

### Design Settings

|                       |                   |                                      |               |
|-----------------------|-------------------|--------------------------------------|---------------|
| Rainfall Methodology  | FSR               | Maximum Time of Concentration (mins) | 30.00         |
| Return Period (years) | 100               | Maximum Rainfall (mm/hr)             | 50.0          |
| Additional Flow (%)   | 40                | Minimum Velocity (m/s)               | 1.00          |
| FSR Region            | England and Wales | Connection Type                      | Level Soffits |
| M5-60 (mm)            | 18.000            | Minimum Backdrop Height (m)          | 0.200         |
| Ratio-R               | 0.356             | 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<br>(ha) | T of E<br>(mins) | Cover<br>Level<br>(m) | Diameter<br>(mm) | Easting<br>(m) | Northing<br>(m) | Depth<br>(m) |
|------------|--------------|------------------|-----------------------|------------------|----------------|-----------------|--------------|
| SW MH02    |              | 5.00             | 71.267                | 1500             | 385116.717     | 402275.705      | 1.994        |
| SW MH03    |              |                  | 71.595                | 1500             | 385127.483     | 402301.107      | 2.506        |
| SW MH05    | 0.050        | 5.00             | 73.562                | 1500             | 385100.488     | 402359.538      | 4.228        |
| SW MH06    | 0.160        | 5.00             | 72.057                | 1500             | 385135.165     | 402368.801      | 3.421        |
| SW MH07    | 0.100        | 5.00             | 71.652                | 1500             | 385137.553     | 402397.024      | 3.206        |
| DUMMY D    | 0.750        | 5.00             | 72.000                | 1500             | 385114.476     | 402411.127      | 3.358        |
| DUMMY MSCP |              |                  | 72.000                | 1500             | 385129.388     | 402414.167      | 3.618        |
| SW MH08    | 0.300        | 5.00             | 70.297                | 1500             | 385138.759     | 402444.242      | 2.313        |
| SW MH09    | 0.180        | 5.00             | 70.407                | 1500             | 385131.782     | 402474.147      | 2.628        |
| SW MH10    |              | 5.00             | 70.274                | 1500             | 385141.318     | 402519.446      | 2.474        |
| SW MH11    | 0.100        | 5.00             | 70.400                | 1500             | 385115.025     | 402506.563      | 2.865        |
| SW MH12    |              |                  | 71.026                | 1500             | 385085.103     | 402530.485      | 7.124        |
| SW MH13    |              |                  | 69.889                | 1500             | 385038.512     | 402554.073      | 6.196        |
| SW MH14    |              |                  | 71.064                | 1500             | 385016.302     | 402570.597      | 7.483        |
| SW MH15    |              |                  | 68.285                | 1500             | 385022.285     | 402585.060      | 4.766        |
| 15_OUT     |              |                  | 68.230                |                  | 385016.233     | 402593.048      | 4.750        |

### Links

| Name  | US<br>Node | DS<br>Node | Length<br>(m) | ks (mm) /<br>n | US IL<br>(m) | DS IL<br>(m) | Fall<br>(m) | Slope<br>(1:X) | Dia<br>(mm) | T of C<br>(mins) | Rain<br>(mm/hr) |
|-------|------------|------------|---------------|----------------|--------------|--------------|-------------|----------------|-------------|------------------|-----------------|
| 1.000 | SW MH02    | SW MH03    | 27.590        | 0.600          | 69.273       | 69.089       | 0.184       | 150.0          | 450         | 5.28             | 50.0            |
| 1.001 | SW MH03    | SW MH06    | 68.129        | 0.600          | 69.091       | 68.637       | 0.454       | 150.0          | 450         | 5.96             | 50.0            |
| 2.000 | SW MH05    | SW MH06    | 35.893        | 0.600          | 69.334       | 68.639       | 0.695       | 51.6           | 450         | 5.21             | 50.0            |
| 1.002 | SW MH06    | SW MH07    | 28.324        | 0.600          | 68.636       | 68.447       | 0.189       | 150.0          | 450         | 6.25             | 50.0            |
| 1.003 | SW MH07    | SW MH08    | 47.233        | 0.600          | 68.446       | 68.131       | 0.315       | 150.0          | 450         | 6.72             | 50.0            |
| 3.000 | DUMMY D    | DUMMY MSCP | 15.219        | 0.600          | 68.642       | 68.382       | 0.260       | 58.5           | 600         | 5.08             | 50.0            |
| 3.001 | DUMMY MSCP | SW MH08    | 31.501        | 0.600          | 68.382       | 68.124       | 0.258       | 122.1          | 600         | 5.32             | 50.0            |
| 1.004 | SW MH08    | SW MH09    | 30.708        | 0.600          | 67.984       | 67.779       | 0.205       | 149.8          | 600         | 6.98             | 50.0            |

