 11          | 13.808    | 0.047     | 3.4          | 0.0000     | OK     |
| 15 minute winter | 1.12    | 11          | 14.033    | 0.013     | 0.7          | 0.0000     | OK     |
| 15 minute winter | 1.04    | 11          | 13.741    | 0.041     | 4.1          | 0.0000     | OK     |
| 15 minute winter | 1.05    | 11          | 13.559    | 0.049     | 4.1          | 0.0000     | OK     |
| 15 minute winter | 1.06    | 11          | 13.463    | 0.053     | 5.2          | 0.0000     | OK     |
| 15 minute winter | RE1.1   | 11          | 14.312    | 0.012     | 0.3          | 0.0000     | OK     |
| 15 minute winter | 1.13    | 11          | 14.384    | 0.014     | 0.7          | 0.0000     | OK     |
| 15 minute winter | 1.07    | 11          | 13.288    | 0.058     | 6.2          | 0.0000     | OK     |
| 15 minute winter | 1.08    | 11          | 11.931    | 0.061     | 7.7          | 0.0000     | OK     |
| 30 minute winter | CS1     | 24          | 11.558    | -0.262    | 21.9         | 0.0000     | OK     |

  

| Link Event (Outflow) | US Node | Link   | DS Node | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|----------------------|---------|--------|---------|---------------|----------------|----------|---------------|--------------------|
| 15 minute winter     | 1.14    | 1.000  | 1.15    | 1.1           | 0.922          | 0.028    | 0.0025        |                    |
| 15 minute winter     | 1.15    | 1.001  | 1.16    | 1.1           | 0.735          | 0.040    | 0.0057        |                    |
| 15 minute winter     | 1.16    | 1.002  | 1.17    | 2.7           | 1.453          | 0.053    | 0.0063        |                    |
| 15 minute summer     | RE1.4   | 2.000  | 1.23    | 0.4           | 0.445          | 0.016    | 0.0048        |                    |
| 15 minute winter     | 1.23    | 2.001  | 1.17    | 1.0           | 0.926          | 0.024    | 0.0031        |                    |
| 15 minute winter     | 1.17    | 1.003  | 1.18    | 3.6           | 0.654          | 0.200    | 0.0533        |                    |
| 15 minute summer     | 1.25    | 3.000  | 1.26    | 0.8           | 0.518          | 0.034    | 0.0087        |                    |
| 15 minute winter     | 1.26    | 3.001  | 1.18    | 1.6           | 0.483          | 0.056    | 0.0200        |                    |
| 15 minute summer     | 1.24    | 4.000  | 1.18    | 0.8           | 0.595          | 0.017    | 0.0145        |                    |
| 15 minute winter     | 1.18    | 1.004  | 1.19    | 6.0           | 0.979          | 0.289    | 0.0448        |                    |
| 15 minute winter     | 1.19    | 1.005  | 1.20    | 9.4           | 0.888          | 0.095    | 0.2679        |                    |
| 15 minute winter     | 1.20    | 1.006  | NODE-2  | 11.9          | 0.740          | 0.282    | 0.0905        |                    |
