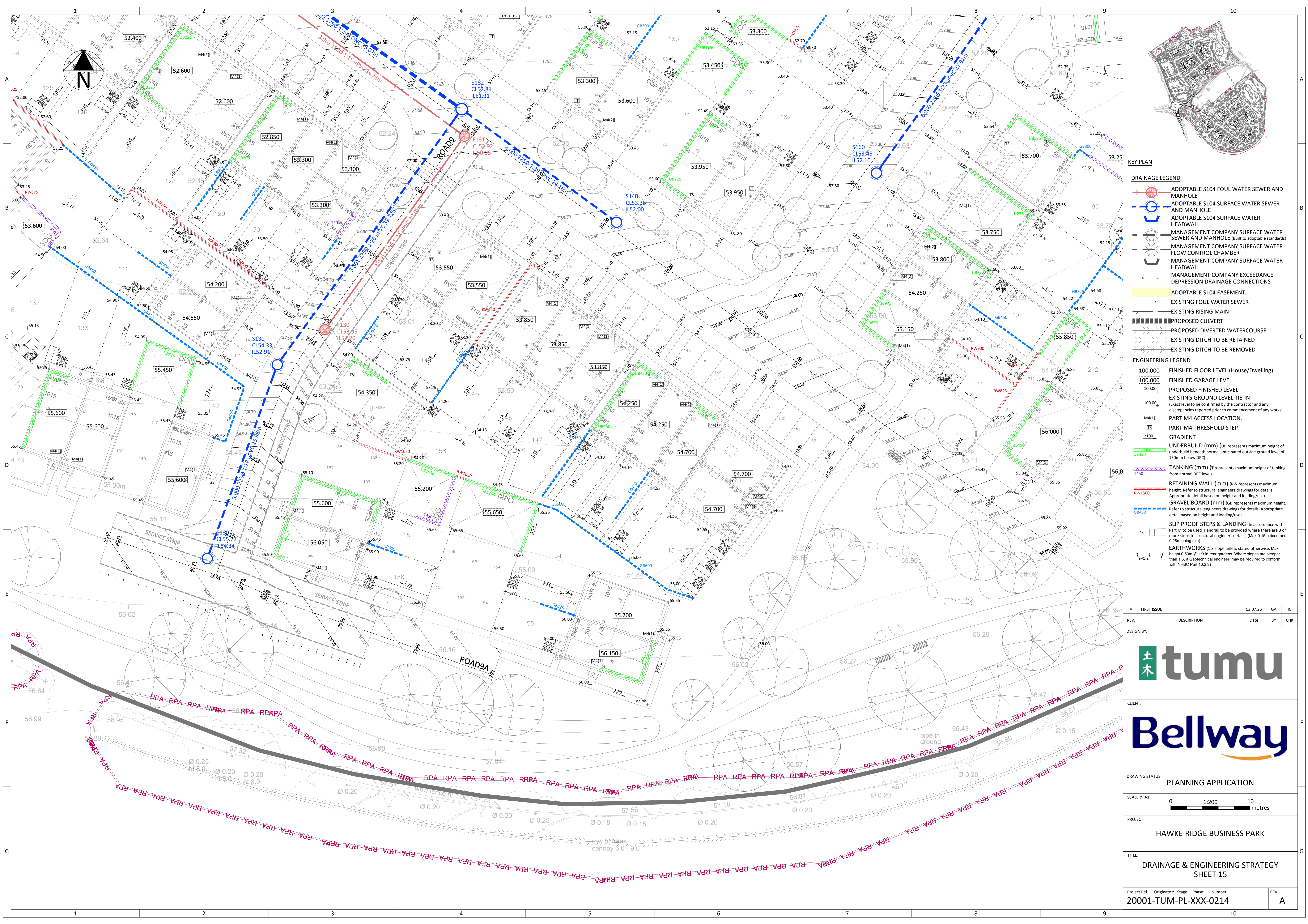




- KEY PLAN**
- DRAINAGE LEGEND**
- ADOPTABLE S104 FOUL WATER SEWER AND MANHOLE
  - ADOPTABLE S104 SURFACE WATER SEWER AND MANHOLE
  - ADOPTABLE S104 SURFACE WATER HEADWALL
  - MANAGEMENT COMPANY SURFACE WATER SEWER AND MANHOLE (built to adoptable standards)
  - MANAGEMENT COMPANY SURFACE WATER FLOW CONTROL CHAMBER
  - MANAGEMENT COMPANY SURFACE WATER HEADWALL
  - MANAGEMENT COMPANY EXCEEDANCE
  - DEPRESSION DRAINAGE CONNECTIONS
  - ADOPTABLE S104 EASEMENT
  - EXISTING FOUL WATER SEWER
  - EXISTING RISING MAIN
  - PROPOSED CULVERT
  - PROPOSED DIVERTED WATERCOURSE
  - EXISTING DITCH TO BE RETAINED
  - EXISTING DITCH TO BE REMOVED
- ENGINEERING LEGEND**
- 100.000 FINISHED FLOOR LEVEL (House/Dwelling)
  - 100.000 FINISHED GARAGE LEVEL
  - 100.000 PROPOSED FINISHED LEVEL
  - 100.000 EXISTING GROUND LEVEL TIE-IN (Exact level to be confirmed by the contractor and any discrepancies reported prior to commencement of any works)
  - M4(1) PART M4 ACCESS LOCATION
  - TS PART M4 THRESHOLD STEP
  - 1:100 GRADIENT
  - UNDERBUILD (mm) (UB represents maximum height of underbuild beneath normal anticipated outside ground level of 150mm below DPC)
  - TANKING (mm) (T represents maximum height of tanking from normal DPC level)
  - RETAINING WALL (mm) (RW represents maximum height. Refer to structural engineers drawings for details. Appropriate detail based on height and loading/use)
  - GRAVEL BOARD (mm) (GB represents maximum height. Refer to structural engineers drawings for details. Appropriate detail based on height and loading/use)
  - SLIP PROOF STEPS & LANDING (in accordance with Part M to be used. Handrail to be provided where there are 3 or more steps to structural engineers details) (Max 0.15m riser, and 0.28m going min)
  - EARTHWORKS (1:3 slope unless stated otherwise. Max height 0.50m @ 1:3 in rear gardens. Where slopes are steeper than 1:6, a Geotechnical engineer may be required to conform with NHBC Part 10.2.9)

|      |             |          |    |     |
|------|-------------|----------|----|-----|
| A    | FIRST ISSUE | 13.07.26 | GA | RJ  |
| REV. | DESCRIPTION | Date     | BY | CHK |

DESIGN BY:

**tumu**

CLIENT:

**Bellway**

DRAWING STATUS:

**PLANNING APPLICATION**

SCALE @ A1:

0 1:200 10 metres

PROJECT:

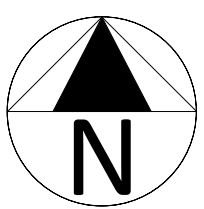
**HAWKE RIDGE BUSINESS PARK**

TITLE:

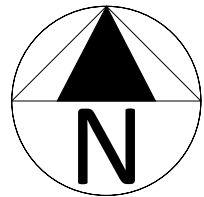
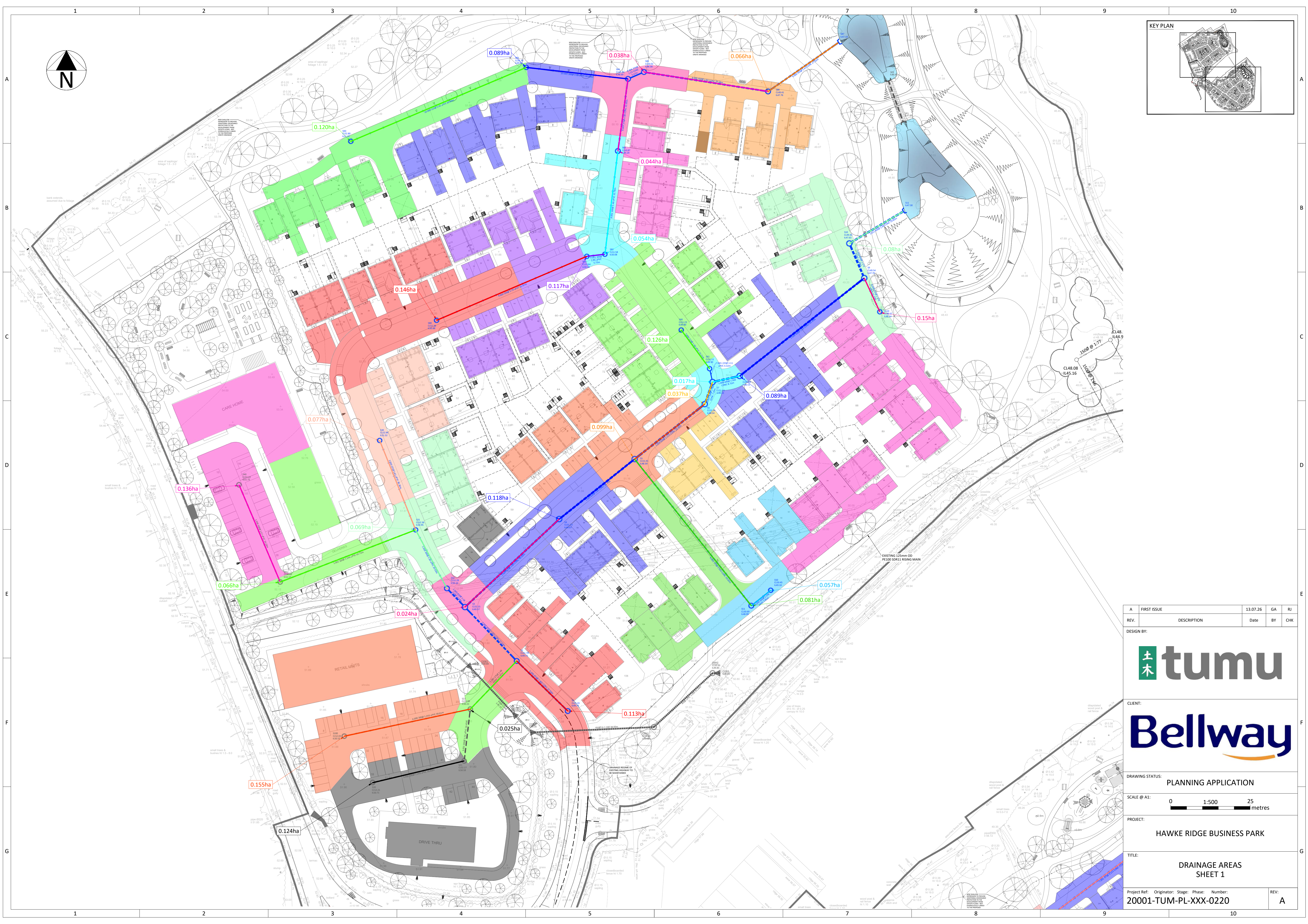
**DRAINAGE & ENGINEERING STRATEGY SHEET 15**

