

### Design Settings

|                       |                   |                                      |               |
|-----------------------|-------------------|--------------------------------------|---------------|
| Rainfall Methodology  | FSR               | Maximum Time of Concentration (mins) | 30.00         |
| Return Period (years) | 1                 | 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)            | 18.000            | Minimum Backdrop Height (m)          | 0.200         |
| Ratio-R               | 0.363             | Preferred Cover Depth (m)            | 1.200         |
| CV                    | 0.750             | Include Intermediate Ground          | ✓             |
| Time of Entry (mins)  | 5.00              | Enforce best practice design rules   | ✓             |

### 1 STANDARD Link Type

|         |          |                     |    |
|---------|----------|---------------------|----|
| Shape   | Circular | Auto Increment (mm) | 75 |
| Barrels | 1        | Follow Ground       | x  |

### Available Diameters (mm)

100 | 150

### Nodes

| Name   | Area (ha) | T of E (mins) | Cover Level (m) | Node Type | Manhole Type | Diameter (mm) | Width (mm) | Easting (m) | Northing (m) | Depth (m) |
|--------|-----------|---------------|-----------------|-----------|--------------|---------------|------------|-------------|--------------|-----------|
| SW1    | 0.016     | 5.00          | 39.150          | Manhole   | 1 STANDARD   | 450           |            | 384864.842  | 396994.279   | 1.150     |
| SW2    | 0.018     | 5.00          | 39.150          | Manhole   | 1 STANDARD   | 450           |            | 384868.793  | 396990.431   | 1.350     |
| SW3    | 0.008     | 5.00          | 39.170          | Manhole   | 1 STANDARD   | 450           |            | 384856.854  | 396970.743   | 1.470     |
| SW4    |           |               | 39.160          | Manhole   | 1 STANDARD   | 450           |            | 384860.255  | 396974.254   | 1.509     |
| SW5    | 0.064     | 5.00          | 39.170          | Manhole   | 1 STANDARD   | 1200          |            | 384865.564  | 396969.224   | 1.665     |
| SW6    | 0.005     | 5.00          | 39.150          | Manhole   | 1 STANDARD   | 1200          |            | 384877.789  | 396981.804   | 1.971     |
| SW7    | 0.014     | 5.00          | 39.200          | Manhole   | 1 STANDARD   | 1200          |            | 384881.102  | 396985.184   | 2.045     |
| SW8    | 0.014     | 5.00          | 39.120          | Manhole   | 1 STANDARD   | 1500          |            | 384885.453  | 396981.116   | 1.995     |
| ATANK  | 0.014     | 5.00          | 39.050          | Manhole   | 1 STANDARD   | 1200          |            | 384891.908  | 396974.899   | 1.970     |
| OU     | 0.006     | 5.00          | 38.840          | Manhole   | 1 STANDARD   | 450           | 450        | 384909.145  | 396961.322   | 1.000     |
| SW9    | 0.004     | 5.00          | 38.980          | Manhole   | 1 STANDARD   | 600           |            | 384898.756  | 396971.228   | 1.284     |
| SW10   | 0.024     | 5.00          | 38.950          | Manhole   | 1 STANDARD   | 1500          |            | 384897.001  | 396970.167   | 1.904     |
| SW11   |           |               | 38.930          | Manhole   | 1 STANDARD   | 1200          |            | 384899.035  | 396967.528   | 1.917     |
| CW1    |           |               | 38.900          | Manhole   | 1 STANDARD   | 1200          |            | 384900.963  | 396964.761   | 2.550     |
| 14_OUT |           |               | 39.000          | Manhole   | 1 STANDARD   |               |            | 384903.055  | 396960.790   | 2.740     |

### Links

|     | US Node | DS Node | Length (m) | ks (mm) / n | Velocity Equation | US IL (m) | DS IL (m) | Fall (m) | Slope (1:X) | Dia (mm) | Link Type  | T of C (mins) | Rain (mm/hr) | M DS (n) |
|-----|---------|---------|------------|-------------|-------------------|-----------|-----------|----------|-------------|----------|------------|---------------|--------------|----------|
| 000 | SW1     | SW2     | 5.515      | 0.600       | Colebrook-White   | 38.000    | 37.813    | 0.187    | 29.5        | 150      | 1 STANDARD | 5.05          | 46.8         |          |
| 001 | SW2     | SW6     | 12.464     | 0.600       | Colebrook-White   | 37.800    | 37.675    | 0.125    | 99.9        | 150      | 1 STANDARD | 5.26          | 46.0         |          |
| 000 | SW3     | SW4     | 4.888      | 0.600       | Colebrook-White   | 37.700    | 37.651    | 0.049    | 99.8        | 150      | 1 STANDARD | 5.08          | 46.7         |          |
| 001 | SW4     | SW5     | 7.314      | 0.600       | Colebrook-White   | 37.651    | 37.505    | 0.146    | 50.0        | 150      | 1 STANDARD | 5.17          | 46.4         |          |

|       | Name | US Node | DS Node | Vel (m/s) | Cap (l/s) | Flow (l/s) | US Depth (m) | DS Depth (m) | Minimum Depth (m) | Maximum Depth (m) | Σ Area (ha) | Σ Add Inflow (l/s) |
|-------|------|---------|---------|-----------|-----------|------------|--------------|--------------|-------------------|-------------------|-------------|--------------------|
| 1.000 | SW1  | SW2     |         | 1.860     | 32.9      | 2.0        | 1.000        | 1.187        | 1.000             | 1.187             | 0.016       | 0.0                |
| 1.001 | SW2  | SW6     |         | 1.005     | 17.8      | 4.2        | 1.200        | 1.325        | 1.200             | 1.325             | 0.034       | 0.0                |
| 2.000 | SW3  | SW4     |         | 1.006     | 17.8      | 1.0        | 1.320        | 1.359        | 1.320             | 1.359             | 0.008       | 0.0                |
| 2.001 | SW4  | SW5     |         | 1.426     | 25.2      | 1.0        | 1.359        | 1.515        | 1.359             | 1.515             | 0.008       | 0.0                |