| Name  | Vel<br>(m/s) | Cap<br>(l/s) | Flow<br>(l/s) | US<br>Depth<br>(m) | DS<br>Depth<br>(m) | Σ Area<br>(ha) | Σ Add<br>Inflow<br>(l/s) |
|-------|--------------|--------------|---------------|--------------------|--------------------|----------------|--------------------------|
| 1.000 | 1.657        | 263.6        | 0.0           | 1.544              | 2.056              | 0.000          | 0.0                      |
| 1.001 | 1.657        | 263.6        | 0.0           | 2.054              | 2.970              | 0.000          | 0.0                      |
| 2.000 | 2.834        | 450.7        | 9.5           | 3.778              | 2.968              | 0.050          | 0.0                      |
| 1.002 | 1.657        | 263.6        | 39.8          | 2.971              | 2.755              | 0.210          | 0.0                      |
| 1.003 | 1.657        | 263.6        | 58.8          | 2.756              | 1.716              | 0.310          | 0.0                      |
| 3.000 | 3.187        | 901.0        | 142.3         | 2.758              | 3.018              | 0.750          | 0.0                      |
| 3.001 | 2.202        | 622.7        | 142.3         | 3.018              | 1.573              | 0.750          | 0.0                      |
| 1.004 | 1.987        | 561.8        | 258.0         | 1.713              | 2.028              | 1.360          | 0.0                      |

### 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) | Rain (mm/hr) |
|-------|---------|---------|------------|-------------|-----------|-----------|----------|-------------|----------|---------------|--------------|
| 1.005 | SW MH09 | SW MH11 | 36.668     | 0.600       | 67.779    | 67.535    | 0.244    | 150.3       | 600      | 7.29          | 50.0         |
| 4.000 | SW MH10 | SW MH11 | 29.340     | 0.600       | 67.800    | 67.604    | 0.196    | 150.0       | 600      | 5.25          | 50.0         |
| 1.006 | SW MH11 | SW MH12 | 38.125     | 0.600       | 67.535    | 67.281    | 0.254    | 150.1       | 600      | 7.61          | 50.0         |
| 1.007 | SW MH12 | SW MH13 | 52.168     | 0.600       | 63.902    | 63.693    | 0.209    | 250.0       | 600      | 8.17          | 50.0         |
| 1.008 | SW MH13 | SW MH14 | 27.825     | 0.600       | 63.693    | 63.582    | 0.111    | 250.0       | 600      | 8.48          | 50.0         |
| 1.009 | SW MH14 | SW MH15 | 15.542     | 0.600       | 63.581    | 63.519    | 0.062    | 250.0       | 600      | 8.65          | 50.0         |
| 1.010 | SW MH15 | 15_OUT  | 10.022     | 0.600       | 63.520    | 63.480    | 0.040    | 250.0       | 450      | 8.78          | 50.0         |

| Name  | Vel (m/s) | Cap (l/s) | Flow (l/s) | US Depth (m) | DS Depth (m) | Σ Area (ha) | Σ Add Inflow (l/s) |
|-------|-----------|-----------|------------|--------------|--------------|-------------|--------------------|
| 1.005 | 1.984     | 560.9     | 292.2      | 2.028        | 2.265        | 1.540       | 0.0                |
| 4.000 | 1.986     | 561.5     | 0.0        | 1.874        | 2.196        | 0.000       | 0.0                |
| 1.006 | 1.985     | 561.3     | 311.2      | 2.265        | 3.145        | 1.640       | 0.0                |
| 1.007 | 1.535     | 434.1     | 311.2      | 6.524        | 5.596        | 1.640       | 0.0                |
| 1.008 | 1.535     | 434.1     | 311.2      | 5.596        | 6.882        | 1.640       | 0.0                |
| 1.009 | 1.535     | 434.1     | 311.2      | 6.883        | 4.166        | 1.640       | 0.0                |
| 1.010 | 1.281     | 203.7     | 311.2      | 4.315        | 4.300        | 1.640       | 0.0                |