| 15 minute winter     | RE1.2   | 5.000  | 1.27    | 0.4           | 0.520          | 0.016    | 0.0130        |                    |
| 15 minute winter     | RE1.3   | 6.000  | 1.27    | 0.6           | 0.701          | 0.017    | 0.0077        |                    |
| 15 minute winter     | 1.27    | 5.001  | NODE-2  | 1.7           | 1.691          | 0.023    | 0.0080        |                    |
| 15 minute winter     | NODE-2  | 1.007  | 1.21    | 15.7          | 0.906          | 0.368    | 0.4190        |                    |
| 15 minute winter     | 1.21    | 1.008  | 1.22    | 18.0          | 0.970          | 0.382    | 0.2253        |                    |
| 15 minute winter     | 1.22    | 1.009  | CS1     | 20.0          | 1.148          | 0.374    | 0.0822        |                    |
| 15 minute summer     | 1.01    | 7.000  | 1.02    | 0.8           | 0.951          | 0.018    | 0.0034        |                    |
| 15 minute summer     | 1.02    | 7.001  | 1.03    | 1.2           | 0.573          | 0.050    | 0.0119        |                    |
| 15 minute summer     | 1.09    | 8.000  | 1.03    | 0.4           | 0.979          | 0.006    | 0.0011        |                    |
| 15 minute winter     | 1.03    | 7.002  | NODE-1  | 1.6           | 0.439          | 0.092    | 0.0648        |                    |
| 15 minute winter     | 1.10    | 9.000  | 1.11    | 1.3           | 0.816          | 0.043    | 0.0055        |                    |
| 15 minute winter     | 1.11    | 9.001  | NODE-1  | 1.9           | 0.894          | 0.027    | 0.0120        |                    |
| 15 minute winter     | NODE-1  | 7.003  | 1.04    | 3.4           | 0.787          | 0.194    | 0.0271        |                    |
| 15 minute winter     | 1.12    | 10.000 | 1.04    | 0.7           | 1.026          | 0.013    | 0.0019        |                    |
| 15 minute winter     | 1.04    | 7.004  | 1.05    | 4.1           | 0.933          | 0.156    | 0.0385        |                    |
| 15 minute winter     | 1.05    | 7.005  | 1.06    | 4.1           | 0.787          | 0.211    | 0.0434        |                    |
| 15 minute winter     | 1.06    | 7.006  | 1.07    | 5.2           | 0.990          | 0.231    | 0.0346        |                    |
| 15 minute winter     | RE1.1   | 11.000 | 1.07    | 0.3           | 0.446          | 0.013    | 0.0053        |                    |
| 15 minute winter     | 1.13    | 12.000 | 1.07    | 0.7           | 0.858          | 0.017    | 0.0031        |                    |
| 15 minute winter     | 1.07    | 7.007  | 1.08    | 6.0           | 0.756          | 0.142    | 0.1777        |                    |
| 15 minute winter     | 1.08    | 7.008  | CS1     | 7.6           | 0.958          | 0.129    | 0.0306        |                    |
| 15 minute summer     | CS1     | 1.010  | DMH     | 0.0           | 0.000          | 0.000    | 0.0000        |                    |