### Links

| US Node | DS Node | Length (m) | ks (mm) / n | Velocity Equation | US IL (m) | DS IL (m) | Fall (m) | Slope (1:X) | Dia (mm) | Link Type  | T of C (mins) | Rain (mm/hr) |
|---------|---------|------------|-------------|-------------------|-----------|-----------|----------|-------------|----------|------------|---------------|--------------|
| SW5     | SW6     | 17.541     | 0.600       | Colebrook-White   | 37.505    | 37.329    | 0.175    | 100.0       | 150      | 1 STANDARD | 5.46          | 45.3         |
| SW6     | SW7     | 4.734      | 0.600       | Colebrook-White   | 37.179    | 37.155    | 0.024    | 197.3       | 300      | 1 STANDARD | 5.53          | 45.0         |
| SW7     | SW8     | 5.957      | 0.600       | Colebrook-White   | 37.155    | 37.125    | 0.030    | 198.6       | 300      | 1 STANDARD | 5.62          | 44.7         |
| SW8     | ATANK   | 8.962      | 0.600       | Colebrook-White   | 37.125    | 37.080    | 0.045    | 199.2       | 300      | 1 STANDARD | 5.75          | 44.2         |
| ATANK   | SW10    | 6.952      | 0.600       | Colebrook-White   | 37.080    | 37.046    | 0.035    | 200.0       | 300      | 1 STANDARD | 5.86          | 43.9         |
| OU      | SW9     | 14.355     | 0.600       | Colebrook-White   | 37.840    | 37.696    | 0.144    | 99.7        | 150      | 1 STANDARD | 5.24          | 45.1         |
| SW9     | SW10    | 2.050      | 0.600       | Colebrook-White   | 37.696    | 37.675    | 0.021    | 97.6        | 150      | 1 STANDARD | 5.27          | 45.0         |
| SW10    | SW11    | 3.331      | 0.600       | Colebrook-White   | 37.046    | 37.013    | 0.033    | 100.9       | 150      | 1 STANDARD | 5.91          | 43.7         |
| SW11    | CW1     | 3.373      | 0.600       | Colebrook-White   | 37.013    | 36.979    | 0.034    | 99.2        | 150      | 1 STANDARD | 5.97          | 43.5         |
| CW1     | 14_OUT  | 4.488      | 0.600       | Colebrook-White   | 36.350    | 36.260    | 0.090    | 50.0        | 150      | 1 STANDARD | 6.02          | 43.3         |

| Name  | US Node | DS Node | Vel (m/s) | Cap (l/s) | Flow (l/s) | US Depth (m) | DS Depth (m) | Minimum Depth (m) | Maximum Depth (m) | Σ Area (ha) | Σ Add Inflow (l/s) |
|-------|---------|---------|-----------|-----------|------------|--------------|--------------|-------------------|-------------------|-------------|--------------------|
| 2.002 | SW5     | SW6     | 1.005     | 17.8      | 8.8        | 1.515        | 1.671        | 1.515             | 1.671             | 0.072       | 0.0                |
| 1.002 | SW6     | SW7     | 1.116     | 78.9      | 13.5       | 1.671        | 1.745        | 1.671             | 1.745             | 0.111       | 0.0                |
| 1.003 | SW7     | SW8     | 1.112     | 78.6      | 15.1       | 1.745        | 1.695        | 1.695             | 1.745             | 0.125       | 0.0                |
| 1.004 | SW8     | ATANK   | 1.110     | 78.5      | 16.7       | 1.695        | 1.670        | 1.670             | 1.695             | 0.139       | 0.0                |
| 1.005 | ATANK   | SW10    | 1.108     | 78.3      | 18.2       | 1.670        | 1.604        | 1.604             | 1.670             | 0.153       | 0.0                |
| 3.000 | OU      | SW9     | 1.006     | 17.8      | 0.7        | 0.850        | 1.134        | 0.850             | 1.134             | 0.006       | 0.0                |
| 3.001 | SW9     | SW10    | 1.017     | 18.0      | 1.2        | 1.134        | 1.125        | 1.125             | 1.134             | 0.010       | 0.0                |
| 1.006 | SW10    | SW11    | 1.000     | 17.7      | 22.1       | 1.754        | 1.767        | 1.754             | 1.767             | 0.187       | 0.0                |
| 1.007 | SW11    | CW1     | 1.009     | 17.8      | 22.1       | 1.767        | 1.771        | 1.767             | 1.771             | 0.187       | 0.0                |
| 1.008 | CW1     | 14_OUT  | 1.426     | 25.2      | 22.0       | 2.400        | 2.590        | 2.400             | 2.590             | 0.187       | 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 | 5.515      | 29.5        | 150      | 1 STANDARD | 39.150    | 38.000    | 1.000        | 39.150    | 37.813    | 1.187        |
| 1.001 | 12.464     | 99.9        | 150      | 1 STANDARD | 39.150    | 37.800    | 1.200        | 39.150    | 37.675    | 1.325        |
| 2.000 | 4.888      | 99.8        | 150      | 1 STANDARD | 39.170    | 37.700    | 1.320        | 39.160    | 37.651    | 1.359        |
| 2.001 | 7.314      | 50.0        | 150      | 1 STANDARD | 39.160    | 37.651    | 1.359        | 39.170    | 37.505    | 1.515        |
| 2.002 | 17.541     | 100.0       | 150      | 1 STANDARD | 39.170    | 37.505    | 1.515        | 39.150    | 37.329    | 1.671        |
| 1.002 | 4.734      | 197.3       | 300      | 1 STANDARD | 39.150    | 37.179    | 1.671        | 39.200    | 37.155    | 1.745        |
| 1.003 | 5.957      | 198.6       | 300      | 1 STANDARD | 39.200    | 37.155    | 1.745        | 39.120    | 37.125    | 1.695        |
| 1.004 | 8.962      | 199.2       | 300      | 1 STANDARD | 39.120    | 37.125    | 1.695        | 39.050    | 37.080    | 1.670        |
| 1.005 | 6.952      | 200.0       | 300      | 1 STANDARD | 39.050    | 37.080    | 1.670        | 38.950    | 37.046    | 1.604        |
| 3.000 | 14.355     | 99.7        | 150      | 1 STANDARD | 38.840    | 37.840    | 0.850        | 38.980    | 37.696    | 1.134        |

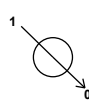
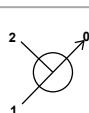
| Link  | US Node | Dia (mm) | Width (mm) | Node Type | MH Type    | DS Node | Dia (mm) | Node Type | MH Type    |
|-------|---------|----------|------------|-----------|------------|---------|----------|-----------|------------|
| 1.000 | SW1     | 450      |            | Manhole   | 1 STANDARD | SW2     | 450      | Manhole   | 1 STANDARD |
| 1.001 | SW2     | 450      |            | Manhole   | 1 STANDARD | SW6     | 1200     | Manhole   | 1 STANDARD |
| 2.000 | SW3     | 450      |            | Manhole   | 1 STANDARD | SW4     | 450      | Manhole   | 1 STANDARD |
| 2.001 | SW4     | 450      |            | Manhole   | 1 STANDARD | SW5     | 1200     | Manhole   | 1 STANDARD |
| 2.002 | SW5     | 1200     |            | Manhole   | 1 STANDARD | SW6     | 1200     | Manhole   | 1 STANDARD |
| 1.002 | SW6     | 1200     |            | Manhole   | 1 STANDARD | SW7     | 1200     | Manhole   | 1 STANDARD |
| 1.003 | SW7     | 1200     |            | Manhole   | 1 STANDARD | SW8     | 1500     | Manhole   | 1 STANDARD |
| 1.004 | SW8     | 1500     |            | Manhole   | 1 STANDARD | ATANK   | 1200     | Manhole   | 1 STANDARD |
| 1.005 | ATANK   | 1200     |            | Manhole   | 1 STANDARD | SW10    | 1500     | Manhole   | 1 STANDARD |
| 3.000 | OU      | 450      | 450        | Manhole   | 1 STANDARD | SW9     | 600      | Manhole   | 1 STANDARD |