### Pipeline Schedule

| Link  | Length (m) | Slope (1:X) | Dia (mm) | Link Type  | US CL (m) | US IL (m) | US Depth (m) | DS CL (m) | DS IL (m) | DS Depth (m) |
|-------|------------|-------------|----------|------------|-----------|-----------|--------------|-----------|-----------|--------------|
| 1.000 | 27.590     | 150.0       | 450      | 1 STANDARD | 71.267    | 69.273    | 1.544        | 71.595    | 69.089    | 2.056        |
| 1.001 | 68.129     | 150.0       | 450      | 1 STANDARD | 71.595    | 69.091    | 2.054        | 72.057    | 68.637    | 2.970        |
| 2.000 | 35.893     | 51.6        | 450      | 1 STANDARD | 73.562    | 69.334    | 3.778        | 72.057    | 68.639    | 2.968        |
| 1.002 | 28.324     | 150.0       | 450      | 1 STANDARD | 72.057    | 68.636    | 2.971        | 71.652    | 68.447    | 2.755        |
| 1.003 | 47.233     | 150.0       | 450      | 1 STANDARD | 71.652    | 68.446    | 2.756        | 70.297    | 68.131    | 1.716        |
| 3.000 | 15.219     | 58.5        | 600      | 1 STANDARD | 72.000    | 68.642    | 2.758        | 72.000    | 68.382    | 3.018        |
| 3.001 | 31.501     | 122.1       | 600      | 1 STANDARD | 72.000    | 68.382    | 3.018        | 70.297    | 68.124    | 1.573        |
| 1.004 | 30.708     | 149.8       | 600      | 1 STANDARD | 70.297    | 67.984    | 1.713        | 70.407    | 67.779    | 2.028        |
| 1.005 | 36.668     | 150.3       | 600      | 1 STANDARD | 70.407    | 67.779    | 2.028        | 70.400    | 67.535    | 2.265        |
| 4.000 | 29.340     | 150.0       | 600      | 1 STANDARD | 70.274    | 67.800    | 1.874        | 70.400    | 67.604    | 2.196        |
| 1.006 | 38.125     | 150.1       | 600      | 1 STANDARD | 70.400    | 67.535    | 2.265        | 71.026    | 67.281    | 3.145        |
| 1.007 | 52.168     | 250.0       | 600      | 1 STANDARD | 71.026    | 63.902    | 6.524        | 69.889    | 63.693    | 5.596        |
| 1.008 | 27.825     | 250.0       | 600      | 1 STANDARD | 69.889    | 63.693    | 5.596        | 71.064    | 63.582    | 6.882        |