|                       |             |        |        |         |      |
|-----------------------|-------------|--------|--------|---------|------|
| Project Ref:          | Originator: | Stage: | Phase: | Number: | REV: |
| 20001-TUM-PL-XXX-0214 |             |        |        |         | A    |

## Appendix H – Proposed Surface Water Drainage Calculations



|                                                                                       |             |          |    |        |
|---------------------------------------------------------------------------------------|-------------|----------|----|--------|
| A                                                                                     | FIRST ISSUE | 13.07.26 | GA | RJ     |
| REV.                                                                                  | DESCRIPTION | Date     | BY | CHK    |
| DESIGN BY:                                                                            |             |          |    |        |
|  |             |          |    |        |
| CLIENT:                                                                               |             |          |    |        |
|  |             |          |    |        |
| DRAWING STATUS: PLANNING APPLICATION                                                  |             |          |    |        |
| SCALE @ A1: 0 1:500 25 metres                                                         |             |          |    |        |
| PROJECT: HAWKE RIDGE BUSINESS PARK                                                    |             |          |    |        |
| TITLE: DRAINAGE AREAS SHEET 2                                                         |             |          |    |        |
| Project Ref: 20001-TUM-PL-XXX-0221                                                    |             |          |    | REV: A |



|      |             |          |    |     |
|------|-------------|----------|----|-----|
| A    | FIRST ISSUE | 13.07.26 | GA | RJ  |
| REV. | DESCRIPTION | Date     | BY | CHK |

DESIGN BY:



CLIENT:



DRAWING STATUS: PLANNING APPLICATION

SCALE @ A1: 0 1:500 25 metres

PROJECT: HAWKE RIDGE BUSINESS PARK

TITLE: DRAINAGE AREAS SHEET 1

Project Ref: 20001-TUM-PL-XXX-0220

REV: A

### Design Settings

|                                      |        |                                    |               |
|--------------------------------------|--------|------------------------------------|---------------|
| Rainfall Methodology                 | FEH-22 | Minimum Velocity (m/s)             | 1.00          |
| Return Period (years)                | 1      | Connection Type                    | Level Soffits |
| Additional Flow (%)                  | 0      | Minimum Backdrop Height (m)        | 0.200         |
| CV                                   | 0.750  | Preferred Cover Depth (m)          | 1.200         |
| Time of Entry (mins)                 | 5.00   | Include Intermediate Ground        | x             |
| Maximum Time of Concentration (mins) | 30.00  | Enforce best practice design rules | ✓             |
| Maximum Rainfall (mm/hr)             | 50.0   |                                    |               |

### 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) |
|--------|---------|---------|------------|-------------|-----------|-----------|----------|-------------|----------|---------------|--------------|
| 1.000  | 1       | 2       | 22.536     | 0.600       | 49.762    | 49.706    | 0.056    | 405.0       | 450      | 5.37          | 28.0         |
| 2.000  | 20      | 21      | 29.635     | 0.600       | 50.710    | 50.588    | 0.122    | 242.9       | 300      | 5.49          | 27.7         |
| 2.001  | 21      | 22      | 16.453     | 0.600       | 50.588    | 50.361    | 0.227    | 72.5        | 300      | 5.64          | 27.4         |
| 10.000 | 100     | 22      | 40.608     | 0.600       | 50.528    | 50.361    | 0.167    | 243.0       | 300      | 5.67          | 27.4         |
| 2.002  | 22      | 2       | 21.070     | 0.600       | 50.224    | 49.781    | 0.443    | 47.6        | 375      | 5.81          | 27.1         |
| 1.001  | 2       | 3       | 23.544     | 0.600       | 49.706    | 49.648    | 0.058    | 405.0       | 450      | 6.20          | 26.3         |
| 3.000  | 30      | 31      | 30.360     | 0.600       | 51.519    | 51.022    | 0.497    | 61.1        | 225      | 5.30          | 28.2         |
| 4.000  | 40      | 41      | 33.281     | 0.600       | 51.722    | 51.134    | 0.588    | 56.6        | 300      | 5.26          | 28.2         |
| 4.001  | 41      | 31      | 45.721     | 0.600       | 51.134    | 50.947    | 0.187    | 244.5       | 300      | 6.03          | 26.6         |
| 3.001  | 31      | 32      | 20.934     | 0.600       | 50.947    | 50.247    | 0.700    | 29.9        | 300      | 6.15          | 26.4         |
| 3.002  | 32      | 3       | 8.178      | 0.600       | 50.097    | 49.648    | 0.449    | 18.2        | 450      | 6.18          | 26.3         |
| 1.002  | 3       | 4       | 40.634     | 0.600       | 49.573    | 49.065    | 0.508    | 80.0        | 525      | 6.47          | 25.8         |
| 1.003  | 4       | 5       | 30.354     | 0.600       | 49.065    | 48.598    | 0.467    | 65.0        | 600      | 6.64          | 25.5         |
| 5.000  | 50      | 51      | 7.809      | 0.600       | 49.101    | 49.069    | 0.032    | 244.0       | 300      | 5.13          | 28.5         |
| 5.001  | 51      | 5       | 59.052     | 0.600       | 48.994    | 48.812    | 0.182    | 324.5       | 375      | 6.11          | 26.4         |
| 1.004  | 5       | 6       | 28.091     | 0.600       | 48.587    | 48.538    | 0.049    | 573.3       | 600      | 7.10          | 24.6         |
| 1.005  | 6       | 7       | 7.386      | 0.600       | 48.538    | 48.525    | 0.013    | 568.2       | 600      | 7.22          | 24.4         |
| 6.000  | 60      | 61      | 15.110     | 0.600       | 49.803    | 49.300    | 0.503    | 30.0        | 225      | 5.11          | 28.6         |
| 6.001  | 61      | 7       | 4.317      | 0.600       | 49.300    | 48.912    | 0.388    | 11.1        | 225      | 5.12          | 28.5         |

| Name   | Cap (l/s) | Flow (l/s) | Σ Area (ha) | Σ Add Inflow (l/s) | Pro Depth (mm) |
|--------|-----------|------------|-------------|--------------------|----------------|
| 1.000  | 159.6     | 8.6        | 0.113       | 0.0                | 70             |
| 2.000  | 71.0      | 9.3        | 0.124       | 0.0                | 73             |
| 2.001  | 130.7     | 9.2        | 0.124       | 0.0                | 54             |
| 10.000 | 71.0      | 11.5       | 0.155       | 0.0                | 81             |
| 2.002  | 290.8     | 22.3       | 0.304       | 0.0                | 69             |
| 1.001  | 159.6     | 29.7       | 0.417       | 0.0                | 131            |
| 3.000  | 66.6      | 5.9        | 0.077       | 0.0                | 45             |
| 4.000  | 148.0     | 10.4       | 0.136       | 0.0                | 54             |
| 4.001  | 70.7      | 14.6       | 0.202       | 0.0                | 92             |
| 3.001  | 203.9     | 24.9       | 0.348       | 0.0                | 70             |
| 3.002  | 760.3     | 24.8       | 0.348       | 0.0                | 55             |
| 1.002  | 542.4     | 55.1       | 0.789       | 0.0                | 112            |
| 1.003  | 854.8     | 62.6       | 0.907       | 0.0                | 108            |
| 5.000  | 70.8      | 4.4        | 0.057       | 0.0                | 51             |
| 5.001  | 110.5     | 9.9        | 0.138       | 0.0                | 75             |
| 1.004  | 285.5     | 76.3       | 1.144       | 0.0                | 211            |
| 1.005  | 286.8     | 78.1       | 1.181       | 0.0                | 213            |
| 6.000  | 95.2      | 9.8        | 0.126       | 0.0                | 49             |
| 6.001  | 156.8     | 9.7        | 0.126       | 0.0                | 37             |