### Pipeline Schedule

| Link  | Length<br>(m) | Slope<br>(1:X) | Dia<br>(mm) | Link<br>Type | US CL<br>(m) | US IL<br>(m) | US Depth<br>(m) | DS CL<br>(m) | DS IL<br>(m) | DS Depth<br>(m) |
|-------|---------------|----------------|-------------|--------------|--------------|--------------|-----------------|--------------|--------------|-----------------|
| 3.001 | 2.050         | 97.6           | 150         | 1 STANDARD   | 38.980       | 37.696       | 1.134           | 38.950       | 37.675       | 1.125           |
| 1.006 | 3.331         | 100.9          | 150         | 1 STANDARD   | 38.950       | 37.046       | 1.754           | 38.930       | 37.013       | 1.767           |
| 1.007 | 3.373         | 99.2           | 150         | 1 STANDARD   | 38.930       | 37.013       | 1.767           | 38.900       | 36.979       | 1.771           |
| 1.008 | 4.488         | 50.0           | 150         | 1 STANDARD   | 38.900       | 36.350       | 2.400           | 39.000       | 36.260       | 2.590           |

| Link  | US<br>Node | Dia<br>(mm) | Width<br>(mm) | Node<br>Type | MH<br>Type | DS<br>Node | Dia<br>(mm) | Node<br>Type | MH<br>Type |
|-------|------------|-------------|---------------|--------------|------------|------------|-------------|--------------|------------|
| 3.001 | SW9        | 600         |               | Manhole      | 1 STANDARD | SW10       | 1500        | Manhole      | 1 STANDARD |
| 1.006 | SW10       | 1500        |               | Manhole      | 1 STANDARD | SW11       | 1200        | Manhole      | 1 STANDARD |
| 1.007 | SW11       | 1200        |               | Manhole      | 1 STANDARD | CW1        | 1200        | Manhole      | 1 STANDARD |
| 1.008 | CW1        | 1200        |               | Manhole      | 1 STANDARD | 14_OUT     |             | Manhole      | 1 STANDARD |

### Manhole Schedule

|   | Easting<br>(m) | Northing<br>(m) | CL<br>(m) | Depth<br>(m) | Dia<br>(mm) | Width<br>(mm) | Node<br>Type | MH<br>Type | Connections                                                                           | Link        | IL<br>(m)               | Dia<br>(mm)                | Link<br>Type      |                                        |
|---|----------------|-----------------|-----------|--------------|-------------|---------------|--------------|------------|---------------------------------------------------------------------------------------|-------------|-------------------------|----------------------------|-------------------|----------------------------------------|
|   | 384864.842     | 396994.279      | 39.150    | 1.150        | 450         |               | Manhole      | 1 STANDARD |    | 0           | 1.000                   | 38.000                     | 150               | 1 STANDARD                             |
|   | 384868.793     | 396990.431      | 39.150    | 1.350        | 450         |               | Manhole      | 1 STANDARD |  | 1<br>0      | 1.000<br>1.001          | 37.813<br>37.800           | 150<br>150        | 1 STANDARD<br>1 STANDARD               |
|   | 384856.854     | 396970.743      | 39.170    | 1.470        | 450         |               | Manhole      | 1 STANDARD |  | 0           | 2.000                   | 37.700                     | 150               | 1 STANDARD                             |
|   | 384860.255     | 396974.254      | 39.160    | 1.509        | 450         |               | Manhole      | 1 STANDARD |  | 1<br>0      | 2.000<br>2.001          | 37.651<br>37.651           | 150<br>150        | 1 STANDARD<br>1 STANDARD               |
|   | 384865.564     | 396969.224      | 39.170    | 1.665        | 1200        |               | Manhole      | 1 STANDARD |  | 1<br>0      | 2.001<br>2.002          | 37.505<br>37.505           | 150<br>150        | 1 STANDARD<br>1 STANDARD               |
|   | 384877.789     | 396981.804      | 39.150    | 1.971        | 1200        |               | Manhole      | 1 STANDARD |  | 1<br>2<br>0 | 2.002<br>1.001<br>1.002 | 37.329<br>37.675<br>37.179 | 150<br>150<br>300 | 1 STANDARD<br>1 STANDARD<br>1 STANDARD |
|   | 384881.102     | 396985.184      | 39.200    | 2.045        | 1200        |               | Manhole      | 1 STANDARD |  | 1<br>0      | 1.002<br>1.003          | 37.155<br>37.155           | 300<br>300        | 1 STANDARD<br>1 STANDARD               |
|   | 384885.453     | 396981.116      | 39.120    | 1.995        | 1500        |               | Manhole      | 1 STANDARD |  | 1<br>0      | 1.003<br>1.004          | 37.125<br>37.125           | 300<br>300        | 1 STANDARD<br>1 STANDARD               |
| X | 384891.908     | 396974.899      | 39.050    | 1.970        | 1200        |               | Manhole      | 1 STANDARD |  | 1<br>0      | 1.004<br>1.005          | 37.080<br>37.080           | 300<br>300        | 1 STANDARD<br>1 STANDARD               |