| Link  | US Node    | Dia (mm) | Node Type | MH Type    | DS Node    | Dia (mm) | Node Type | MH Type    |
|-------|------------|----------|-----------|------------|------------|----------|-----------|------------|
| 1.000 | SW MH02    | 1500     | Manhole   | 1 STANDARD | SW MH03    | 1500     | Manhole   | 1 STANDARD |
| 1.001 | SW MH03    | 1500     | Manhole   | 1 STANDARD | SW MH06    | 1500     | Manhole   | 1 STANDARD |
| 2.000 | SW MH05    | 1500     | Manhole   | 1 STANDARD | SW MH06    | 1500     | Manhole   | 1 STANDARD |
| 1.002 | SW MH06    | 1500     | Manhole   | 1 STANDARD | SW MH07    | 1500     | Manhole   | 1 STANDARD |
| 1.003 | SW MH07    | 1500     | Manhole   | 1 STANDARD | SW MH08    | 1500     | Manhole   | 1 STANDARD |
| 3.000 | DUMMY D    | 1500     | Manhole   | 1 STANDARD | DUMMY MSCP | 1500     | Manhole   | 1 STANDARD |
| 3.001 | DUMMY MSCP | 1500     | Manhole   | 1 STANDARD | SW MH08    | 1500     | Manhole   | 1 STANDARD |
| 1.004 | SW MH08    | 1500     | Manhole   | 1 STANDARD | SW MH09    | 1500     | Manhole   | 1 STANDARD |
| 1.005 | SW MH09    | 1500     | Manhole   | 1 STANDARD | SW MH11    | 1500     | Manhole   | 1 STANDARD |
| 4.000 | SW MH10    | 1500     | Manhole   | 1 STANDARD | SW MH11    | 1500     | Manhole   | 1 STANDARD |
| 1.006 | SW MH11    | 1500     | Manhole   | 1 STANDARD | SW MH12    | 1500     | Manhole   | 1 STANDARD |
| 1.007 | SW MH12    | 1500     | Manhole   | 1 STANDARD | SW MH13    | 1500     | Manhole   | 1 STANDARD |
| 1.008 | SW MH13    | 1500     | Manhole   | 1 STANDARD | SW MH14    | 1500     | Manhole   | 1 STANDARD |

### Pipeline Schedule

| Link  | Length (m) | Slope (1:X) | Dia (mm) | Link Type  | US CL (m) | US IL (m) | US Depth (m) | DS CL (m) | DS IL (m) | DS Depth (m) |
|-------|------------|-------------|----------|------------|-----------|-----------|--------------|-----------|-----------|--------------|
| 1.009 | 15.542     | 250.0       | 600      | 1 STANDARD | 71.064    | 63.581    | 6.883        | 68.285    | 63.519    | 4.166        |
| 1.010 | 10.022     | 250.0       | 450      | 1 STANDARD | 68.285    | 63.520    | 4.315        | 68.230    | 63.480    | 4.300        |

| Link  | US Node | Dia (mm) | Node Type | MH Type    | DS Node | Dia (mm) | Node Type | MH Type    |
|-------|---------|----------|-----------|------------|---------|----------|-----------|------------|
| 1.009 | SW MH14 | 1500     | Manhole   | 1 STANDARD | SW MH15 | 1500     | Manhole   | 1 STANDARD |
| 1.010 | SW MH15 | 1500     | Manhole   | 1 STANDARD | 15_OUT  |          | Manhole   | 1 STANDARD |

### Manhole Schedule

| Node       | Easting (m) | Northing (m) | CL (m) | Depth (m) | Dia (mm) | Connections                                                                           | Link  | IL (m) | Dia (mm) |
|------------|-------------|--------------|--------|-----------|----------|---------------------------------------------------------------------------------------|-------|--------|----------|
| SW MH02    | 385116.717  | 402275.705   | 71.267 | 1.994     | 1500     |    |       |        |          |
|            |             |              |        |           |          | 0                                                                                     | 1.000 | 69.273 | 450      |
| SW MH03    | 385127.483  | 402301.107   | 71.595 | 2.506     | 1500     |    |       |        |          |
|            |             |              |        |           |          | 0                                                                                     | 1.001 | 69.091 | 450      |
| SW MH05    | 385100.488  | 402359.538   | 73.562 | 4.228     | 1500     |  |       |        |          |
|            |             |              |        |           |          | 0                                                                                     | 2.000 | 69.334 | 450      |
| SW MH06    | 385135.165  | 402368.801   | 72.057 | 3.421     | 1500     |  |       |        |          |
|            |             |              |        |           |          | 1                                                                                     | 2.000 | 68.639 | 450      |
|            |             |              |        |           |          | 2                                                                                     | 1.001 | 68.637 | 450      |
| SW MH07    | 385137.553  | 402397.024   | 71.652 | 3.206     | 1500     |  |       |        |          |
|            |             |              |        |           |          | 0                                                                                     | 1.002 | 68.636 | 450      |
|            |             |              |        |           |          | 1                                                                                     | 1.002 | 68.447 | 450      |
| DUMMY D    | 385114.476  | 402411.127   | 72.000 | 3.358     | 1500     |  |       |        |          |
|            |             |              |        |           |          | 0                                                                                     | 3.000 | 68.642 | 600      |
| DUMMY MSCP | 385129.388  | 402414.167   | 72.000 | 3.618     | 1500     |  |       |        |          |
|            |             |              |        |           |          | 1                                                                                     | 3.000 | 68.382 | 600      |
|            |             |              |        |           |          | 0                                                                                     | 3.001 | 68.382 | 600      |
| SW MH08    | 385138.759  | 402444.242   | 70.297 | 2.313     | 1500     |  |       |        |          |
|            |             |              |        |           |          | 1                                                                                     | 3.001 | 68.124 | 600      |
|            |             |              |        |           |          | 2                                                                                     | 1.003 | 68.131 | 450      |
| SW MH09    | 385131.782  | 402474.147   | 70.407 | 2.628     | 1500     |  |       |        |          |
|            |             |              |        |           |          | 0                                                                                     | 1.004 | 67.984 | 600      |
|            |             |              |        |           |          | 1                                                                                     | 1.004 | 67.779 | 600      |
| SW MH10    | 385141.318  | 402519.446   | 70.274 | 2.474     | 1500     |  |       |        |          |
|            |             |              |        |           |          | 0                                                                                     | 1.005 | 67.779 | 600      |
|            |             |              |        |           |          | 0                                                                                     | 4.000 | 67.800 | 600      |