### 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) |
|---------|---------|---------|------------|-------------|-----------|-----------|----------|-------------|----------|---------------|--------------|
| 1.006   | 7       | 8       | 8.752      | 0.600       | 48.525    | 48.510    | 0.015    | 583.5       | 600      | 7.37          | 24.2         |
| 1.007   | 8       | 9       | 49.927     | 0.600       | 48.510    | 47.700    | 0.810    | 61.6        | 600      | 7.63          | 23.7         |
| 11.000  | 110     | 9       | 11.708     | 0.600       | 48.144    | 48.075    | 0.069    | 169.7       | 225      | 5.20          | 28.4         |
| 1.008   | 9       | 10      | 11.886     | 0.600       | 47.700    | 47.631    | 0.069    | 172.3       | 600      | 7.74          | 23.6         |
| 1.009_1 | 10      | 11      | 19.854     | 0.600       | 47.631    | 47.300    | 0.331    | 60.0        | 600      | 7.85          | 23.4         |
| 8.000   | 80      | 81      | 51.470     | 0.600       | 50.881    | 50.144    | 0.737    | 69.8        | 300      | 5.46          | 27.8         |
| 8.001   | 81      | 82      | 5.721      | 0.600       | 50.144    | 50.077    | 0.067    | 85.4        | 300      | 5.51          | 27.7         |
| 8.002   | 82      | 83      | 32.783     | 0.600       | 50.077    | 49.367    | 0.710    | 46.2        | 300      | 5.75          | 27.2         |
| 9.000   | 90      | 91      | 60.000     | 0.600       | 51.375    | 49.919    | 1.456    | 41.2        | 225      | 5.49          | 27.8         |
| 9.001   | 91      | 84      | 32.263     | 0.600       | 49.844    | 48.764    | 1.080    | 29.9        | 300      | 5.68          | 27.4         |
| 8.004   | 84      | 85      | 5.467      | 0.600       | 48.689    | 48.450    | 0.239    | 22.9        | 375      | 5.90          | 26.9         |
| 8.005   | 85      | 86      | 39.578     | 0.600       | 48.375    | 47.755    | 0.620    | 63.8        | 450      | 6.16          | 26.4         |
| 8.006   | 86      | 87      | 27.100     | 0.600       | 47.755    | 47.100    | 0.655    | 41.4        | 450      | 6.30          | 26.1         |
| 1.009   | 12      | 70      | 6.428      | 0.600       | 46.950    | 46.934    | 0.016    | 401.8       | 450      | 5.11          | 28.6         |
| 1.010   | 70      | 71      | 26.272     | 0.600       | 46.934    | 45.976    | 0.958    | 27.4        | 225      | 5.28          | 28.2         |
| 1.011   | 71      | 72      | 5.395      | 0.600       | 45.976    | 45.821    | 0.155    | 34.8        | 225      | 5.32          | 28.1         |
| 1.012   | 72      | 73      | 8.765      | 0.600       | 45.821    | 45.733    | 0.088    | 99.6        | 225      | 5.43          | 27.9         |
| 1.013   | 73      | 74      | 9.327      | 0.600       | 45.733    | 45.640    | 0.093    | 100.3       | 225      | 5.55          | 27.6         |
| 8.003   | 83      | 84      | 22.945     | 0.600       | 49.292    | 48.689    | 0.603    | 38.1        | 375      | 5.88          | 26.9         |
| 12.000  | P1      | P2      | 13.748     | 0.600       | 47.000    | 46.950    | 0.050    | 275.0       | 375      | 5.21          | 28.3         |

| Name    | Cap (l/s) | Flow (l/s) | Σ Area (ha) | Σ Add Inflow (l/s) | Pro Depth (mm) |
|---------|-----------|------------|-------------|--------------------|----------------|
| 1.006   | 282.9     | 86.8       | 1.324       | 0.0                | 227            |
| 1.007   | 877.9     | 90.9       | 1.413       | 0.0                | 129            |
| 11.000  | 39.8      | 11.5       | 0.150       | 0.0                | 83             |
| 1.008   | 523.7     | 99.9       | 1.563       | 0.0                | 176            |
| 1.009_1 | 890.0     | 104.2      | 1.643       | 0.0                | 137            |
| 8.000   | 133.1     | 11.0       | 0.146       | 0.0                | 58             |
| 8.001   | 120.3     | 19.7       | 0.263       | 0.0                | 82             |
| 8.002   | 163.9     | 23.4       | 0.317       | 0.0                | 76             |
| 9.000   | 81.2      | 9.0        | 0.120       | 0.0                | 51             |
| 9.001   | 204.1     | 15.5       | 0.209       | 0.0                | 55             |
| 8.004   | 419.9     | 41.5       | 0.570       | 0.0                | 79             |
| 8.005   | 405.2     | 43.4       | 0.608       | 0.0                | 99             |
| 8.006   | 503.7     | 47.7       | 0.674       | 0.0                | 93             |
| 1.009   | 160.3     | 0.0        | 0.000       | 0.0                | 0              |
| 1.010   | 99.7      | 0.0        | 0.000       | 0.0                | 0              |
| 1.011   | 88.4      | 0.0        | 0.000       | 0.0                | 0              |
| 1.012   | 52.1      | 0.0        | 0.000       | 0.0                | 0              |
| 1.013   | 51.9      | 0.0        | 0.000       | 0.0                | 0              |
| 8.003   | 325.2     | 26.3       | 0.361       | 0.0                | 71             |
| 12.000  | 120.1     | 0.0        | 0.000       | 0.0                | 0              |

### Simulation Settings

|                      |          |                            |          |                           |
|----------------------|----------|----------------------------|----------|---------------------------|
| Rainfall Methodology | FEH-22   | Analysis Speed             | Detailed | Starting Level (m)        |
| Rainfall Events      | Singular | Skip Steady State          | ✓        | Check Discharge Rate(s) x |
| Summer CV            | 0.750    | Drain Down Time (mins)     | 240      | Check Discharge Volume x  |
| Winter CV            | 0.840    | Additional Storage (m³/ha) | 0.0      |                           |

### 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 %) |
|--------------------------|--------------------------|--------------------------|--------------------------|
| 2                        | 0                        | 10                       | 0                        |
| 30                       | 0                        | 10                       | 0                        |
| 100                      | 45                       | 10                       | 0                        |

### Node 70 Online Hydro-Brake® Control

|                          |        |                         |                                |
|--------------------------|--------|-------------------------|--------------------------------|
| Flap Valve               | x      | Objective               | (HE) Minimise upstream storage |
| Replaces Downstream Link | x      | Sump Available          | ✓                              |
| Invert Level (m)         | 46.934 | Product Number          | CTL-SHE-0180-1750-1500-1750    |
| Design Depth (m)         | 1.500  | Min Outlet Diameter (m) | 0.225                          |
| Design Flow (l/s)        | 17.5   | Min Node Diameter (mm)  | 1800                           |

### Node P1 Flow through Pond Storage Structure

|                             |         |                           |        |                          |        |
|-----------------------------|---------|---------------------------|--------|--------------------------|--------|
| Base Inf Coefficient (m/hr) | 0.00000 | Porosity                  | 1.00   | Main Channel Length (m)  | 28.000 |
| Side Inf Coefficient (m/hr) | 0.00000 | Invert Level (m)          | 47.000 | Main Channel Slope (1:X) | 600.0  |
| Safety Factor               | 2.0     | Time to half empty (mins) | 0      | Main Channel n           | 0.030  |

### Inlets

11

| Depth<br>(m) | Area<br>(m²) | Inf Area<br>(m²) | Depth<br>(m) | Area<br>(m²) | Inf Area<br>(m²) | Depth<br>(m) | Area<br>(m²) | Inf Area<br>(m²) | Depth<br>(m) | Area<br>(m²) | Inf Area<br>(m²) |
|--------------|--------------|------------------|--------------|--------------|------------------|--------------|--------------|------------------|--------------|--------------|------------------|
| 0.000        | 637.0        | 637.0            | 0.500        | 874.0        | 878.9            | 1.000        | 1153.0       | 1163.5           | 1.500        | 1475.0       | 1491.9           |
| 0.100        | 681.0        | 681.9            | 0.600        | 926.0        | 932.0            | 1.100        | 1214.0       | 1225.7           | 1.600        | 1545.0       | 1563.2           |
| 0.200        | 727.0        | 728.9            | 0.700        | 980.0        | 987.1            | 1.200        | 1277.0       | 1290.0           | 1.700        | 1616.0       | 1635.6           |
| 0.300        | 774.0        | 776.9            | 0.800        | 1036.0       | 1044.2           | 1.300        | 1341.0       | 1355.3           | 1.800        | 1689.0       | 1710.0           |
| 0.400        | 823.0        | 826.9            | 0.900        | 1094.0       | 1103.4           | 1.400        | 1407.0       | 1422.5           |              |              |                  |

### Node 12 Flow through Pond Storage Structure

|                             |         |                           |        |                          |        |
|-----------------------------|---------|---------------------------|--------|--------------------------|--------|
| Base Inf Coefficient (m/hr) | 0.00000 | Porosity                  | 1.00   | Main Channel Length (m)  | 17.500 |
| Side Inf Coefficient (m/hr) | 0.00000 | Invert Level (m)          | 46.950 | Main Channel Slope (1:X) | 600.0  |
| Safety Factor               | 2.0     | Time to half empty (mins) | 0      | Main Channel n           | 0.030  |