### Manhole Schedule

|   | Easting<br>(m) | Northing<br>(m) | CL<br>(m) | Depth<br>(m) | Dia<br>(mm) | Width<br>(mm) | Node<br>Type | MH<br>Type | Connections                                                                          | Link        | IL<br>(m)               | Dia<br>(mm)                | Link<br>Type      |                                        |
|---|----------------|-----------------|-----------|--------------|-------------|---------------|--------------|------------|--------------------------------------------------------------------------------------|-------------|-------------------------|----------------------------|-------------------|----------------------------------------|
|   | 384909.145     | 396961.322      | 38.840    | 1.000        | 450         | 450           | Manhole      | 1 STANDARD |   | 0           | 3.000                   | 37.840                     | 150               | 1 STANDARD                             |
|   | 384898.756     | 396971.228      | 38.980    | 1.284        | 600         |               | Manhole      | 1 STANDARD |   | 1           | 3.000                   | 37.696                     | 150               | 1 STANDARD                             |
|   | 384897.001     | 396970.167      | 38.950    | 1.904        | 1500        |               | Manhole      | 1 STANDARD |   | 0<br>1<br>2 | 3.001<br>3.001<br>1.005 | 37.696<br>37.675<br>37.046 | 150<br>150<br>300 | 1 STANDARD<br>1 STANDARD<br>1 STANDARD |
|   | 384899.035     | 396967.528      | 38.930    | 1.917        | 1200        |               | Manhole      | 1 STANDARD |   | 1           | 1.006                   | 37.013                     | 150               | 1 STANDARD                             |
|   | 384900.963     | 396964.761      | 38.900    | 2.550        | 1200        |               | Manhole      | 1 STANDARD |   | 1           | 1.007                   | 37.013                     | 150               | 1 STANDARD                             |
|   | 384900.963     | 396964.761      | 38.900    | 2.550        | 1200        |               | Manhole      | 1 STANDARD |   | 0           | 1.007                   | 36.979                     | 150               | 1 STANDARD                             |
| T | 384903.055     | 396960.790      | 39.000    | 2.740        |             |               | Manhole      | 1 STANDARD |  | 1           | 1.008                   | 36.350                     | 150               | 1 STANDARD                             |
|   | 384903.055     | 396960.790      | 39.000    | 2.740        |             |               | Manhole      | 1 STANDARD |  | 1           | 1.008                   | 36.260                     | 150               | 1 STANDARD                             |

### 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              | 0.363             | 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<br>(years) | Climate Change<br>(CC %) | Additional Area<br>(A %) | Additional Flow<br>(Q %) |
|--------------------------|--------------------------|--------------------------|--------------------------|
| 1                        | 0                        | 0                        | 0                        |
| 30                       | 0                        | 0                        | 0                        |
| 100                      | 20                       | 0                        | 0                        |
| 100                      | 40                       | 0                        | 0                        |

### Node Surcharged Outfall

|                                    |   |                               |   |                              |   |
|------------------------------------|---|-------------------------------|---|------------------------------|---|
| Overrides Design Area              | x | Depression Storage Area (m²)  | 0 | Evapo-transpiration (mm/day) | 0 |
| Overrides Design Additional Inflow | x | Depression Storage Depth (mm) | 0 |                              |   |

Applies to All storms

| Time (mins) | Depth (m) | Time (mins) | Depth (m) | Time (mins) | Depth (m) | Time (mins) | Depth (m) | Time (mins) | Depth (m) | Time (mins) | Depth (m) |
|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
| 0           | 36.410    | 255         | 37.410    | 510         | 37.410    | 765         | 37.410    | 1020        | 37.410    | 1275        | 37.410    |
| 15          | 37.410    | 270         | 37.410    | 525         | 37.410    | 780         | 37.410    | 1035        | 37.410    | 1290        | 37.410    |
| 30          | 37.410    | 285         | 37.410    | 540         | 37.410    | 795         | 37.410    | 1050        | 37.410    | 1305        | 37.410    |
| 45          | 37.410    | 300         | 37.410    | 555         | 37.410    | 810         | 37.410    | 1065        | 37.410    | 1320        | 37.410    |
| 60          | 37.410    | 315         | 37.410    | 570         | 37.410    | 825         | 37.410    | 1080        | 37.410    | 1335        | 37.410    |
| 75          | 37.410    | 330         | 37.410    | 585         | 37.410    | 840         | 37.410    | 1095        | 37.410    | 1350        | 37.410    |
| 90          | 37.410    | 345         | 37.410    | 600         | 37.410    | 855         | 37.410    | 1110        | 37.410    | 1365        | 37.410    |
| 105         | 37.410    | 360         | 37.410    | 615         | 37.410    | 870         | 37.410    | 1125        | 37.410    | 1380        | 37.410    |
| 120         | 37.410    | 375         | 37.410    | 630         | 37.410    | 885         | 37.410    | 1140        | 37.410    | 1395        | 37.410    |
| 135         | 37.410    | 390         | 37.410    | 645         | 37.410    | 900         | 37.410    | 1155        | 37.410    | 1410        | 37.410    |
| 150         | 37.410    | 405         | 37.410    | 660         | 37.410    | 915         | 37.410    | 1170        | 37.410    | 1425        | 37.410    |
| 165         | 37.410    | 420         | 37.410    | 675         | 37.410    | 930         | 37.410    | 1185        | 37.410    | 1440        | 37.410    |
| 180         | 37.410    | 435         | 37.410    | 690         | 37.410    | 945         | 37.410    | 1200        | 37.410    |             |           |
| 195         | 37.410    | 450         | 37.410    | 705         | 37.410    | 960         | 37.410    | 1215        | 37.410    |             |           |
| 210         | 37.410    | 465         | 37.410    | 720         | 37.410    | 975         | 37.410    | 1230        | 37.410    |             |           |
| 225         | 37.410    | 480         | 37.410    | 735         | 37.410    | 990         | 37.410    | 1245        | 37.410    |             |           |
| 240         | 37.410    | 495         | 37.410    | 750         | 37.410    | 1005        | 37.410    | 1260        | 37.410    |             |           |

### Node SW10 Online Hydro-Brake® Control

|                          |        |                         |                                |
|--------------------------|--------|-------------------------|--------------------------------|
| Flap Valve               | x      | Objective               | (HE) Minimise upstream storage |
| Replaces Downstream Link | x      | Sump Available          | ✓                              |
| Invert Level (m)         | 37.046 | Product Number          | CTL-SHE-0101-5000-1300-5000    |
| Design Depth (m)         | 1.300  | Min Outlet Diameter (m) | 0.150                          |
| Design Flow (l/s)        | 5.0    | Min Node Diameter (mm)  | 1200                           |

### Node ATANK Depth/Area Storage Structure

|                             |         |               |      |                           |        |
|-----------------------------|---------|---------------|------|---------------------------|--------|
| Base Inf Coefficient (m/hr) | 0.00000 | Safety Factor | 2.0  | Invert Level (m)          | 37.081 |
| Side Inf Coefficient (m/hr) | 0.00000 | Porosity      | 0.95 | Time to half empty (mins) | 90     |

| Depth (m) | Area (m²) | Inf Area (m²) | Depth (m) | Area (m²) | Inf Area (m²) | Depth (m) | Area (m²) | Inf Area (m²) |
|-----------|-----------|---------------|-----------|-----------|---------------|-----------|-----------|---------------|
| 0.000     | 77.0      | 24.0          | 1.200     | 77.0      | 46.4          | 1.210     | 0.0       | 46.4          |