### Manhole Schedule

| Node    | Easting (m) | Northing (m) | CL (m) | Depth (m) | Dia (mm) | Connections                                                                          | Link  | IL (m) | Dia (mm) |     |
|---------|-------------|--------------|--------|-----------|----------|--------------------------------------------------------------------------------------|-------|--------|----------|-----|
| SW MH11 | 385115.025  | 402506.563   | 70.400 | 2.865     | 1500     |    | 1     | 4.000  | 67.604   | 600 |
|         |             |              |        |           |          |                                                                                      | 2     | 1.005  | 67.535   | 600 |
|         |             |              |        |           |          |                                                                                      | 0     | 1.006  | 67.535   | 600 |
| SW MH12 | 385085.103  | 402530.485   | 71.026 | 7.124     | 1500     |    | 1     | 1.006  | 67.281   | 600 |
|         |             |              |        |           | 0        |                                                                                      | 1.007 | 63.902 | 600      |     |
| SW MH13 | 385038.512  | 402554.073   | 69.889 | 6.196     | 1500     |    | 1     | 1.007  | 63.693   | 600 |
|         |             |              |        |           | 0        |                                                                                      | 1.008 | 63.693 | 600      |     |
| SW MH14 | 385016.302  | 402570.597   | 71.064 | 7.483     | 1500     |    | 1     | 1.008  | 63.582   | 600 |
|         |             |              |        |           | 0        |                                                                                      | 1.009 | 63.581 | 600      |     |
| SW MH15 | 385022.285  | 402585.060   | 68.285 | 4.766     | 1500     |    | 1     | 1.009  | 63.519   | 600 |
|         |             |              |        |           | 0        |                                                                                      | 1.010 | 63.520 | 450      |     |
| 15_OUT  | 385016.233  | 402593.048   | 68.230 | 4.750     |          |  | 1     | 1.010  | 63.480   | 450 |

### Simulation Settings

|                      |                   |                            |        |
|----------------------|-------------------|----------------------------|--------|
| Rainfall Methodology | FSR               | Analysis Speed             | Normal |
| FSR Region           | England and Wales | Skip Steady State          | x      |
| M5-60 (mm)           | 18.000            | Drain Down Time (mins)     | 240    |
| Ratio-R              | 0.356             | Additional Storage (m³/ha) | 20.0   |
| Summer CV            | 0.750             | Check Discharge Rate(s)    | x      |
| Winter CV            | 0.840             | Check Discharge Volume     | x      |

### Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

| Return Period (years) | Climate Change (CC %) | Additional Area (A %) | Additional Flow (Q %) |
|-----------------------|-----------------------|-----------------------|-----------------------|
| 100                   | 0                     | 0                     | 0                     |