### Inlets

87

| Depth<br>(m) | Area<br>(m²) | Inf Area<br>(m²) | Depth<br>(m) | Area<br>(m²) | Inf Area<br>(m²) | Depth<br>(m) | Area<br>(m²) | Inf Area<br>(m²) | Depth<br>(m) | Area<br>(m²) | Inf Area<br>(m²) |
|--------------|--------------|------------------|--------------|--------------|------------------|--------------|--------------|------------------|--------------|--------------|------------------|
| 0.000        | 289.0        | 289.0            | 0.500        | 424.0        | 428.1            | 1.000        | 582.0        | 590.9            | 1.500        | 764.0        | 778.6            |
| 0.100        | 314.0        | 314.7            | 0.600        | 453.0        | 458.0            | 1.100        | 616.0        | 626.0            | 1.600        | 803.0        | 818.9            |
| 0.200        | 340.0        | 341.5            | 0.700        | 484.0        | 489.9            | 1.200        | 652.0        | 663.1            | 1.700        | 843.0        | 860.2            |
| 0.300        | 367.0        | 369.3            | 0.800        | 516.0        | 522.9            | 1.300        | 688.0        | 700.3            | 1.800        | 885.0        | 903.4            |
| 0.400        | 395.0        | 398.2            | 0.900        | 548.0        | 555.9            | 1.400        | 725.0        | 738.5            |              |              |                  |

**Results for 2 year +10% A Critical Storm Duration. Lowest mass balance: 99.93%**

| Node Event        | US<br>Node | Peak<br>(mins) | Level<br>(m) | Depth<br>(m) | Inflow<br>(l/s) | Node<br>Vol (m³) | Flood<br>(m³) | Status |
|-------------------|------------|----------------|--------------|--------------|-----------------|------------------|---------------|--------|
| 15 minute winter  | 1          | 11             | 49.893       | 0.131        | 15.0            | 0.1873           | 0.0000        | OK     |
| 15 minute winter  | 20         | 10             | 50.810       | 0.100        | 16.4            | 0.1134           | 0.0000        | OK     |
| 15 minute winter  | 21         | 11             | 50.662       | 0.074        | 16.2            | 0.0836           | 0.0000        | OK     |
| 15 minute winter  | 100        | 10             | 50.639       | 0.111        | 20.6            | 0.1251           | 0.0000        | OK     |
| 15 minute winter  | 22         | 10             | 50.319       | 0.095        | 39.1            | 0.1361           | 0.0000        | OK     |
| 15 minute winter  | 2          | 11             | 49.889       | 0.183        | 53.2            | 0.2621           | 0.0000        | OK     |
| 15 minute winter  | 30         | 10             | 51.579       | 0.060        | 10.2            | 0.0678           | 0.0000        | OK     |
| 15 minute winter  | 40         | 10             | 51.792       | 0.070        | 18.0            | 0.0789           | 0.0000        | OK     |
| 15 minute winter  | 41         | 11             | 51.263       | 0.129        | 26.6            | 0.1458           | 0.0000        | OK     |
| 15 minute winter  | 31         | 11             | 51.048       | 0.101        | 44.5            | 0.1138           | 0.0000        | OK     |
| 15 minute winter  | 32         | 11             | 50.177       | 0.080        | 44.9            | 0.1141           | 0.0000        | OK     |
| 15 minute winter  | 3          | 11             | 49.732       | 0.159        | 100.5           | 0.2815           | 0.0000        | OK     |
| 15 minute winter  | 4          | 11             | 49.210       | 0.145        | 115.0           | 0.2563           | 0.0000        | OK     |
| 15 minute winter  | 50         | 10             | 49.171       | 0.070        | 7.6             | 0.0787           | 0.0000        | OK     |
| 15 minute winter  | 51         | 11             | 49.096       | 0.102        | 18.2            | 0.1459           | 0.0000        | OK     |
| 15 minute winter  | 5          | 12             | 48.907       | 0.320        | 143.8           | 0.5656           | 0.0000        | OK     |
| 15 minute winter  | 6          | 12             | 48.843       | 0.305        | 145.5           | 0.5386           | 0.0000        | OK     |
| 15 minute winter  | 60         | 10             | 49.871       | 0.068        | 16.7            | 0.0771           | 0.0000        | OK     |
| 15 minute winter  | 61         | 10             | 49.355       | 0.055        | 16.6            | 0.0627           | 0.0000        | OK     |
| 15 minute winter  | 7          | 12             | 48.787       | 0.262        | 162.2           | 0.4637           | 0.0000        | OK     |
| 15 minute winter  | 8          | 12             | 48.686       | 0.176        | 171.9           | 0.3119           | 0.0000        | OK     |
| 15 minute winter  | 110        | 10             | 48.264       | 0.120        | 19.9            | 0.1356           | 0.0000        | OK     |
| 15 minute winter  | 9          | 12             | 47.968       | 0.268        | 188.9           | 0.4730           | 0.0000        | OK     |
| 15 minute winter  | 10         | 12             | 47.832       | 0.201        | 198.6           | 0.3558           | 0.0000        | OK     |
| 120 minute winter | 11         | 82             | 47.172       | 0.125        | 82.2            | 0.0000           | 0.0000        | OK     |

| Link Event<br>(Upstream Depth) | US<br>Node | Link              | DS<br>Node | Outflow<br>(l/s) | Flow/Cap | Link<br>Vol (m³) | Discharge<br>Vol (m³) |
|--------------------------------|------------|-------------------|------------|------------------|----------|------------------|-----------------------|
| 15 minute winter               | 1          | 1.000             | 2          | 13.8             | 0.087    | 1.1137           |                       |
| 15 minute winter               | 20         | 2.000             | 21         | 16.2             | 0.228    | 0.5033           |                       |
| 15 minute winter               | 21         | 2.001             | 22         | 16.1             | 0.123    | 0.2143           |                       |
| 15 minute winter               | 100        | 10.000            | 22         | 20.0             | 0.281    | 0.9384           |                       |
| 15 minute winter               | 22         | 2.002             | 2          | 39.4             | 0.135    | 0.5076           |                       |
| 15 minute winter               | 2          | 1.001             | 3          | 52.6             | 0.329    | 1.2945           |                       |
| 15 minute winter               | 30         | 3.000             | 31         | 10.0             | 0.149    | 0.2527           |                       |
| 15 minute winter               | 40         | 4.000             | 41         | 17.8             | 0.120    | 0.6858           |                       |
| 15 minute winter               | 41         | 4.001             | 31         | 26.1             | 0.369    | 1.1344           |                       |
| 15 minute winter               | 31         | 3.001             | 32         | 44.9             | 0.220    | 0.4167           |                       |
| 15 minute winter               | 32         | 3.002             | 3          | 45.0             | 0.059    | 0.1611           |                       |
| 15 minute winter               | 3          | 1.002             | 4          | 100.3            | 0.185    | 2.1078           |                       |
| 15 minute winter               | 4          | 1.003             | 5          | 114.0            | 0.133    | 3.0077           |                       |
| 15 minute winter               | 50         | 5.000             | 51         | 7.5              | 0.105    | 0.0918           |                       |
| 15 minute winter               | 51         | 5.001             | 5          | 17.3             | 0.157    | 1.3531           |                       |
| 15 minute winter               | 5          | 1.004             | 6          | 141.6            | 0.496    | 4.1659           |                       |
| 15 minute winter               | 6          | 1.005             | 7          | 146.7            | 0.512    | 0.9681           |                       |
| 15 minute winter               | 60         | 6.000             | 61         | 16.6             | 0.174    | 0.1337           |                       |
| 15 minute winter               | 61         | 6.001             | 7          | 16.5             | 0.105    | 0.0301           |                       |
| 15 minute winter               | 7          | 1.006             | 8          | 162.7            | 0.575    | 0.8205           |                       |
| 15 minute winter               | 8          | 1.007             | 9          | 172.6            | 0.197    | 4.7587           |                       |
| 15 minute winter               | 110        | 11.000            | 9          | 19.6             | 0.493    | 0.2392           |                       |
| 15 minute winter               | 9          | 1.008             | 10         | 190.3            | 0.363    | 1.2151           |                       |
| 15 minute winter               | 10         | 1.009_1           | 11         | 199.4            | 0.224    | 1.5766           |                       |
| 120 minute winter              | 11         | Flow through Pond | P1         | 62.7             | 0.001    | 99.6181          |                       |

**Results for 2 year +10% A Critical Storm Duration. Lowest mass balance: 99.93%**

| Node Event        | US<br>Node | Peak<br>(mins) | Level<br>(m) | Depth<br>(m) | Inflow<br>(l/s) | Node<br>Vol (m³) | Flood<br>(m³) | Status |
|-------------------|------------|----------------|--------------|--------------|-----------------|------------------|---------------|--------|
| 15 minute winter  | 80         | 10             | 50.957       | 0.076        | 19.4            | 0.0860           | 0.0000        | OK     |
| 15 minute winter  | 81         | 10             | 50.269       | 0.125        | 34.5            | 0.1410           | 0.0000        | OK     |
| 15 minute winter  | 82         | 11             | 50.182       | 0.105        | 40.9            | 0.1191           | 0.0000        | OK     |
| 15 minute winter  | 90         | 10             | 51.442       | 0.067        | 15.9            | 0.0757           | 0.0000        | OK     |
| 15 minute winter  | 91         | 10             | 49.919       | 0.075        | 27.1            | 0.0848           | 0.0000        | OK     |
| 15 minute winter  | 84         | 11             | 48.819       | 0.130        | 73.4            | 0.1854           | 0.0000        | OK     |
| 15 minute winter  | 85         | 11             | 48.514       | 0.139        | 78.4            | 0.1994           | 0.0000        | OK     |
| 15 minute winter  | 86         | 11             | 47.884       | 0.129        | 86.9            | 0.1844           | 0.0000        | OK     |
| 180 minute winter | 87         | 124            | 47.152       | 0.173        | 27.2            | 0.0000           | 0.0000        | OK     |
| 180 minute winter | 12         | 124            | 47.152       | 0.202        | 18.7            | 0.0000           | 0.0000        | OK     |
| 180 minute winter | 70         | 124            | 47.151       | 0.217        | 13.0            | 1.5369           | 0.0000        | OK     |
| 180 minute winter | 71         | 124            | 46.039       | 0.063        | 13.0            | 0.0713           | 0.0000        | OK     |
| 180 minute winter | 72         | 124            | 45.904       | 0.083        | 13.0            | 0.0938           | 0.0000        | OK     |
| 180 minute winter | 73         | 124            | 45.815       | 0.082        | 13.0            | 0.0932           | 0.0000        | OK     |
| 180 minute winter | 74         | 128            | 45.716       | 0.076        | 13.0            | 0.0000           | 0.0000        | OK     |
| 15 minute winter  | 83         | 11             | 49.387       | 0.095        | 46.4            | 0.1358           | 0.0000        | OK     |
| 120 minute winter | P1         | 82             | 47.172       | 0.172        | 62.7            | 0.0000           | 0.0000        | OK     |
| 120 minute winter | P2         | 82             | 47.119       | 0.169        | 54.6            | 0.0000           | 0.0000        | OK     |