### Other (defaults)

|                      |       |                       |       |                          |       |
|----------------------|-------|-----------------------|-------|--------------------------|-------|
| Entry Loss (manhole) | 0.250 | Entry Loss (junction) | 0.000 | Apply Recommended Losses | x     |
| Exit Loss (manhole)  | 0.250 | Exit Loss (junction)  | 0.000 | Flood Risk (m)           | 0.300 |

### Approval Settings

|                         |         |                                     |       |
|-------------------------|---------|-------------------------------------|-------|
| Node Size               | ✓       | Minimum Backdrop Height (m)         | 0.200 |
| Node Losses             | ✓       | Maximum Backdrop Height (m)         | 1.500 |
| Link Size               | ✓       | Full Bore Velocity                  | ✓     |
| Minimum Diameter (mm)   | 150     | Minimum Full Bore Velocity (m/s)    | 1.000 |
| Link Length             | ✓       | Maximum Full Bore Velocity (m/s)    | 3.000 |
| Maximum Length (m)      | 100.000 | Proportional Velocity               | ✓     |
| Coordinates             | ✓       | Return Period (years)               | 1     |
| Accuracy (m)            | 1.000   | Minimum Proportional Velocity (m/s) | 0.750 |
| Crossings               | ✓       | Maximum Proportional Velocity (m/s) | 3.000 |
| Cover Depth             | ✓       | Surcharged Depth                    | ✓     |
| Minimum Cover Depth (m) | 1.200   | Return Period (years)               | 1     |
| Maximum Cover Depth (m) | 3.000   | Maximum Surcharged Depth (m)        | 0.100 |
| Backdrops               | ✓       | Flooding                            | ✓     |

### Approval Settings

Return Period (years) 30  
Time to Half Empty x  
Discharge Rates ✓

Discharge Volume ✓  
100 year 360 minute (m<sup>3</sup>)

### Rainfall

| Event                     | Peak Intensity (mm/hr) | Average Intensity (mm/hr) | Event                               | Peak Intensity (mm/hr) | Average Intensity (mm/hr) |
|---------------------------|------------------------|---------------------------|-------------------------------------|------------------------|---------------------------|
| 1 year 15 minute summer   | 95.066                 | 26.900                    | 30 year 1440 minute summer          | 9.930                  | 2.661                     |
| 1 year 15 minute winter   | 66.713                 | 26.900                    | 30 year 1440 minute winter          | 6.673                  | 2.661                     |
| 1 year 30 minute summer   | 62.653                 | 17.729                    | 100 year +20% CC 15 minute summer   | 360.342                | 101.964                   |
| 1 year 30 minute winter   | 43.967                 | 17.729                    | 100 year +20% CC 15 minute winter   | 252.871                | 101.964                   |
| 1 year 60 minute summer   | 43.047                 | 11.376                    | 100 year +20% CC 30 minute summer   | 240.915                | 68.171                    |
| 1 year 60 minute winter   | 28.599                 | 11.376                    | 100 year +20% CC 30 minute winter   | 169.063                | 68.171                    |
| 1 year 120 minute summer  | 27.164                 | 7.179                     | 100 year +20% CC 60 minute summer   | 164.805                | 43.553                    |
| 1 year 120 minute winter  | 18.047                 | 7.179                     | 100 year +20% CC 60 minute winter   | 109.492                | 43.553                    |
| 1 year 180 minute summer  | 21.219                 | 5.460                     | 100 year +20% CC 120 minute summer  | 101.919                | 26.934                    |
| 1 year 180 minute winter  | 13.793                 | 5.460                     | 100 year +20% CC 120 minute winter  | 67.713                 | 26.934                    |
| 1 year 240 minute summer  | 17.002                 | 4.493                     | 100 year +20% CC 180 minute summer  | 77.993                 | 20.070                    |
| 1 year 240 minute winter  | 11.296                 | 4.493                     | 100 year +20% CC 180 minute winter  | 50.697                 | 20.070                    |
| 1 year 360 minute summer  | 13.256                 | 3.411                     | 100 year +20% CC 240 minute summer  | 61.271                 | 16.192                    |
| 1 year 360 minute winter  | 8.617                  | 3.411                     | 100 year +20% CC 240 minute winter  | 40.707                 | 16.192                    |
| 1 year 480 minute summer  | 10.544                 | 2.786                     | 100 year +20% CC 360 minute summer  | 46.088                 | 11.860                    |
| 1 year 480 minute winter  | 7.005                  | 2.786                     | 100 year +20% CC 360 minute winter  | 29.958                 | 11.860                    |
| 1 year 600 minute summer  | 8.707                  | 2.382                     | 100 year +20% CC 480 minute summer  | 36.005                 | 9.515                     |
| 1 year 600 minute winter  | 5.949                  | 2.382                     | 100 year +20% CC 480 minute winter  | 23.921                 | 9.515                     |
| 1 year 720 minute summer  | 7.817                  | 2.095                     | 100 year +20% CC 600 minute summer  | 29.299                 | 8.014                     |
| 1 year 720 minute winter  | 5.254                  | 2.095                     | 100 year +20% CC 600 minute winter  | 20.019                 | 8.014                     |
| 1 year 960 minute summer  | 6.500                  | 1.712                     | 100 year +20% CC 720 minute summer  | 25.975                 | 6.962                     |
| 1 year 960 minute winter  | 4.306                  | 1.712                     | 100 year +20% CC 720 minute winter  | 17.457                 | 6.962                     |
| 1 year 1440 minute summer | 4.806                  | 1.288                     | 100 year +20% CC 960 minute summer  | 21.153                 | 5.570                     |
| 1 year 1440 minute winter | 3.230                  | 1.288                     | 100 year +20% CC 960 minute winter  | 14.012                 | 5.570                     |
| 30 year 15 minute summer  | 232.567                | 65.808                    | 100 year +20% CC 1440 minute summer | 15.152                 | 4.061                     |
| 30 year 15 minute winter  | 163.205                | 65.808                    | 100 year +20% CC 1440 minute winter | 10.183                 | 4.061                     |
| 30 year 30 minute summer  | 153.976                | 43.570                    | 100 year +40% CC 15 minute summer   | 420.399                | 118.958                   |
| 30 year 30 minute winter  | 108.053                | 43.570                    | 100 year +40% CC 15 minute winter   | 295.017                | 118.958                   |
| 30 year 60 minute summer  | 104.640                | 27.653                    | 100 year +40% CC 30 minute summer   | 281.068                | 79.532                    |
| 30 year 60 minute winter  | 69.521                 | 27.653                    | 100 year +40% CC 30 minute winter   | 197.240                | 79.532                    |
| 30 year 120 minute summer | 64.570                 | 17.064                    | 100 year +40% CC 60 minute summer   | 192.272                | 50.812                    |
| 30 year 120 minute winter | 42.899                 | 17.064                    | 100 year +40% CC 60 minute winter   | 127.741                | 50.812                    |
| 30 year 180 minute summer | 49.489                 | 12.735                    | 100 year +40% CC 120 minute summer  | 118.905                | 31.423                    |
| 30 year 180 minute winter | 32.169                 | 12.735                    | 100 year +40% CC 120 minute winter  | 78.998                 | 31.423                    |
| 30 year 240 minute summer | 38.987                 | 10.303                    | 100 year +40% CC 180 minute summer  | 90.992                 | 23.415                    |
| 30 year 240 minute winter | 25.902                 | 10.303                    | 100 year +40% CC 180 minute winter  | 59.147                 | 23.415                    |
| 30 year 360 minute summer | 29.523                 | 7.597                     | 100 year +40% CC 240 minute summer  | 71.483                 | 18.891                    |
| 30 year 360 minute winter | 19.191                 | 7.597                     | 100 year +40% CC 240 minute winter  | 47.492                 | 18.891                    |
| 30 year 480 minute summer | 23.161                 | 6.121                     | 100 year +40% CC 360 minute summer  | 53.769                 | 13.837                    |
| 30 year 480 minute winter | 15.388                 | 6.121                     | 100 year +40% CC 360 minute winter  | 34.951                 | 13.837                    |
| 30 year 600 minute summer | 18.912                 | 5.173                     | 100 year +40% CC 480 minute summer  | 42.006                 | 11.101                    |
| 30 year 600 minute winter | 12.922                 | 5.173                     | 100 year +40% CC 480 minute winter  | 27.908                 | 11.101                    |
| 30 year 720 minute summer | 16.816                 | 4.507                     | 100 year +40% CC 600 minute summer  | 34.182                 | 9.350                     |
| 30 year 720 minute winter | 11.301                 | 4.507                     | 100 year +40% CC 600 minute winter  | 23.355                 | 9.350                     |
| 30 year 960 minute summer | 13.761                 | 3.624                     | 100 year +40% CC 720 minute summer  | 30.304                 | 8.122                     |
| 30 year 960 minute winter | 9.115                  | 3.624                     | 100 year +40% CC 720 minute winter  | 20.366                 | 8.122                     |