**Results for 1 year Critical Storm Duration. Lowest mass balance: 97.68%**

| Node Event           |         | US Node      | Peak (mins) | Level (m)     | Depth (m)      | Inflow (l/s) | Flood (m³)    | Status             |
|----------------------|---------|--------------|-------------|---------------|----------------|--------------|---------------|--------------------|
| 15 minute summer     |         | DMH          | 1           | 11.810        | 0.000          | 0.0          | 0.0000        | OK                 |
| Link Event (Outflow) | US Node | Link         | DS Node     | Outflow (l/s) | Velocity (m/s) | Flow/Cap     | Link Vol (m³) | Discharge Vol (m³) |
| 30 minute winter     | CS1     | Infiltration |             | 13.5          |                |              |               |                    |
| 15 minute summer     | DMH     | Weir         | CS1         | 0.0           |                |              |               | 0.0                |

**Results for 10 year Critical Storm Duration. Lowest mass balance: 97.68%**

| Node Event       | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Flood (m³) | Status |
|------------------|---------|-------------|-----------|-----------|--------------|------------|--------|
| 15 minute winter | 1.14    | 10          | 14.027    | 0.027     | 2.2          | 0.0000     | OK     |
| 15 minute winter | 1.15    | 10          | 13.861    | 0.031     | 2.2          | 0.0000     | OK     |
| 15 minute winter | 1.16    | 10          | 13.705    | 0.035     | 5.2          | 0.0000     | OK     |
| 15 minute winter | RE1.4   | 11          | 13.669    | 0.019     | 0.8          | 0.0000     | OK     |
| 15 minute winter | 1.23    | 10          | 13.574    | 0.024     | 1.9          | 0.0000     | OK     |
| 15 minute winter | 1.17    | 10          | 13.394    | 0.069     | 7.0          | 0.0000     | OK     |
| 15 minute summer | 1.25    | 10          | 13.477    | 0.026     | 1.6          | 0.0000     | OK     |
| 15 minute winter | 1.26    | 10          | 13.384    | 0.034     | 3.2          | 0.0000     | OK     |
| 15 minute summer | 1.24    | 10          | 13.519    | 0.019     | 1.6          | 0.0000     | OK     |
| 15 minute winter | 1.18    | 11          | 13.313    | 0.088     | 11.7         | 0.0000     | OK     |
| 15 minute winter | 1.19    | 11          | 13.115    | 0.065     | 18.2         | 0.0000     | OK     |
| 15 minute winter | 1.20    | 11          | 12.318    | 0.148     | 23.3         | 0.0000     | OK     |
| 15 minute winter | RE1.2   | 11          | 13.719    | 0.019     | 0.8          | 0.0000     | OK     |
| 15 minute winter | RE1.3   | 10          | 13.719    | 0.019     | 1.1          | 0.0000     | OK     |
| 15 minute winter | 1.27    | 10          | 13.322    | 0.022     | 3.5          | 0.0000     | OK     |
| 15 minute winter | NODE-2  | 11          | 12.282    | 0.149     | 30.1         | 0.0000     | OK     |
| 15 minute winter | 1.21    | 11          | 12.135    | 0.165     | 34.9         | 0.0000     | OK     |
| 15 minute winter | 1.22    | 11          | 12.038    | 0.168     | 39.0         | 0.0000     | OK     |
| 15 minute summer | 1.01    | 10          | 14.370    | 0.020     | 1.6          | 0.0000     | OK     |
| 15 minute winter | 1.02    | 10          | 14.063    | 0.033     | 2.4          | 0.0000     | OK     |
| 15 minute winter | 1.09    | 10          | 14.362    | 0.012     | 0.8          | 0.0000     | OK     |
| 15 minute winter | 1.03    | 11          | 13.973    | 0.043     | 3.2          | 0.0000     | OK     |
| 15 minute winter | 1.10    | 10          | 14.551    | 0.031     | 2.5          | 0.0000     | OK     |
| 15 minute winter | 1.11    | 10          | 14.373    | 0.023     | 3.6          | 0.0000     | OK     |
| 15 minute winter | NODE-1  | 11          | 13.830    | 0.069     | 6.7          | 0.0000     | OK     |
| 15 minute winter | 1.12    | 10          | 14.038    | 0.018     | 1.4          | 0.0000     | OK     |
| 15 minute winter | 1.04    | 11          | 13.759    | 0.059     | 7.9          | 0.0000     | OK     |
| 15 minute winter | 1.05    | 11          | 13.582    | 0.072     | 8.0          | 0.0000     | OK     |
| 15 minute winter | 1.06    | 11          | 13.488    | 0.078     | 10.1         | 0.0000     | OK     |
| 15 minute winter | RE1.1   | 11          | 14.316    | 0.016     | 0.5          | 0.0000     | OK     |
| 15 minute winter | 1.13    | 10          | 14.390    | 0.020     | 1.4          | 0.0000     | OK     |
| 15 minute winter | 1.07    | 11          | 13.314    | 0.084     | 12.0         | 0.0000     | OK     |
| 15 minute winter | 1.08    | 11          | 11.959    | 0.089     | 15.2         | 0.0000     | OK     |
| 30 minute winter | CS1     | 23          | 11.834    | 0.014     | 42.1         | 0.0000     | OK     |