| Link Event<br>(Upstream Depth) | US<br>Node | Link              | DS<br>Node | Outflow<br>(l/s) | Flow/Cap | Link<br>Vol (m³) | Discharge<br>Vol (m³) |
|--------------------------------|------------|-------------------|------------|------------------|----------|------------------|-----------------------|
| 15 minute winter               | 80         | 8.000             | 81         | 19.0             | 0.143    | 1.0731           |                       |
| 15 minute winter               | 81         | 8.001             | 82         | 33.7             | 0.280    | 0.1419           |                       |
| 15 minute winter               | 82         | 8.002             | 83         | 40.9             | 0.250    | 0.7040           |                       |
| 15 minute winter               | 90         | 9.000             | 91         | 15.4             | 0.189    | 0.5864           |                       |
| 15 minute winter               | 91         | 9.001             | 84         | 26.8             | 0.131    | 0.4341           |                       |
| 15 minute winter               | 84         | 8.004             | 85         | 73.7             | 0.175    | 0.1612           |                       |
| 15 minute winter               | 85         | 8.005             | 86         | 78.7             | 0.194    | 1.5658           |                       |
| 15 minute winter               | 86         | 8.006             | 87         | 87.0             | 0.173    | 0.9912           |                       |
| 180 minute winter              | 87         | Flow through Pond | 12         | 18.7             | 0.000    | 58.7311          |                       |
| 180 minute winter              | 12         | 1.009             | 70         | 13.0             | 0.081    | 0.4652           |                       |
| 180 minute winter              | 70         | 1.010             | 71         | 13.0             | 0.130    | 0.2172           |                       |
| 180 minute winter              | 71         | 1.011             | 72         | 13.0             | 0.147    | 0.0603           |                       |
| 180 minute winter              | 72         | 1.012             | 73         | 13.0             | 0.250    | 0.1158           |                       |
| 180 minute winter              | 73         | 1.013             | 74         | 13.0             | 0.250    | 0.1165           | 111.0                 |
| 15 minute winter               | 83         | 8.003             | 84         | 46.6             | 0.143    | 0.6379           |                       |
| 120 minute winter              | P1         | 12.000            | P2         | 54.6             | 0.454    | 0.6708           | 234.0                 |

**Results for 30 year +10% A Critical Storm Duration. Lowest mass balance: 99.75%**

| Node Event       | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status     |
|------------------|---------|-------------|-----------|-----------|--------------|---------------|------------|------------|
| 15 minute winter | 1       | 11          | 50.050    | 0.288     | 41.8         | 0.4121        | 0.0000     | OK         |
| 15 minute winter | 20      | 10          | 50.887    | 0.177     | 45.9         | 0.2003        | 0.0000     | OK         |
| 15 minute winter | 21      | 10          | 50.719    | 0.131     | 45.3         | 0.1479        | 0.0000     | OK         |
| 15 minute winter | 100     | 10          | 50.737    | 0.209     | 57.4         | 0.2367        | 0.0000     | OK         |
| 15 minute winter | 22      | 11          | 50.394    | 0.170     | 109.2        | 0.2427        | 0.0000     | OK         |
| 15 minute winter | 2       | 11          | 50.044    | 0.338     | 149.1        | 0.4837        | 0.0000     | OK         |
| 15 minute winter | 30      | 10          | 51.624    | 0.105     | 28.5         | 0.1188        | 0.0000     | OK         |
| 15 minute winter | 40      | 10          | 51.841    | 0.119     | 50.3         | 0.1345        | 0.0000     | OK         |
| 15 minute winter | 41      | 11          | 51.391    | 0.257     | 74.3         | 0.2904        | 0.0000     | OK         |
| 15 minute winter | 31      | 11          | 51.135    | 0.188     | 124.5        | 0.2128        | 0.0000     | OK         |
| 15 minute winter | 32      | 11          | 50.236    | 0.139     | 124.9        | 0.1984        | 0.0000     | OK         |
| 15 minute winter | 3       | 11          | 49.864    | 0.291     | 283.0        | 0.5143        | 0.0000     | OK         |
| 15 minute winter | 4       | 11          | 49.318    | 0.253     | 324.8        | 0.4478        | 0.0000     | OK         |
| 15 minute winter | 50      | 12          | 49.289    | 0.188     | 21.1         | 0.2124        | 0.0000     | OK         |
| 15 minute winter | 51      | 12          | 49.285    | 0.291     | 50.8         | 0.4160        | 0.0000     | OK         |
| 15 minute winter | 5       | 12          | 49.247    | 0.660     | 389.1        | 1.1659        | 0.0000     | SURCHARGED |
| 15 minute winter | 6       | 12          | 49.110    | 0.572     | 404.1        | 1.0104        | 0.0000     | OK         |
| 15 minute winter | 60      | 10          | 49.925    | 0.122     | 46.6         | 0.1383        | 0.0000     | OK         |
| 15 minute winter | 61      | 10          | 49.403    | 0.103     | 46.4         | 0.1164        | 0.0000     | OK         |
| 15 minute winter | 7       | 12          | 49.000    | 0.475     | 448.0        | 0.8389        | 0.0000     | OK         |
| 15 minute winter | 8       | 12          | 48.846    | 0.336     | 475.6        | 0.5945        | 0.0000     | OK         |
| 15 minute winter | 110     | 10          | 48.452    | 0.308     | 55.5         | 0.3479        | 0.0000     | SURCHARGED |
| 15 minute winter | 9       | 11          | 48.206    | 0.506     | 528.1        | 0.8941        | 0.0000     | OK         |
| 15 minute winter | 10      | 11          | 48.004    | 0.373     | 556.2        | 0.6595        | 0.0000     | OK         |
| 60 minute winter | 11      | 44          | 47.350    | 0.303     | 316.9        | 0.0000        | 0.0000     | OK         |

| Link Event<br>(Upstream Depth) | US Node | Link              | DS Node | Outflow (l/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|--------------------------------|---------|-------------------|---------|---------------|----------|---------------|--------------------|
| 15 minute winter               | 1       | 1.000             | 2       | 39.3          | 0.246    | 2.6464        |                    |
| 15 minute winter               | 20      | 2.000             | 21      | 45.3          | 0.638    | 1.0779        |                    |
| 15 minute winter               | 21      | 2.001             | 22      | 44.7          | 0.342    | 0.4576        |                    |
| 15 minute winter               | 100     | 10.000            | 22      | 55.8          | 0.786    | 1.9772        |                    |
| 15 minute winter               | 22      | 2.002             | 2       | 109.8         | 0.378    | 1.3796        |                    |
| 15 minute winter               | 2       | 1.001             | 3       | 149.6         | 0.937    | 2.6805        |                    |
| 15 minute winter               | 30      | 3.000             | 31      | 28.3          | 0.424    | 0.5714        |                    |
| 15 minute winter               | 40      | 4.000             | 41      | 49.9          | 0.337    | 1.4897        |                    |
| 15 minute winter               | 41      | 4.001             | 31      | 72.7          | 1.028    | 2.5307        |                    |
| 15 minute winter               | 31      | 3.001             | 32      | 124.9         | 0.612    | 0.9112        |                    |
| 15 minute winter               | 32      | 3.002             | 3       | 125.0         | 0.164    | 0.4770        |                    |
| 15 minute winter               | 3       | 1.002             | 4       | 283.6         | 0.523    | 4.5915        |                    |
| 15 minute winter               | 4       | 1.003             | 5       | 323.1         | 0.378    | 5.9918        |                    |
| 15 minute winter               | 50      | 5.000             | 51      | 20.9          | 0.295    | 0.3929        |                    |
| 15 minute winter               | 51      | 5.001             | 5       | 50.1          | 0.454    | 5.9638        |                    |
| 15 minute winter               | 5       | 1.004             | 6       | 393.4         | 1.378    | 7.8463        |                    |
| 15 minute winter               | 6       | 1.005             | 7       | 405.4         | 1.414    | 1.9061        |                    |
| 15 minute winter               | 60      | 6.000             | 61      | 46.4          | 0.487    | 0.3001        |                    |
| 15 minute winter               | 61      | 6.001             | 7       | 46.1          | 0.294    | 0.0669        |                    |
| 15 minute winter               | 7       | 1.006             | 8       | 449.6         | 1.589    | 1.7581        |                    |
| 15 minute winter               | 8       | 1.007             | 9       | 479.2         | 0.546    | 10.3810       |                    |
| 15 minute winter               | 110     | 11.000            | 9       | 54.9          | 1.379    | 0.4454        |                    |
| 15 minute winter               | 9       | 1.008             | 10      | 528.3         | 1.009    | 2.6018        |                    |
| 15 minute winter               | 10      | 1.009_1           | 11      | 556.3         | 0.625    | 3.4312        |                    |
| 60 minute winter               | 11      | Flow through Pond | P1      | 225.3         | 0.003    | 232.3063      |                    |