### Rainfall

| Event                              | Peak<br>Intensity<br>(mm/hr) | Average<br>Intensity<br>(mm/hr) | Event                               | Peak<br>Intensity<br>(mm/hr) | Average<br>Intensity<br>(mm/hr) |
|------------------------------------|------------------------------|---------------------------------|-------------------------------------|------------------------------|---------------------------------|
| 100 year +40% CC 960 minute summer | 24.679                       | 6.498                           | 100 year +40% CC 1440 minute summer | 17.677                       | 4.738                           |
| 100 year +40% CC 960 minute winter | 16.348                       | 6.498                           | 100 year +40% CC 1440 minute winter | 11.880                       | 4.738                           |

**Results for 1 year Critical Storm Duration. Lowest mass balance: 99.85%**

| Node Event       | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status     |
|------------------|---------|-------------|-----------|-----------|--------------|---------------|------------|------------|
| 15 minute winter | SW1     | 10          | 38.025    | 0.025     | 2.0          | 0.0109        | 0.0000     | OK         |
| 15 minute winter | SW2     | 10          | 37.851    | 0.051     | 4.2          | 0.0216        | 0.0000     | OK         |
| 15 minute winter | SW3     | 10          | 37.725    | 0.025     | 1.0          | 0.0067        | 0.0000     | OK         |
| 15 minute winter | SW4     | 11          | 37.671    | 0.020     | 1.0          | 0.0032        | 0.0000     | OK         |
| 15 minute winter | SW5     | 10          | 37.581    | 0.076     | 8.7          | 0.1450        | 0.0000     | OK         |
| 15 minute winter | SW6     | 11          | 37.277    | 0.098     | 13.2         | 0.1156        | 0.0000     | OK         |
| 15 minute winter | SW7     | 11          | 37.255    | 0.099     | 14.8         | 0.1258        | 0.0000     | OK         |
| 15 minute winter | SW8     | 11          | 37.221    | 0.096     | 16.5         | 0.1823        | 0.0000     | OK         |
| 60 minute winter | ATANK   | 47          | 37.217    | 0.137     | 9.9          | 10.1584       | 0.0000     | OK         |
| 15 minute winter | OU      | 11          | 37.860    | 0.020     | 0.7          | 0.0066        | 0.0000     | OK         |
| 15 minute winter | SW9     | 11          | 37.724    | 0.028     | 1.2          | 0.0098        | 0.0000     | OK         |
| 60 minute winter | SW10    | 47          | 37.216    | 0.171     | 3.9          | 0.3447        | 0.0000     | SURCHARGED |
| 60 minute winter | SW11    | 47          | 37.065    | 0.052     | 3.9          | 0.0593        | 0.0000     | OK         |
| 60 minute winter | CW1     | 47          | 36.393    | 0.043     | 3.9          | 0.0488        | 0.0000     | OK         |
| 60 minute winter | 14_OUT  | 47          | 36.300    | 0.040     | 3.9          | 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 winter            | SW1     | 1.000 | SW2     | 2.0           | 0.739          | 0.060    | 0.0149        |                    |
| 15 minute winter            | SW2     | 1.001 | SW6     | 4.1           | 0.800          | 0.229    | 0.0636        |                    |
| 15 minute winter            | SW3     | 2.000 | SW4     | 1.0           | 0.588          | 0.055    | 0.0081        |                    |
| 15 minute winter            | SW4     | 2.001 | SW5     | 1.0           | 0.196          | 0.038    | 0.0379        |                    |
| 15 minute winter            | SW5     | 2.002 | SW6     | 8.5           | 0.977          | 0.480    | 0.1531        |                    |
| 15 minute winter            | SW6     | 1.002 | SW7     | 13.2          | 0.657          | 0.168    | 0.0952        |                    |
| 15 minute winter            | SW7     | 1.003 | SW8     | 14.9          | 0.753          | 0.190    | 0.1180        |                    |
| 15 minute winter            | SW8     | 1.004 | ATANK   | 16.6          | 1.350          | 0.212    | 0.1523        |                    |
| 60 minute winter            | ATANK   | 1.005 | SW10    | 3.3           | 0.119          | 0.043    | 0.2528        |                    |
| 15 minute winter            | OU      | 3.000 | SW9     | 0.7           | 0.380          | 0.039    | 0.0268        |                    |
| 15 minute winter            | SW9     | 3.001 | SW10    | 1.2           | 0.547          | 0.067    | 0.0045        |                    |
| 60 minute winter            | SW10    | 1.006 | SW11    | 3.9           | 0.702          | 0.221    | 0.0185        |                    |
| 60 minute winter            | SW11    | 1.007 | CW1     | 3.9           | 0.760          | 0.219    | 0.0173        |                    |
| 60 minute winter            | CW1     | 1.008 | 14_OUT  | 3.9           | 0.984          | 0.155    | 0.0178        | 17.6               |