  

| Link Event (Outflow) | US Node | Link   | DS Node | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|----------------------|---------|--------|---------|---------------|----------------|----------|---------------|--------------------|
| 15 minute winter     | 1.14    | 1.000  | 1.15    | 2.2           | 1.108          | 0.056    | 0.0042        |                    |
| 15 minute winter     | 1.15    | 1.001  | 1.16    | 2.2           | 0.886          | 0.079    | 0.0094        |                    |
| 15 minute winter     | 1.16    | 1.002  | 1.17    | 5.1           | 1.725          | 0.102    | 0.0101        |                    |
| 15 minute winter     | RE1.4   | 2.000  | 1.23    | 0.8           | 0.539          | 0.033    | 0.0080        |                    |
| 15 minute winter     | 1.23    | 2.001  | 1.17    | 1.9           | 1.114          | 0.047    | 0.0050        |                    |
| 15 minute winter     | 1.17    | 1.003  | 1.18    | 7.0           | 0.749          | 0.384    | 0.0894        |                    |
| 15 minute summer     | 1.25    | 3.000  | 1.26    | 1.6           | 0.631          | 0.066    | 0.0141        |                    |
| 15 minute winter     | 1.26    | 3.001  | 1.18    | 3.2           | 0.495          | 0.110    | 0.0329        |                    |
| 15 minute summer     | 1.24    | 4.000  | 1.18    | 1.6           | 0.672          | 0.034    | 0.0241        |                    |
| 15 minute winter     | 1.18    | 1.004  | 1.19    | 11.6          | 1.145          | 0.556    | 0.0737        |                    |
| 15 minute winter     | 1.19    | 1.005  | 1.20    | 18.1          | 0.998          | 0.183    | 0.4562        |                    |
| 15 minute winter     | 1.20    | 1.006  | NODE-2  | 23.2          | 0.837          | 0.548    | 0.1553        |                    |
| 15 minute winter     | RE1.2   | 5.000  | 1.27    | 0.8           | 0.640          | 0.032    | 0.0212        |                    |
| 15 minute winter     | RE1.3   | 6.000  | 1.27    | 1.1           | 0.848          | 0.032    | 0.0121        |                    |
| 15 minute winter     | 1.27    | 5.001  | NODE-2  | 3.4           | 1.744          | 0.045    | 0.0308        |                    |
| 15 minute winter     | NODE-2  | 1.007  | 1.21    | 30.3          | 1.025          | 0.713    | 0.7164        |                    |
| 15 minute winter     | 1.21    | 1.008  | 1.22    | 34.9          | 1.108          | 0.740    | 0.3824        |                    |
| 15 minute winter     | 1.22    | 1.009  | CS1     | 38.9          | 1.341          | 0.727    | 0.1366        |                    |
| 15 minute winter     | 1.01    | 7.000  | 1.02    | 1.6           | 1.159          | 0.035    | 0.0055        |                    |
| 15 minute winter     | 1.02    | 7.001  | 1.03    | 2.4           | 0.681          | 0.099    | 0.0195        |                    |
| 15 minute winter     | 1.09    | 8.000  | 1.03    | 0.8           | 1.204          | 0.013    | 0.0019        |                    |
| 15 minute winter     | 1.03    | 7.002  | NODE-1  | 3.2           | 0.527          | 0.182    | 0.1062        |                    |
| 15 minute winter     | 1.10    | 9.000  | 1.11    | 2.5           | 0.977          | 0.082    | 0.0089        |                    |
| 15 minute winter     | 1.11    | 9.001  | NODE-1  | 3.5           | 0.990          | 0.052    | 0.0196        |                    |
| 15 minute winter     | NODE-1  | 7.003  | 1.04    | 6.6           | 0.926          | 0.377    | 0.0448        |                    |
| 15 minute winter     | 1.12    | 10.000 | 1.04    | 1.4           | 1.247          | 0.026    | 0.0031        |                    |
| 15 minute winter     | 1.04    | 7.004  | 1.05    | 8.0           | 1.079          | 0.303    | 0.0644        |                    |
| 15 minute winter     | 1.05    | 7.005  | 1.06    | 8.0           | 0.910          | 0.411    | 0.0731        |                    |
| 15 minute winter     | 1.06    | 7.006  | 1.07    | 10.1          | 1.167          | 0.451    | 0.0573        |                    |
| 15 minute summer     | RE1.1   | 11.000 | 1.07    | 0.5           | 0.520          | 0.022    | 0.0077        |                    |
| 15 minute winter     | 1.13    | 12.000 | 1.07    | 1.4           | 1.043          | 0.034    | 0.0051        |                    |
| 15 minute winter     | 1.07    | 7.007  | 1.08    | 11.9          | 0.905          | 0.279    | 0.2914        |                    |
| 15 minute winter     | 1.08    | 7.008  | CS1     | 15.1          | 1.139          | 0.255    | 0.0509        |                    |
| 30 minute winter     | CS1     | 1.010  | DMH     | 0.1           | 0.062          | 0.002    | 0.0023        |                    |