**Results for 30 year +10% A Critical Storm Duration. Lowest mass balance: 99.75%**

| Node Event        | US<br>Node | Peak<br>(mins) | Level<br>(m) | Depth<br>(m) | Inflow<br>(l/s) | Node<br>Vol (m³) | Flood<br>(m³) | Status     |
|-------------------|------------|----------------|--------------|--------------|-----------------|------------------|---------------|------------|
| 15 minute winter  | 80         | 10             | 51.012       | 0.131        | 54.0            | 0.1479           | 0.0000        | OK         |
| 15 minute winter  | 81         | 10             | 50.388       | 0.244        | 96.6            | 0.2764           | 0.0000        | OK         |
| 15 minute winter  | 82         | 10             | 50.275       | 0.198        | 114.8           | 0.2235           | 0.0000        | OK         |
| 15 minute winter  | 90         | 10             | 51.495       | 0.120        | 44.4            | 0.1352           | 0.0000        | OK         |
| 15 minute winter  | 91         | 10             | 49.969       | 0.125        | 76.1            | 0.1418           | 0.0000        | OK         |
| 15 minute winter  | 84         | 11             | 48.944       | 0.255        | 204.2           | 0.3643           | 0.0000        | OK         |
| 15 minute winter  | 85         | 11             | 48.628       | 0.253        | 218.6           | 0.3620           | 0.0000        | OK         |
| 15 minute winter  | 86         | 11             | 47.985       | 0.230        | 243.0           | 0.3295           | 0.0000        | OK         |
| 120 minute winter | 87         | 98             | 47.408       | 0.429        | 83.2            | 0.0000           | 0.0000        | OK         |
| 120 minute winter | 12         | 98             | 47.408       | 0.458        | 50.7            | 0.0000           | 0.0000        | SURCHARGED |
| 120 minute winter | 70         | 98             | 47.408       | 0.474        | 18.5            | 3.3505           | 0.0000        | SURCHARGED |
| 120 minute winter | 71         | 98             | 46.051       | 0.075        | 17.5            | 0.0854           | 0.0000        | OK         |
| 120 minute winter | 72         | 98             | 45.920       | 0.099        | 17.5            | 0.1117           | 0.0000        | OK         |
| 120 minute winter | 73         | 98             | 45.831       | 0.098        | 17.5            | 0.1105           | 0.0000        | OK         |
| 120 minute winter | 74         | 98             | 45.729       | 0.089        | 17.5            | 0.0000           | 0.0000        | OK         |
| 15 minute winter  | 83         | 10             | 49.464       | 0.172        | 129.4           | 0.2454           | 0.0000        | OK         |
| 60 minute winter  | P1         | 44             | 47.350       | 0.350        | 225.3           | 0.0000           | 0.0000        | OK         |
| 60 minute winter  | P2         | 45             | 47.254       | 0.304        | 171.5           | 0.0000           | 0.0000        | OK         |

| Link Event<br>(Upstream Depth) | US<br>Node | Link              | DS<br>Node | Outflow<br>(l/s) | Flow/Cap | Link<br>Vol (m³) | Discharge<br>Vol (m³) |
|--------------------------------|------------|-------------------|------------|------------------|----------|------------------|-----------------------|
| 15 minute winter               | 80         | 8.000             | 81         | 53.3             | 0.401    | 2.3402           |                       |
| 15 minute winter               | 81         | 8.001             | 82         | 94.8             | 0.788    | 0.3166           |                       |
| 15 minute winter               | 82         | 8.002             | 83         | 114.1            | 0.696    | 1.5383           |                       |
| 15 minute winter               | 90         | 9.000             | 91         | 43.2             | 0.532    | 1.2606           |                       |
| 15 minute winter               | 91         | 9.001             | 84         | 75.6             | 0.371    | 1.1532           |                       |
| 15 minute winter               | 84         | 8.004             | 85         | 205.4            | 0.489    | 0.3631           |                       |
| 15 minute winter               | 85         | 8.005             | 86         | 219.9            | 0.543    | 3.4308           |                       |
| 15 minute winter               | 86         | 8.006             | 87         | 244.4            | 0.485    | 2.1311           |                       |
| 120 minute winter              | 87         | Flow through Pond | 12         | 50.7             | 0.001    | 153.9923         |                       |
| 120 minute winter              | 12         | 1.009             | 70         | 18.5             | 0.115    | 1.0185           |                       |
| 120 minute winter              | 70         | 1.010             | 71         | 17.5             | 0.175    | 0.2738           |                       |
| 120 minute winter              | 71         | 1.011             | 72         | 17.5             | 0.198    | 0.0767           |                       |
| 120 minute winter              | 72         | 1.012             | 73         | 17.5             | 0.336    | 0.1458           |                       |
| 120 minute winter              | 73         | 1.013             | 74         | 17.5             | 0.337    | 0.1454           | 222.5                 |
| 15 minute winter               | 83         | 8.003             | 84         | 129.9            | 0.400    | 1.4762           |                       |
| 60 minute winter               | P1         | 12.000            | P2         | 171.5            | 1.428    | 1.3941           | 467.2                 |

**Results for 100 year +45% CC +10% A Critical Storm Duration. Lowest mass balance: 99.62%**

| Node Event       | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status     |
|------------------|---------|-------------|-----------|-----------|--------------|---------------|------------|------------|
| 15 minute winter | 1       | 12          | 51.288    | 1.525     | 77.5         | 2.1830        | 0.0000     | FLOOD RISK |
| 15 minute winter | 20      | 12          | 51.711    | 1.001     | 84.9         | 1.1319        | 0.0000     | SURCHARGED |
| 15 minute winter | 21      | 12          | 51.576    | 0.988     | 82.7         | 1.1176        | 0.0000     | SURCHARGED |
| 15 minute winter | 100     | 12          | 51.763    | 1.235     | 106.2        | 1.3971        | 0.0000     | FLOOD RISK |
| 15 minute winter | 22      | 12          | 51.487    | 1.263     | 178.9        | 1.8067        | 0.0000     | SURCHARGED |
| 15 minute winter | 2       | 12          | 51.278    | 1.572     | 239.3        | 2.2488        | 0.0000     | SURCHARGED |
| 15 minute winter | 30      | 12          | 52.293    | 0.774     | 52.8         | 0.8754        | 0.0000     | SURCHARGED |
| 15 minute winter | 40      | 12          | 52.802    | 1.080     | 93.2         | 1.2212        | 0.0000     | SURCHARGED |
| 15 minute winter | 41      | 12          | 52.614    | 1.480     | 128.9        | 1.6741        | 0.0000     | FLOOD RISK |
| 15 minute winter | 31      | 12          | 52.047    | 1.100     | 215.3        | 1.2446        | 0.0000     | SURCHARGED |
| 15 minute winter | 32      | 12          | 51.175    | 1.078     | 201.5        | 1.5429        | 0.0000     | SURCHARGED |
| 15 minute winter | 3       | 12          | 51.106    | 1.533     | 437.9        | 2.7086        | 0.0000     | SURCHARGED |
| 15 minute winter | 4       | 12          | 50.670    | 1.605     | 501.1        | 2.8356        | 0.0000     | SURCHARGED |
| 15 minute winter | 50      | 12          | 50.525    | 1.424     | 39.1         | 1.6101        | 0.0000     | FLOOD RISK |
| 15 minute winter | 51      | 12          | 50.514    | 1.520     | 93.6         | 2.1756        | 0.0000     | FLOOD RISK |
| 15 minute winter | 5       | 12          | 50.427    | 1.840     | 629.0        | 3.2515        | 0.0000     | SURCHARGED |
| 15 minute winter | 6       | 12          | 50.067    | 1.529     | 649.2        | 2.7012        | 0.0000     | SURCHARGED |
| 15 minute winter | 60      | 11          | 50.396    | 0.593     | 86.3         | 0.6704        | 0.0000     | SURCHARGED |
| 15 minute winter | 61      | 12          | 50.027    | 0.727     | 79.9         | 0.8225        | 0.0000     | SURCHARGED |
| 15 minute winter | 7       | 12          | 49.865    | 1.340     | 729.3        | 2.3684        | 0.0000     | SURCHARGED |
| 15 minute winter | 8       | 12          | 49.596    | 1.086     | 777.9        | 1.9186        | 0.0000     | SURCHARGED |
| 15 minute winter | 110     | 11          | 49.232    | 1.088     | 102.8        | 1.2311        | 0.0000     | SURCHARGED |
| 15 minute winter | 9       | 12          | 48.766    | 1.066     | 868.0        | 1.8828        | 0.0000     | SURCHARGED |
| 15 minute winter | 10      | 12          | 48.341    | 0.710     | 921.4        | 1.2548        | 0.0000     | SURCHARGED |
| 60 minute winter | 11      | 45          | 47.599    | 0.553     | 595.8        | 0.0000        | 0.0000     | OK         |