**Results for 30 year Critical Storm Duration. Lowest mass balance: 99.85%**

| Node Event        | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status     |
|-------------------|---------|-------------|-----------|-----------|--------------|---------------|------------|------------|
| 15 minute winter  | SW1     | 10          | 38.039    | 0.039     | 4.8          | 0.0169        | 0.0000     | OK         |
| 15 minute winter  | SW2     | 10          | 37.886    | 0.086     | 10.2         | 0.0365        | 0.0000     | OK         |
| 15 minute winter  | SW3     | 10          | 37.739    | 0.039     | 2.4          | 0.0106        | 0.0000     | OK         |
| 15 minute winter  | SW4     | 11          | 37.707    | 0.056     | 2.4          | 0.0089        | 0.0000     | OK         |
| 15 minute winter  | SW5     | 11          | 37.705    | 0.200     | 20.4         | 0.3802        | 0.0000     | SURCHARGED |
| 120 minute winter | SW6     | 92          | 37.460    | 0.280     | 11.0         | 0.3312        | 0.0000     | OK         |
| 120 minute winter | SW7     | 92          | 37.459    | 0.304     | 12.1         | 0.3857        | 0.0000     | SURCHARGED |
| 120 minute winter | SW8     | 92          | 37.459    | 0.334     | 13.1         | 0.6374        | 0.0000     | SURCHARGED |
| 120 minute winter | ATANK   | 92          | 37.459    | 0.379     | 13.8         | 28.1638       | 0.0000     | SURCHARGED |
| 15 minute winter  | OU      | 10          | 37.872    | 0.032     | 1.8          | 0.0103        | 0.0000     | OK         |
| 15 minute winter  | SW9     | 10          | 37.742    | 0.046     | 3.0          | 0.0157        | 0.0000     | OK         |
| 120 minute winter | SW10    | 92          | 37.458    | 0.413     | 5.2          | 0.8333        | 0.0000     | SURCHARGED |
| 120 minute winter | SW11    | 92          | 37.073    | 0.060     | 5.0          | 0.0682        | 0.0000     | OK         |
| 120 minute winter | CW1     | 92          | 36.399    | 0.049     | 5.0          | 0.0560        | 0.0000     | OK         |
| 120 minute winter | 14_OUT  | 92          | 36.305    | 0.045     | 5.0          | 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 winter            | SW1     | 1.000 | SW2     | 4.8           | 0.806          | 0.145    | 0.0332        |                    |
| 15 minute winter            | SW2     | 1.001 | SW6     | 10.0          | 1.000          | 0.562    | 0.1245        |                    |
| 15 minute winter            | SW3     | 2.000 | SW4     | 2.4           | 0.745          | 0.134    | 0.0234        |                    |
| 15 minute winter            | SW4     | 2.001 | SW5     | 3.1           | 0.238          | 0.122    | 0.0863        |                    |
| 15 minute winter            | SW5     | 2.002 | SW6     | 20.0          | 1.144          | 1.129    | 0.2960        |                    |
| 120 minute winter           | SW6     | 1.002 | SW7     | 10.7          | 0.571          | 0.136    | 0.3287        |                    |
| 120 minute winter           | SW7     | 1.003 | SW8     | 11.7          | 0.597          | 0.149    | 0.4195        |                    |
| 120 minute winter           | SW8     | 1.004 | ATANK   | 12.4          | 0.834          | 0.159    | 0.6311        |                    |
| 120 minute winter           | ATANK   | 1.005 | SW10    | 4.8           | 0.119          | 0.062    | 0.4896        |                    |
| 15 minute winter            | OU      | 3.000 | SW9     | 1.8           | 0.491          | 0.100    | 0.0521        |                    |
| 15 minute winter            | SW9     | 3.001 | SW10    | 2.9           | 0.693          | 0.161    | 0.0086        |                    |
| 120 minute winter           | SW10    | 1.006 | SW11    | 5.0           | 0.741          | 0.283    | 0.0224        |                    |
| 120 minute winter           | SW11    | 1.007 | CW1     | 5.0           | 0.809          | 0.280    | 0.0208        |                    |
| 120 minute winter           | CW1     | 1.008 | 14_OUT  | 5.0           | 1.048          | 0.198    | 0.0214        | 53.1               |