### Node DUMMY MSCP Online Hydro-Brake® Control

|                          |        |                         |                                |
|--------------------------|--------|-------------------------|--------------------------------|
| Flap Valve               | x      | Objective               | (HE) Minimise upstream storage |
| Replaces Downstream Link | x      | Sump Available          | ✓                              |
| Invert Level (m)         | 68.382 | Product Number          | CTL-SHE-0087-5000-2500-5000    |
| Design Depth (m)         | 2.500  | Min Outlet Diameter (m) | 0.100                          |
| Design Flow (l/s)        | 5.0    | Min Node Diameter (mm)  | 1200                           |

### Node SW MH11 Online Hydro-Brake® Control

|                          |        |                         |                                |
|--------------------------|--------|-------------------------|--------------------------------|
| Flap Valve               | x      | Objective               | (HE) Minimise upstream storage |
| Replaces Downstream Link | x      | Sump Available          | ✓                              |
| Invert Level (m)         | 67.535 | Product Number          | CTL-SHE-0127-1050-2500-1050    |
| Design Depth (m)         | 2.500  | Min Outlet Diameter (m) | 0.150                          |
| Design Flow (l/s)        | 10.5   | Min Node Diameter (mm)  | 1500                           |

### Node DUMMY MSCP Depth/Area Storage Structure

|                             |         |               |      |                           |        |
|-----------------------------|---------|---------------|------|---------------------------|--------|
| Base Inf Coefficient (m/hr) | 0.00000 | Safety Factor | 2.0  | Invert Level (m)          | 68.450 |
| Side Inf Coefficient (m/hr) | 0.00000 | Porosity      | 1.00 | Time to half empty (mins) | 0      |

| Depth<br>(m) | Area<br>(m <sup>2</sup> ) | Inf Area<br>(m <sup>2</sup> ) | Depth<br>(m) | Area<br>(m <sup>2</sup> ) | Inf Area<br>(m <sup>2</sup> ) | Depth<br>(m) | Area<br>(m <sup>2</sup> ) | Inf Area<br>(m <sup>2</sup> ) |
|--------------|---------------------------|-------------------------------|--------------|---------------------------|-------------------------------|--------------|---------------------------|-------------------------------|
| 0.000        | 3000.0                    | 0.0                           | 1.000        | 3000.0                    | 0.0                           | 1.010        | 0.0                       | 0.0                           |

### Node SW MH10 Depth/Area Storage Structure

|                             |         |               |      |                           |        |
|-----------------------------|---------|---------------|------|---------------------------|--------|
| Base Inf Coefficient (m/hr) | 0.00000 | Safety Factor | 2.0  | Invert Level (m)          | 67.700 |
| Side Inf Coefficient (m/hr) | 0.00000 | Porosity      | 0.95 | Time to half empty (mins) | 180    |

| Depth<br>(m) | Area<br>(m <sup>2</sup> ) | Inf Area<br>(m <sup>2</sup> ) | Depth<br>(m) | Area<br>(m <sup>2</sup> ) | Inf Area<br>(m <sup>2</sup> ) | Depth<br>(m) | Area<br>(m <sup>2</sup> ) | Inf Area<br>(m <sup>2</sup> ) |
|--------------|---------------------------|-------------------------------|--------------|---------------------------|-------------------------------|--------------|---------------------------|-------------------------------|
| 0.000        | 225.0                     | 0.0                           | 1.500        | 225.0                     | 0.0                           | 1.501        | 0.0                       | 0.0                           |