| Link Event<br>(Upstream Depth) | US Node | Link              | DS Node | Outflow (l/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|--------------------------------|---------|-------------------|---------|---------------|----------|---------------|--------------------|
| 15 minute winter               | 1       | 1.000             | 2       | 63.5          | 0.398    | 3.5707        |                    |
| 15 minute winter               | 20      | 2.000             | 21      | 82.7          | 1.166    | 2.0869        |                    |
| 15 minute winter               | 21      | 2.001             | 22      | 79.7          | 0.610    | 1.1586        |                    |
| 15 minute winter               | 100     | 10.000            | 22      | 92.8          | 1.307    | 2.8596        |                    |
| 15 minute winter               | 22      | 2.002             | 2       | 178.7         | 0.615    | 2.3240        |                    |
| 15 minute winter               | 2       | 1.001             | 3       | 229.3         | 1.436    | 3.7304        |                    |
| 15 minute winter               | 30      | 3.000             | 31      | 48.2          | 0.724    | 1.2074        |                    |
| 15 minute winter               | 40      | 4.000             | 41      | 83.6          | 0.565    | 2.3436        |                    |
| 15 minute winter               | 41      | 4.001             | 31      | 119.8         | 1.694    | 3.2196        |                    |
| 15 minute winter               | 31      | 3.001             | 32      | 201.5         | 0.988    | 1.4742        |                    |
| 15 minute winter               | 32      | 3.002             | 3       | 211.9         | 0.279    | 1.2958        |                    |
| 15 minute winter               | 3       | 1.002             | 4       | 439.1         | 0.810    | 8.7783        |                    |
| 15 minute winter               | 4       | 1.003             | 5       | 501.8         | 0.587    | 8.5500        |                    |
| 15 minute winter               | 50      | 5.000             | 51      | 41.4          | 0.584    | 0.5499        |                    |
| 15 minute winter               | 51      | 5.001             | 5       | 92.4          | 0.837    | 6.5133        |                    |
| 15 minute winter               | 5       | 1.004             | 6       | 629.3         | 2.205    | 7.9126        |                    |
| 15 minute winter               | 6       | 1.005             | 7       | 650.0         | 2.267    | 2.0805        |                    |
| 15 minute winter               | 60      | 6.000             | 61      | 79.9          | 0.839    | 0.6009        |                    |
| 15 minute winter               | 61      | 6.001             | 7       | 76.9          | 0.490    | 0.1717        |                    |
| 15 minute winter               | 7       | 1.006             | 8       | 731.1         | 2.584    | 2.4652        |                    |
| 15 minute winter               | 8       | 1.007             | 9       | 778.7         | 0.887    | 14.0633       |                    |
| 15 minute winter               | 110     | 11.000            | 9       | 98.8          | 2.483    | 0.4656        |                    |
| 15 minute winter               | 9       | 1.008             | 10      | 869.8         | 1.661    | 3.3480        |                    |
| 15 minute winter               | 10      | 1.009_1           | 11      | 905.2         | 1.017    | 5.5379        |                    |
| 60 minute winter               | 11      | Flow through Pond | P1      | 413.0         | 0.006    | 443.8844      |                    |

**Results for 100 year +45% CC +10% A Critical Storm Duration. Lowest mass balance: 99.62%**

| Node Event        | US<br>Node | Peak<br>(mins) | Level<br>(m) | Depth<br>(m) | Inflow<br>(l/s) | Node<br>Vol (m³) | Flood<br>(m³) | Status     |
|-------------------|------------|----------------|--------------|--------------|-----------------|------------------|---------------|------------|
| 15 minute winter  | 80         | 11             | 51.692       | 0.811        | 100.0           | 0.9175           | 0.0000        | SURCHARGED |
| 15 minute winter  | 81         | 11             | 51.259       | 1.115        | 169.9           | 1.2608           | 0.0000        | SURCHARGED |
| 15 minute winter  | 82         | 11             | 50.972       | 0.895        | 204.5           | 1.0120           | 0.0000        | SURCHARGED |
| 15 minute winter  | 90         | 10             | 51.565       | 0.190        | 82.2            | 0.2154           | 0.0000        | OK         |
| 15 minute winter  | 91         | 11             | 50.042       | 0.198        | 141.9           | 0.2244           | 0.0000        | OK         |
| 15 minute winter  | 84         | 11             | 49.282       | 0.593        | 366.3           | 0.8480           | 0.0000        | SURCHARGED |
| 15 minute winter  | 85         | 11             | 48.785       | 0.410        | 390.1           | 0.5864           | 0.0000        | OK         |
| 15 minute winter  | 86         | 11             | 48.099       | 0.344        | 431.8           | 0.4919           | 0.0000        | OK         |
| 180 minute winter | 87         | 176            | 47.806       | 0.827        | 113.5           | 0.0000           | 0.0000        | OK         |
| 180 minute winter | 12         | 176            | 47.806       | 0.856        | 66.1            | 0.0000           | 0.0000        | SURCHARGED |
| 180 minute winter | 70         | 176            | 47.805       | 0.871        | 19.0            | 6.1595           | 0.0000        | SURCHARGED |
| 180 minute winter | 71         | 356            | 46.052       | 0.076        | 17.5            | 0.0854           | 0.0000        | OK         |
| 480 minute summer | 72         | 512            | 45.920       | 0.099        | 17.5            | 0.1118           | 0.0000        | OK         |
| 30 minute winter  | 73         | 119            | 45.831       | 0.098        | 17.5            | 0.1106           | 0.0000        | OK         |
| 30 minute winter  | 74         | 119            | 45.729       | 0.089        | 17.5            | 0.0000           | 0.0000        | OK         |
| 15 minute winter  | 83         | 11             | 49.626       | 0.334        | 232.6           | 0.4782           | 0.0000        | OK         |
| 60 minute winter  | P1         | 45             | 47.600       | 0.600        | 413.0           | 0.0000           | 0.0000        | SURCHARGED |
| 30 minute winter  | P2         | 25             | 47.305       | 0.355        | 289.2           | 0.0000           | 0.0000        | OK         |

| Link Event<br>(Upstream Depth) | US<br>Node | Link              | DS<br>Node | Outflow<br>(l/s) | Flow/Cap | Link<br>Vol (m³) | Discharge<br>Vol (m³) |
|--------------------------------|------------|-------------------|------------|------------------|----------|------------------|-----------------------|
| 15 minute winter               | 80         | 8.000             | 81         | 94.3             | 0.709    | 3.6245           |                       |
| 15 minute winter               | 81         | 8.001             | 82         | 169.6            | 1.409    | 0.4029           |                       |
| 15 minute winter               | 82         | 8.002             | 83         | 204.2            | 1.246    | 2.3085           |                       |
| 15 minute winter               | 90         | 9.000             | 91         | 80.9             | 0.996    | 2.2685           |                       |
| 15 minute winter               | 91         | 9.001             | 84         | 138.8            | 0.680    | 1.9336           |                       |
| 15 minute winter               | 84         | 8.004             | 85         | 365.5            | 0.871    | 0.5855           |                       |
| 15 minute winter               | 85         | 8.005             | 86         | 389.1            | 0.960    | 5.5698           |                       |
| 15 minute winter               | 86         | 8.006             | 87         | 430.1            | 0.854    | 3.3508           |                       |
| 180 minute winter              | 87         | Flow through Pond | 12         | 66.1             | 0.001    | 339.5573         |                       |
| 180 minute winter              | 12         | 1.009             | 70         | 19.0             | 0.119    | 1.0185           |                       |
| 180 minute winter              | 70         | 1.010             | 71         | 17.5             | 0.175    | 0.2740           |                       |
| 180 minute winter              | 71         | 1.011             | 72         | 17.5             | 0.198    | 0.0767           |                       |
| 480 minute summer              | 72         | 1.012             | 73         | 17.5             | 0.336    | 0.1460           |                       |
| 30 minute winter               | 73         | 1.013             | 74         | 17.5             | 0.337    | 0.1455           | 244.8                 |
| 15 minute winter               | 83         | 8.003             | 84         | 228.3            | 0.702    | 2.4556           |                       |
| 60 minute winter               | P1         | 12.000            | P2         | 291.3            | 2.426    | 1.5010           | 885.0                 |

### Design Settings

|                                      |        |                                    |               |
|--------------------------------------|--------|------------------------------------|---------------|
| Rainfall Methodology                 | FEH-22 | Minimum Velocity (m/s)             | 1.00          |
| Return Period (years)                | 1      | Connection Type                    | Level Soffits |
| Additional Flow (%)                  | 0      | Minimum Backdrop Height (m)        | 0.200         |
| CV                                   | 0.750  | Preferred Cover Depth (m)          | 1.200         |
| Time of Entry (mins)                 | 5.00   | Include Intermediate Ground        | x             |
| Maximum Time of Concentration (mins) | 30.00  | Enforce best practice design rules | ✓             |
| Maximum Rainfall (mm/hr)             | 50.0   |                                    |               |