**Results for 10 year Critical Storm Duration. Lowest mass balance: 97.68%**

| Node Event           |         | US Node      | Peak (mins) | Level (m)     | Depth (m)      | Inflow (l/s) | Flood (m³)    | Status             |
|----------------------|---------|--------------|-------------|---------------|----------------|--------------|---------------|--------------------|
| 30 minute winter     |         | DMH          | 23          | 11.834        | 0.024          | 0.6          | 0.0000        | OK                 |
| Link Event (Outflow) | US Node | Link         | DS Node     | Outflow (l/s) | Velocity (m/s) | Flow/Cap     | Link Vol (m³) | Discharge Vol (m³) |
| 30 minute winter     | CS1     | Infiltration |             | 26.4          |                |              |               |                    |
| 15 minute winter     | DMH     | Weir         | CS1         | 0.3           |                |              |               | 0.0                |

**Results for 30 year Critical Storm Duration. Lowest mass balance: 97.68%**

| Node Event       | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Flood (m³) | Status |
|------------------|---------|-------------|-----------|-----------|--------------|------------|--------|
| 15 minute winter | 1.14    | 10          | 14.030    | 0.030     | 2.8          | 0.0000     | OK     |
| 15 minute winter | 1.15    | 10          | 13.865    | 0.035     | 2.8          | 0.0000     | OK     |
| 15 minute winter | 1.16    | 10          | 13.710    | 0.040     | 6.5          | 0.0000     | OK     |
| 15 minute winter | RE1.4   | 11          | 13.671    | 0.021     | 1.0          | 0.0000     | OK     |
| 15 minute winter | 1.23    | 10          | 13.577    | 0.027     | 2.4          | 0.0000     | OK     |
| 15 minute winter | 1.17    | 10          | 13.404    | 0.079     | 8.9          | 0.0000     | OK     |
| 15 minute winter | 1.25    | 10          | 13.481    | 0.031     | 2.1          | 0.0000     | OK     |
| 15 minute winter | 1.26    | 10          | 13.389    | 0.039     | 4.2          | 0.0000     | OK     |
| 15 minute winter | 1.24    | 10          | 13.522    | 0.022     | 2.1          | 0.0000     | OK     |
| 15 minute winter | 1.18    | 11          | 13.330    | 0.105     | 15.1         | 0.0000     | OK     |
| 15 minute winter | 1.19    | 10          | 13.124    | 0.074     | 23.4         | 0.0000     | OK     |
| 15 minute winter | 1.20    | 11          | 12.353    | 0.183     | 29.8         | 0.0000     | OK     |
| 15 minute winter | RE1.2   | 11          | 13.721    | 0.021     | 1.0          | 0.0000     | OK     |
| 15 minute winter | RE1.3   | 10          | 13.721    | 0.021     | 1.4          | 0.0000     | OK     |
| 15 minute winter | 1.27    | 10          | 13.325    | 0.025     | 4.5          | 0.0000     | OK     |
| 15 minute winter | NODE-2  | 11          | 12.318    | 0.185     | 38.4         | 0.0000     | OK     |
| 15 minute winter | 1.21    | 11          | 12.182    | 0.212     | 44.3         | 0.0000     | OK     |
| 15 minute winter | 1.22    | 11          | 12.073    | 0.203     | 49.1         | 0.0000     | OK     |
| 15 minute winter | 1.01    | 10          | 14.373    | 0.023     | 2.1          | 0.0000     | OK     |
| 15 minute winter | 1.02    | 10          | 14.068    | 0.038     | 3.1          | 0.0000     | OK     |
| 15 minute winter | 1.09    | 10          | 14.364    | 0.014     | 1.0          | 0.0000     | OK     |
| 15 minute winter | 1.03    | 11          | 13.979    | 0.049     | 4.1          | 0.0000     | OK     |
| 15 minute winter | 1.10    | 10          | 14.555    | 0.035     | 3.1          | 0.0000     | OK     |
| 15 minute winter | 1.11    | 10          | 14.376    | 0.026     | 4.5          | 0.0000     | OK     |
| 15 minute winter | NODE-1  | 11          | 13.840    | 0.079     | 8.5          | 0.0000     | OK     |
| 15 minute winter | 1.12    | 10          | 14.039    | 0.019     | 1.7          | 0.0000     | OK     |
| 15 minute winter | 1.04    | 11          | 13.768    | 0.068     | 10.0         | 0.0000     | OK     |
| 15 minute winter | 1.05    | 11          | 13.594    | 0.084     | 10.1         | 0.0000     | OK     |
| 15 minute winter | 1.06    | 11          | 13.500    | 0.090     | 12.7         | 0.0000     | OK     |
| 15 minute winter | RE1.1   | 11          | 14.318    | 0.018     | 0.7          | 0.0000     | OK     |
| 15 minute winter | 1.13    | 10          | 14.392    | 0.022     | 1.7          | 0.0000     | OK     |
| 15 minute winter | 1.07    | 11          | 13.326    | 0.096     | 15.1         | 0.0000     | OK     |
| 30 minute winter | 1.08    | 23          | 11.979    | 0.109     | 15.2         | 0.0000     | OK     |
| 30 minute winter | CS1     | 23          | 11.980    | 0.160     | 54.2         | 0.0000     | OK     |