**Results for 100 year Critical Storm Duration. Lowest mass balance: 95.82%**

| Node Event        | US Node    | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status     |
|-------------------|------------|-------------|-----------|-----------|--------------|---------------|------------|------------|
| 15 minute summer  | SW MH02    | 1           | 69.273    | 0.000     | 0.0          | 0.0000        | 0.0000     | OK         |
| 15 minute summer  | SW MH03    | 1           | 69.089    | 0.000     | 0.0          | 0.0000        | 0.0000     | OK         |
| 15 minute winter  | SW MH05    | 10          | 69.396    | 0.062     | 19.2         | 0.1247        | 0.0000     | OK         |
| 240 minute winter | SW MH06    | 228         | 68.842    | 0.206     | 16.7         | 0.5568        | 0.0000     | OK         |
| 240 minute winter | SW MH07    | 228         | 68.842    | 0.396     | 24.6         | 0.9475        | 0.0000     | OK         |
| 15 minute winter  | DUMMY D    | 10          | 68.949    | 0.307     | 287.9        | 1.9132        | 0.0000     | OK         |
| 720 minute winter | DUMMY MSCP | 720         | 68.595    | 0.213     | 25.7         | 437.9078      | 0.0000     | OK         |
| 240 minute winter | SW MH08    | 228         | 68.842    | 0.858     | 51.0         | 3.7433        | 0.0000     | SURCHARGED |
| 240 minute winter | SW MH09    | 228         | 68.842    | 1.063     | 56.6         | 3.3356        | 0.0000     | SURCHARGED |
| 240 minute winter | SW MH10    | 228         | 68.842    | 1.042     | 54.3         | 224.4978      | 0.0000     | SURCHARGED |
| 240 minute winter | SW MH11    | 228         | 68.842    | 1.307     | 63.4         | 3.2223        | 0.0000     | SURCHARGED |
| 15 minute winter  | SW MH12    | 7           | 63.963    | 0.061     | 9.2          | 0.1071        | 0.0000     | OK         |
| 15 minute winter  | SW MH13    | 155         | 63.754    | 0.061     | 9.2          | 0.1072        | 0.0000     | OK         |
| 15 minute winter  | SW MH14    | 156         | 63.642    | 0.061     | 9.2          | 0.1082        | 0.0000     | OK         |
| 15 minute winter  | SW MH15    | 156         | 63.588    | 0.069     | 9.2          | 0.1214        | 0.0000     | OK         |
| 15 minute winter  | 15_OUT     | 156         | 63.544    | 0.064     | 9.2          | 0.0000        | 0.0000     | OK         |

| Link Event (Upstream Depth) | US Node    | Link  | DS Node    | Outflow (l/s) | Velocity (m/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|-----------------------------|------------|-------|------------|---------------|----------------|----------|---------------|--------------------|
| 15 minute summer            | SW MH02    | 1.000 | SW MH03    | 0.0           | 0.000          | 0.000    | 0.0000        |                    |
| 15 minute summer            | SW MH03    | 1.001 | SW MH06    | 0.0           | 0.000          | 0.000    | 1.9339        |                    |
| 15 minute winter            | SW MH05    | 2.000 | SW MH06    | 19.0          | 0.572          | 0.042    | 1.2675        |                    |
| 240 minute winter           | SW MH06    | 1.002 | SW MH07    | 16.6          | 0.821          | 0.063    | 3.0909        |                    |
| 240 minute winter           | SW MH07    | 1.003 | SW MH08    | 24.6          | 1.013          | 0.093    | 7.2331        |                    |
| 15 minute winter            | DUMMY D    | 3.000 | DUMMY MSCP | 286.5         | 3.497          | 0.318    | 1.3118        |                    |
| 720 minute winter           | DUMMY MSCP | 3.001 | SW MH08    | 3.5           | 0.537          | 0.006    | 6.9593        |                    |
| 240 minute winter           | SW MH08    | 1.004 | SW MH09    | 42.5          | 0.708          | 0.076    | 8.6497        |                    |
| 240 minute winter           | SW MH09    | 1.005 | SW MH11    | 55.5          | 0.344          | 0.099    | 10.3285       |                    |
| 240 minute winter           | SW MH10    | 4.000 | SW MH11    | -54.3         | -0.214         | -0.097   | 8.2644        |                    |
| 240 minute winter           | SW MH11    | 1.006 | SW MH12    | 9.2           | 0.757          | 0.016    | 0.4615        |                    |
| 15 minute winter            | SW MH12    | 1.007 | SW MH13    | 9.2           | 0.747          | 0.021    | 0.7658        |                    |
| 15 minute winter            | SW MH13    | 1.008 | SW MH14    | 9.2           | 0.622          | 0.021    | 0.4101        |                    |
| 15 minute winter            | SW MH14    | 1.009 | SW MH15    | 9.2           | 0.572          | 0.021    | 0.2547        |                    |
| 15 minute winter            | SW MH15    | 1.010 | 15_OUT     | 9.2           | 0.639          | 0.045    | 0.1437        | 134.9              |