**Results for 100 year +20% CC Critical Storm Duration. Lowest mass balance: 99.85%**

| Node Event        | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status     |
|-------------------|---------|-------------|-----------|-----------|--------------|---------------|------------|------------|
| 15 minute winter  | SW1     | 10          | 38.050    | 0.050     | 7.4          | 0.0217        | 0.0000     | OK         |
| 15 minute winter  | SW2     | 10          | 37.918    | 0.118     | 15.8         | 0.0504        | 0.0000     | OK         |
| 15 minute winter  | SW3     | 12          | 38.003    | 0.303     | 4.5          | 0.0811        | 0.0000     | SURCHARGED |
| 15 minute winter  | SW4     | 12          | 37.999    | 0.348     | 4.0          | 0.0554        | 0.0000     | SURCHARGED |
| 15 minute winter  | SW5     | 12          | 37.993    | 0.488     | 29.9         | 0.9273        | 0.0000     | SURCHARGED |
| 120 minute winter | SW6     | 114         | 37.776    | 0.596     | 17.5         | 0.7049        | 0.0000     | SURCHARGED |
| 120 minute winter | SW7     | 114         | 37.776    | 0.620     | 19.1         | 0.7865        | 0.0000     | SURCHARGED |
| 120 minute winter | SW8     | 114         | 37.775    | 0.650     | 20.9         | 1.2405        | 0.0000     | SURCHARGED |
| 120 minute winter | ATANK   | 114         | 37.775    | 0.695     | 22.5         | 51.6891       | 0.0000     | SURCHARGED |
| 15 minute winter  | OU      | 10          | 37.880    | 0.040     | 2.8          | 0.0129        | 0.0000     | OK         |
| 120 minute winter | SW9     | 114         | 37.775    | 0.079     | 1.5          | 0.0272        | 0.0000     | OK         |
| 120 minute winter | SW10    | 114         | 37.774    | 0.729     | 5.6          | 1.4716        | 0.0000     | SURCHARGED |
| 15 minute winter  | SW11    | 23          | 37.073    | 0.060     | 5.0          | 0.0683        | 0.0000     | OK         |
| 15 minute winter  | CW1     | 23          | 36.400    | 0.050     | 5.0          | 0.0560        | 0.0000     | OK         |
| 15 minute winter  | 14_OUT  | 23          | 36.306    | 0.045     | 5.0          | 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 winter            | SW1     | 1.000 | SW2     | 7.4           | 0.832          | 0.224    | 0.0504        |                    |
| 15 minute winter            | SW2     | 1.001 | SW6     | 15.4          | 1.089          | 0.870    | 0.1770        |                    |
| 15 minute winter            | SW3     | 2.000 | SW4     | 4.0           | 0.725          | 0.224    | 0.0861        |                    |
| 15 minute winter            | SW4     | 2.001 | SW5     | 6.3           | 0.359          | 0.251    | 0.1288        |                    |
| 15 minute winter            | SW5     | 2.002 | SW6     | 28.4          | 1.612          | 1.598    | 0.3088        |                    |
| 120 minute winter           | SW6     | 1.002 | SW7     | 16.9          | 0.572          | 0.214    | 0.3334        |                    |
| 120 minute winter           | SW7     | 1.003 | SW8     | 18.7          | 0.591          | 0.238    | 0.4195        |                    |
| 120 minute winter           | SW8     | 1.004 | ATANK   | 20.3          | 0.939          | 0.259    | 0.6311        |                    |
| 120 minute winter           | ATANK   | 1.005 | SW10    | 4.9           | 0.115          | 0.062    | 0.4896        |                    |
| 15 minute winter            | OU      | 3.000 | SW9     | 2.8           | 0.548          | 0.155    | 0.0725        |                    |
| 120 minute winter           | SW9     | 3.001 | SW10    | 1.5           | 0.582          | 0.083    | 0.0224        |                    |
| 120 minute winter           | SW10    | 1.006 | SW11    | 5.0           | 0.742          | 0.283    | 0.0225        |                    |
| 15 minute winter            | SW11    | 1.007 | CW1     | 5.0           | 0.810          | 0.281    | 0.0208        |                    |
| 15 minute winter            | CW1     | 1.008 | 14_OUT  | 5.0           | 1.049          | 0.199    | 0.0214        | 39.2               |

**Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.85%**

| Node Event        | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status     |
|-------------------|---------|-------------|-----------|-----------|--------------|---------------|------------|------------|
| 15 minute winter  | SW1     | 9           | 38.053    | 0.053     | 8.7          | 0.0231        | 0.0000     | OK         |
| 15 minute winter  | SW2     | 11          | 37.945    | 0.145     | 18.4         | 0.0618        | 0.0000     | OK         |
| 15 minute winter  | SW3     | 12          | 38.181    | 0.481     | 4.3          | 0.1289        | 0.0000     | SURCHARGED |
| 15 minute winter  | SW4     | 12          | 38.178    | 0.527     | 4.2          | 0.0838        | 0.0000     | SURCHARGED |
| 15 minute winter  | SW5     | 12          | 38.172    | 0.667     | 34.6         | 1.2680        | 0.0000     | SURCHARGED |
| 120 minute winter | SW6     | 118         | 37.941    | 0.762     | 19.7         | 0.9006        | 0.0000     | SURCHARGED |
| 120 minute winter | SW7     | 118         | 37.941    | 0.786     | 21.6         | 0.9965        | 0.0000     | SURCHARGED |
| 120 minute winter | SW8     | 118         | 37.941    | 0.816     | 23.7         | 1.5567        | 0.0000     | SURCHARGED |
| 120 minute winter | ATANK   | 118         | 37.941    | 0.861     | 26.1         | 64.0290       | 0.0000     | SURCHARGED |
| 120 minute winter | OU      | 118         | 37.940    | 0.100     | 1.1          | 0.0325        | 0.0000     | OK         |
| 120 minute winter | SW9     | 118         | 37.941    | 0.245     | 1.8          | 0.0844        | 0.0000     | SURCHARGED |
| 120 minute winter | SW10    | 118         | 37.940    | 0.895     | 6.2          | 1.8064        | 0.0000     | SURCHARGED |
| 15 minute summer  | SW11    | 29          | 37.073    | 0.060     | 5.0          | 0.0683        | 0.0000     | OK         |
| 15 minute summer  | CW1     | 29          | 36.400    | 0.050     | 5.0          | 0.0560        | 0.0000     | OK         |
| 15 minute summer  | 14_OUT  | 29          | 36.306    | 0.045     | 5.0          | 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 winter            | SW1     | 1.000 | SW2     | 8.7           | 0.836          | 0.264    | 0.0599        |                    |
| 15 minute winter            | SW2     | 1.001 | SW6     | 17.8          | 1.102          | 1.004    | 0.2050        |                    |
| 15 minute winter            | SW3     | 2.000 | SW4     | 4.2           | 0.761          | 0.236    | 0.0861        |                    |
| 15 minute winter            | SW4     | 2.001 | SW5     | 6.7           | 0.387          | 0.265    | 0.1288        |                    |
| 15 minute winter            | SW5     | 2.002 | SW6     | 32.2          | 1.830          | 1.814    | 0.3088        |                    |
| 120 minute winter           | SW6     | 1.002 | SW7     | 19.1          | 0.568          | 0.242    | 0.3334        |                    |
| 120 minute winter           | SW7     | 1.003 | SW8     | 21.1          | 0.580          | 0.269    | 0.4195        |                    |
| 120 minute winter           | SW8     | 1.004 | ATANK   | 23.0          | 0.958          | 0.294    | 0.6311        |                    |
| 120 minute winter           | ATANK   | 1.005 | SW10    | 4.9           | 0.111          | 0.062    | 0.4896        |                    |
| 120 minute winter           | OU      | 3.000 | SW9     | 1.1           | 0.434          | 0.062    | 0.2164        |                    |
| 120 minute winter           | SW9     | 3.001 | SW10    | 1.8           | 0.611          | 0.100    | 0.0361        |                    |
| 120 minute winter           | SW10    | 1.006 | SW11    | 5.0           | 0.742          | 0.283    | 0.0225        |                    |
| 15 minute summer            | SW11    | 1.007 | CW1     | 5.0           | 0.810          | 0.281    | 0.0208        |                    |
| 15 minute summer            | CW1     | 1.008 | 14_OUT  | 5.0           | 1.049          | 0.199    | 0.0214        | 40.8               |