| Link Event (Outflow) | US Node | Link   | DS Node | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|----------------------|---------|--------|---------|---------------|----------------|----------|---------------|--------------------|
| 15 minute winter     | 1.14    | 1.000  | 1.15    | 2.8           | 1.178          | 0.072    | 0.0050        |                    |
| 15 minute winter     | 1.15    | 1.001  | 1.16    | 2.7           | 0.943          | 0.100    | 0.0111        |                    |
| 15 minute winter     | 1.16    | 1.002  | 1.17    | 6.5           | 1.830          | 0.129    | 0.0121        |                    |
| 15 minute winter     | RE1.4   | 2.000  | 1.23    | 1.0           | 0.569          | 0.041    | 0.0095        |                    |
| 15 minute winter     | 1.23    | 2.001  | 1.17    | 2.4           | 1.186          | 0.059    | 0.0060        |                    |
| 15 minute winter     | 1.17    | 1.003  | 1.18    | 8.8           | 0.778          | 0.487    | 0.1087        |                    |
| 15 minute winter     | 1.25    | 3.000  | 1.26    | 2.1           | 0.679          | 0.087    | 0.0172        |                    |
| 15 minute winter     | 1.26    | 3.001  | 1.18    | 4.2           | 0.508          | 0.145    | 0.0404        |                    |
| 15 minute winter     | 1.24    | 4.000  | 1.18    | 2.1           | 0.670          | 0.045    | 0.0301        |                    |
| 15 minute winter     | 1.18    | 1.004  | 1.19    | 15.0          | 1.206          | 0.718    | 0.0902        |                    |
| 15 minute winter     | 1.19    | 1.005  | 1.20    | 23.2          | 1.032          | 0.235    | 0.5650        |                    |
| 15 minute winter     | 1.20    | 1.006  | NODE-2  | 29.5          | 0.858          | 0.696    | 0.1945        |                    |
| 15 minute winter     | RE1.2   | 5.000  | 1.27    | 1.0           | 0.684          | 0.040    | 0.0248        |                    |
| 15 minute winter     | RE1.3   | 6.000  | 1.27    | 1.4           | 0.913          | 0.042    | 0.0145        |                    |
| 15 minute winter     | 1.27    | 5.001  | NODE-2  | 4.5           | 1.700          | 0.058    | 0.0474        |                    |
| 15 minute winter     | NODE-2  | 1.007  | 1.21    | 38.4          | 1.049          | 0.902    | 0.8930        |                    |
| 15 minute winter     | 1.21    | 1.008  | 1.22    | 43.9          | 1.149          | 0.932    | 0.4645        |                    |
| 15 minute winter     | 1.22    | 1.009  | CS1     | 48.9          | 1.401          | 0.914    | 0.1634        |                    |
| 15 minute winter     | 1.01    | 7.000  | 1.02    | 2.1           | 1.252          | 0.047    | 0.0067        |                    |
| 15 minute winter     | 1.02    | 7.001  | 1.03    | 3.1           | 0.729          | 0.129    | 0.0236        |                    |
| 15 minute winter     | 1.09    | 8.000  | 1.03    | 1.0           | 1.287          | 0.016    | 0.0022        |                    |
| 15 minute winter     | 1.03    | 7.002  | NODE-1  | 4.1           | 0.563          | 0.233    | 0.1275        |                    |
| 15 minute winter     | 1.10    | 9.000  | 1.11    | 3.1           | 1.035          | 0.102    | 0.0105        |                    |
| 15 minute winter     | 1.11    | 9.001  | NODE-1  | 4.5           | 1.085          | 0.066    | 0.0235        |                    |
| 15 minute winter     | NODE-1  | 7.003  | 1.04    | 8.4           | 0.978          | 0.480    | 0.0539        |                    |
| 15 minute winter     | 1.12    | 10.000 | 1.04    | 1.7           | 1.319          | 0.032    | 0.0036        |                    |
| 15 minute winter     | 1.04    | 7.004  | 1.05    | 10.1          | 1.128          | 0.382    | 0.0778        |                    |
| 15 minute winter     | 1.05    | 7.005  | 1.06    | 10.1          | 0.952          | 0.519    | 0.0882        |                    |
| 15 minute winter     | 1.06    | 7.006  | 1.07    | 12.8          | 1.229          | 0.568    | 0.0685        |                    |
| 15 minute winter     | RE1.1   | 11.000 | 1.07    | 0.7           | 0.574          | 0.031    | 0.0097        |                    |
| 15 minute winter     | 1.13    | 12.000 | 1.07    | 1.7           | 1.103          | 0.041    | 0.0058        |                    |
| 15 minute winter     | 1.07    | 7.007  | 1.08    | 15.0          | 0.963          | 0.353    | 0.3472        |                    |
| 15 minute winter     | 1.08    | 7.008  | CS1     | 19.2          | 1.209          | 0.323    | 0.0913        |                    |
| 15 minute winter     | CS1     | 1.010  | DMH     | 1.9           | 0.288          | 0.044    | 0.0434        |                    |

**Results for 30 year Critical Storm Duration. Lowest mass balance: 97.68%**

| Node Event           |         | US Node      | Peak (mins) | Level (m)     | Depth (m)      | Inflow (l/s) | Flood (m³)    | Status             |
|----------------------|---------|--------------|-------------|---------------|----------------|--------------|---------------|--------------------|
| 30 minute winter     |         | DMH          | 23          | 11.982        | 0.172          | 1.2          | 0.0000        | OK                 |
| Link Event (Outflow) | US Node | Link         | DS Node     | Outflow (l/s) | Velocity (m/s) | Flow/Cap     | Link Vol (m³) | Discharge Vol (m³) |
| 30 minute winter     | CS1     | Infiltration |             | 33.3          |                |              |               |                    |
| 30 minute winter     | DMH     | Weir         | CS1         | 4.1           |                |              |               | 0.3                |

**Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 97.68%**

| Node Event       | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Flood (m³) | Status     |
|------------------|---------|-------------|-----------|-----------|--------------|------------|------------|
| 15 minute winter | 1.14    | 10          | 14.042    | 0.042     | 5.0          | 0.0000     | OK         |
| 15 minute winter | 1.15    | 10          | 13.878    | 0.048     | 5.0          | 0.0000     | OK         |
| 15 minute winter | 1.16    | 9           | 13.724    | 0.054     | 11.8         | 0.0000     | OK         |
| 15 minute winter | RE1.4   | 10          | 13.679    | 0.029     | 1.9          | 0.0000     | OK         |
| 15 minute summer | 1.23    | 9           | 13.584    | 0.034     | 4.2          | 0.0000     | OK         |
| 15 minute winter | 1.17    | 11          | 13.573    | 0.248     | 16.1         | 0.0000     | SURCHARGED |
| 15 minute winter | 1.25    | 9           | 13.491    | 0.041     | 3.8          | 0.0000     | OK         |
| 15 minute winter | 1.26    | 11          | 13.487    | 0.137     | 7.6          | 0.0000     | OK         |
| 15 minute winter | 1.24    | 10          | 13.529    | 0.029     | 3.8          | 0.0000     | OK         |
| 15 minute winter | 1.18    | 11          | 13.477    | 0.252     | 25.8         | 0.0000     | SURCHARGED |
| 15 minute winter | 1.19    | 12          | 13.210    | 0.160     | 40.3         | 0.0000     | OK         |
| 15 minute winter | 1.20    | 12          | 13.102    | 0.932     | 49.5         | 0.0000     | SURCHARGED |
| 15 minute winter | RE1.2   | 10          | 13.728    | 0.028     | 1.9          | 0.0000     | OK         |
| 15 minute winter | RE1.3   | 10          | 13.729    | 0.029     | 2.5          | 0.0000     | OK         |
| 15 minute winter | 1.27    | 10          | 13.333    | 0.033     | 8.1          | 0.0000     | OK         |
| 15 minute winter | NODE-2  | 12          | 13.026    | 0.893     | 61.7         | 0.0000     | SURCHARGED |
| 30 minute winter | 1.21    | 23          | 12.769    | 0.799     | 56.8         | 0.0000     | SURCHARGED |
| 30 minute winter | 1.22    | 23          | 12.692    | 0.822     | 62.2         | 0.0000     | SURCHARGED |
| 15 minute winter | 1.01    | 10          | 14.382    | 0.032     | 3.8          | 0.0000     | OK         |
| 15 minute winter | 1.02    | 10          | 14.084    | 0.054     | 5.7          | 0.0000     | OK         |
| 15 minute winter | 1.09    | 10          | 14.369    | 0.019     | 1.9          | 0.0000     | OK         |
| 15 minute winter | 1.03    | 10          | 13.998    | 0.068     | 7.5          | 0.0000     | OK         |
| 15 minute winter | 1.10    | 10          | 14.569    | 0.049     | 5.7          | 0.0000     | OK         |
| 15 minute winter | 1.11    | 10          | 14.385    | 0.035     | 8.1          | 0.0000     | OK         |
| 15 minute winter | NODE-1  | 11          | 13.883    | 0.122     | 15.6         | 0.0000     | OK         |
| 15 minute winter | 1.12    | 9           | 14.046    | 0.026     | 3.1          | 0.0000     | OK         |
| 15 minute winter | 1.04    | 11          | 13.807    | 0.107     | 18.3         | 0.0000     | OK         |
| 15 minute winter | 1.05    | 11          | 13.698    | 0.188     | 18.1         | 0.0000     | SURCHARGED |
| 15 minute winter | 1.06    | 11          | 13.584    | 0.174     | 22.3         | 0.0000     | SURCHARGED |
| 15 minute winter | RE1.1   | 10          | 14.325    | 0.025     | 1.3          | 0.0000     | OK         |
| 15 minute winter | 1.13    | 10          | 14.400    | 0.030     | 3.1          | 0.0000     | OK         |
| 15 minute winter | 1.07    | 11          | 13.364    | 0.134     | 26.2         | 0.0000     | OK         |
| 30 minute winter | 1.08    | 23          | 12.650    | 0.780     | 27.8         | 0.0000     | SURCHARGED |
| 30 minute winter | CS1     | 23          | 12.647    | 0.827     | 125.6        | 0.0000     | SURCHARGED |

  

| Link Event (Outflow) | US Node | Link   | DS Node | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|----------------------|---------|--------|---------|---------------|----------------|----------|---------------|--------------------|
| 15 minute winter     | 1.14    | 1.000  | 1.15    | 5.0           | 1.360          | 0.128    | 0.0078        |                    |
| 15 minute winter     | 1.15    | 1.001  | 1.16    | 4.9           | 1.097          | 0.180    | 0.0172        |                    |
| 15 minute winter     | 1.16    | 1.002  | 1.17    | 11.8          | 1.968          | 0.233    | 0.0382        |                    |
| 15 minute winter     | RE1.4   | 2.000  | 1.23    | 1.9           | 0.712          | 0.077    | 0.0141        |                    |
| 15 minute winter     | 1.23    | 2.001  | 1.17    | 4.4           | 1.287          | 0.108    | 0.0303        |                    |
| 15 minute winter     | 1.17    | 1.003  | 1.18    | 15.3          | 0.872          | 0.848    | 0.1695        |                    |
| 15 minute winter     | 1.25    | 3.000  | 1.26    | 3.8           | 0.767          | 0.159    | 0.0576        |                    |
| 15 minute winter     | 1.26    | 3.001  | 1.18    | 6.9           | 0.606          | 0.241    | 0.0834        |                    |
| 15 minute winter     | 1.24    | 4.000  | 1.18    | 3.8           | 0.856          | 0.082    | 0.0409        |                    |
| 15 minute winter     | 1.18    | 1.004  | 1.19    | 25.5          | 1.450          | 1.225    | 0.1262        |                    |
| 15 minute winter     | 1.19    | 1.005  | 1.20    | 38.2          | 1.124          | 0.387    | 0.8617        |                    |
| 15 minute winter     | 1.20    | 1.006  | NODE-2  | 45.6          | 1.145          | 1.076    | 0.2228        |                    |
| 15 minute winter     | RE1.2   | 5.000  | 1.27    | 1.9           | 0.819          | 0.075    | 0.0386        |                    |
| 15 minute winter     | RE1.3   | 6.000  | 1.27    | 2.5           | 1.082          | 0.075    | 0.0220        |                    |
| 15 minute winter     | 1.27    | 5.001  | NODE-2  | 8.1           | 1.785          | 0.107    | 0.0620        |                    |
| 15 minute winter     | NODE-2  | 1.007  | 1.21    | 59.7          | 1.501          | 1.403    | 0.9643        |                    |
| 15 minute winter     | 1.21    | 1.008  | 1.22    | 68.0          | 1.709          | 1.443    | 0.4832        |                    |
| 15 minute summer     | 1.22    | 1.009  | CS1     | 75.5          | 1.899          | 1.411    | 0.1878        |                    |
| 15 minute winter     | 1.01    | 7.000  | 1.02    | 3.8           | 1.471          | 0.084    | 0.0102        |                    |
| 15 minute winter     | 1.02    | 7.001  | 1.03    | 5.6           | 0.840          | 0.237    | 0.0375        |                    |
| 15 minute winter     | 1.09    | 8.000  | 1.03    | 1.9           | 1.539          | 0.030    | 0.0035        |                    |
| 15 minute winter     | 1.03    | 7.002  | NODE-1  | 7.4           | 0.634          | 0.427    | 0.2033        |                    |
| 15 minute winter     | 1.10    | 9.000  | 1.11    | 5.7           | 1.208          | 0.188    | 0.0166        |                    |
| 15 minute winter     | 1.11    | 9.001  | NODE-1  | 8.1           | 1.331          | 0.120    | 0.0377        |                    |
| 15 minute winter     | NODE-1  | 7.003  | 1.04    | 15.3          | 1.072          | 0.872    | 0.0904        |                    |
| 15 minute winter     | 1.12    | 10.000 | 1.04    | 3.1           | 1.534          | 0.058    | 0.0074        |                    |
| 15 minute winter     | 1.04    | 7.004  | 1.05    | 18.1          | 1.210          | 0.688    | 0.1353        |                    |
| 15 minute winter     | 1.05    | 7.005  | 1.06    | 17.7          | 1.006          | 0.907    | 0.1460        |                    |
| 15 minute winter     | 1.06    | 7.006  | 1.07    | 22.0          | 1.344          | 0.979    | 0.1127        |                    |
| 15 minute winter     | RE1.1   | 11.000 | 1.07    | 1.3           | 0.682          | 0.056    | 0.0148        |                    |
| 15 minute winter     | 1.13    | 12.000 | 1.07    | 3.1           | 1.302          | 0.076    | 0.0091        |                    |
| 15 minute winter     | 1.07    | 7.007  | 1.08    | 26.0          | 1.101          | 0.610    | 0.5253        |                    |
| 15 minute winter     | 1.08    | 7.008  | CS1     | 33.1          | 1.373          | 0.556    | 0.1522        |                    |
| 30 minute winter     | CS1     | 1.010  | DMH     | -14.0         | -0.351         | -0.320   | 0.0564        |                    |

**Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 97.68%**

| Node Event           |         | US Node      | Peak (mins) | Level (m)     | Depth (m)      | Inflow (l/s) | Flood (m³)    | Status             |
|----------------------|---------|--------------|-------------|---------------|----------------|--------------|---------------|--------------------|
| 30 minute winter     |         | DMH          | 23          | 12.637        | 0.827          | 73.1         | 0.0000        | OK                 |
| Link Event (Outflow) | US Node | Link         | DS Node     | Outflow (l/s) | Velocity (m/s) | Flow/Cap     | Link Vol (m³) | Discharge Vol (m³) |
| 15 minute winter     | CS1     | Infiltration |             | 53.9          |                |              |               |                    |
| 30 minute winter     | DMH     | Weir         | CS1         | 24.6          |                |              |               | -6.2               |