### 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) |
|-------|---------|---------|------------|-------------|-----------|-----------|----------|-------------|----------|---------------|--------------|
| 1.000 | 100     | 101     | 13.024     | 0.600       | 52.512    | 52.435    | 0.077    | 169.1       | 225      | 5.22          | 28.3         |
| 1.001 | 101     | 102     | 15.379     | 0.600       | 52.435    | 52.344    | 0.091    | 169.0       | 225      | 5.47          | 27.8         |
| 1.002 | 102     | 103     | 22.164     | 0.600       | 52.344    | 51.407    | 0.937    | 23.7        | 225      | 5.61          | 27.5         |
| 1.003 | 103     | 104     | 29.479     | 0.600       | 51.407    | 49.730    | 1.677    | 17.6        | 225      | 5.77          | 27.2         |
| 2.000 | 120     | 104     | 53.304     | 0.600       | 49.561    | 49.430    | 0.131    | 406.9       | 525      | 5.80          | 27.1         |
| 1.004 | 104     | 105     | 25.407     | 0.600       | 49.430    | 49.378    | 0.052    | 488.6       | 525      | 6.23          | 26.2         |
| 3.000 | 130     | 131     | 25.978     | 0.600       | 54.345    | 52.908    | 1.437    | 18.1        | 225      | 5.14          | 28.5         |
| 3.001 | 131     | 132     | 39.721     | 0.600       | 52.908    | 51.383    | 1.525    | 26.0        | 225      | 5.40          | 27.9         |
| 4.000 | 140     | 132     | 24.163     | 0.600       | 51.999    | 51.383    | 0.616    | 39.2        | 225      | 5.19          | 28.4         |
| 3.002 | 132     | 105     | 35.067     | 0.600       | 51.308    | 49.528    | 1.780    | 19.7        | 375      | 5.54          | 27.6         |
| 1.005 | 105     | 106     | 31.615     | 0.600       | 49.378    | 49.314    | 0.064    | 494.0       | 525      | 6.75          | 25.2         |
| 1.006 | 106     | 107     | 43.938     | 0.600       | 49.314    | 48.054    | 1.260    | 34.9        | 525      | 6.94          | 24.9         |
| 1.007 | 107     | 108     | 5.905      | 0.600       | 47.904    | 47.895    | 0.009    | 656.1       | 675      | 7.04          | 24.7         |
| 5.000 | 150     | 151     | 9.463      | 0.600       | 53.436    | 53.190    | 0.246    | 38.5        | 225      | 5.07          | 28.6         |
| 5.001 | 151     | 152     | 31.820     | 0.600       | 53.190    | 51.996    | 1.194    | 26.6        | 225      | 5.28          | 28.2         |
| 5.002 | 152     | 153     | 56.323     | 0.600       | 51.996    | 50.504    | 1.492    | 37.8        | 225      | 5.72          | 27.3         |
| 6.000 | 160     | 161     | 27.920     | 0.600       | 52.096    | 50.863    | 1.233    | 22.6        | 225      | 5.17          | 28.4         |
| 6.001 | 161     | 153     | 9.659      | 0.600       | 50.863    | 50.504    | 0.359    | 26.9        | 225      | 5.23          | 28.3         |
| 5.003 | 153     | 154     | 55.564     | 0.600       | 50.354    | 48.299    | 2.055    | 27.0        | 375      | 5.99          | 26.7         |

| Name  | Cap (l/s) | Flow (l/s) | Σ Area (ha) | Σ Add Inflow (l/s) | Pro Depth (mm) |
|-------|-----------|------------|-------------|--------------------|----------------|
| 1.000 | 39.8      | 7.0        | 0.091       | 0.0                | 64             |
| 1.001 | 39.9      | 6.9        | 0.091       | 0.0                | 63             |
| 1.002 | 107.4     | 12.3       | 0.165       | 0.0                | 51             |
| 1.003 | 124.7     | 15.1       | 0.205       | 0.0                | 52             |
| 2.000 | 239.0     | 6.0        | 0.082       | 0.0                | 57             |
| 1.004 | 217.8     | 28.3       | 0.398       | 0.0                | 127            |
| 3.000 | 122.9     | 7.1        | 0.092       | 0.0                | 36             |
| 3.001 | 102.3     | 13.5       | 0.178       | 0.0                | 55             |
| 4.000 | 83.3      | 10.6       | 0.138       | 0.0                | 54             |
| 3.002 | 452.6     | 33.1       | 0.442       | 0.0                | 68             |
| 1.005 | 216.6     | 63.6       | 0.930       | 0.0                | 194            |
| 1.006 | 823.0     | 67.8       | 1.006       | 0.0                | 101            |
| 1.007 | 363.4     | 72.2       | 1.078       | 0.0                | 203            |
| 5.000 | 84.1      | 6.5        | 0.084       | 0.0                | 42             |
| 5.001 | 101.2     | 9.8        | 0.128       | 0.0                | 47             |
| 5.002 | 84.9      | 13.4       | 0.182       | 0.0                | 60             |
| 6.000 | 109.8     | 8.3        | 0.108       | 0.0                | 42             |
| 6.001 | 100.7     | 10.5       | 0.137       | 0.0                | 49             |
| 5.003 | 386.1     | 30.7       | 0.425       | 0.0                | 71             |

### 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) |
|---------|------------|------------|---------------|----------------|--------------|--------------|-------------|----------------|-------------|------------------|-----------------|
| 5.004   | 154        | 108        | 6.210         | 0.600          | 48.149       | 48.045       | 0.104       | 59.7           | 525         | 6.02             | 26.6            |
| 1.008   | 108        | 109        | 12.085        | 0.600          | 47.820       | 47.804       | 0.016       | 755.3          | 750         | 7.24             | 24.4            |
| 1.009   | 109        | 109a       | 29.864        | 0.600          | 47.804       | 47.765       | 0.039       | 765.7          | 750         | 7.74             | 23.6            |
| 1.010   | 110        | 111        | 29.801        | 0.600          | 47.650       | 47.605       | 0.045       | 662.2          | 825         | 8.59             | 22.3            |
| 7.000   | 170        | 171        | 25.646        | 0.600          | 48.519       | 48.252       | 0.267       | 96.1           | 225         | 5.32             | 28.1            |
| 7.001   | 171        | 172        | 72.018        | 0.600          | 48.102       | 47.625       | 0.477       | 151.0          | 375         | 6.14             | 26.4            |
| 7.002   | 172        | 173        | 8.221         | 0.600          | 47.625       | 47.600       | 0.025       | 324.0          | 375         | 6.27             | 26.1            |
| 7.003   | 173        | 174        | 29.467        | 0.600          | 47.600       | 47.509       | 0.091       | 324.0          | 375         | 6.76             | 25.2            |
| 8.000   | 112        | 180        | 9.955         | 0.600          | 47.500       | 47.441       | 0.059       | 168.7          | 225         | 5.17             | 28.4            |
| 8.001   | 180        | 181        | 41.481        | 0.600          | 47.441       | 47.196       | 0.245       | 169.3          | 225         | 5.86             | 27.0            |
| 1.013   | 181        | 182        | 16.325        | 0.600          | 47.196       | 47.114       | 0.082       | 200.0          | 225         | 6.15             | 26.4            |
| 1.014   | 182        | 183        | 11.637        | 0.600          | 47.114       | 47.056       | 0.058       | 200.0          | 225         | 6.36             | 26.0            |
| 1.010_1 | 109a       | 110        | 26.992        | 0.600          | 47.765       | 47.725       | 0.040       | 670.0          | 750         | 8.16             | 22.9            |

| Name    | Cap<br>(l/s) | Flow<br>(l/s) | Σ Area<br>(ha) | Σ Add<br>Inflow<br>(l/s) | Pro<br>Depth<br>(mm) |
|---------|--------------|---------------|----------------|--------------------------|----------------------|
| 5.004   | 628.3        | 38.6          | 0.535          | 0.0                      | 87                   |
| 1.008   | 446.3        | 106.6         | 1.613          | 0.0                      | 248                  |
| 1.009   | 443.2        | 103.1         | 1.613          | 0.0                      | 244                  |
| 1.010   | 612.5        | 114.0         | 1.882          | 0.0                      | 239                  |
| 7.000   | 53.0         | 7.5           | 0.098          | 0.0                      | 57                   |
| 7.001   | 162.6        | 16.5          | 0.231          | 0.0                      | 80                   |
| 7.002   | 110.5        | 26.9          | 0.379          | 0.0                      | 126                  |
| 7.003   | 110.5        | 25.9          | 0.379          | 0.0                      | 123                  |
| 8.000   | 39.9         | 0.0           | 0.000          | 0.0                      | 0                    |
| 8.001   | 39.8         | 0.0           | 0.000          | 0.0                      | 0                    |
| 1.013   | 36.6         | 0.0           | 0.000          | 0.0                      | 0                    |
| 1.014   | 36.6         | 0.0           | 0.000          | 0.0                      | 0                    |
| 1.010_1 | 474.2        | 107.0         | 1.721          | 0.0                      | 241                  |

### Simulation Settings

|                      |          |                            |          |                           |
|----------------------|----------|----------------------------|----------|---------------------------|
| Rainfall Methodology | FEH-22   | Analysis Speed             | Detailed | Starting Level (m)        |
| Rainfall Events      | Singular | Skip Steady State          | ✓        | Check Discharge Rate(s) x |
| Summer CV            | 0.750    | Drain Down Time (mins)     | 240      | Check Discharge Volume x  |
| Winter CV            | 0.840    | Additional Storage (m³/ha) | 0.0      |                           |

### 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 %) |
|--------------------------|--------------------------|--------------------------|--------------------------|
| 2                        | 0                        | 10                       | 0                        |
| 30                       | 0                        | 10                       | 0                        |
| 100                      | 45                       | 10                       | 0                        |

### Node 180 Online Hydro-Brake® Control

|                          |        |                         |                                |
|--------------------------|--------|-------------------------|--------------------------------|
| Flap Valve               | x      | Objective               | (HE) Minimise upstream storage |
| Replaces Downstream Link | x      | Sump Available          | ✓                              |
| Invert Level (m)         | 47.441 | Product Number          | CTL-SHE-0179-1720-1500-1720    |
| Design Depth (m)         | 1.500  | Min Outlet Diameter (m) | 0.225                          |
| Design Flow (l/s)        | 17.2   | Min Node Diameter (mm)  | 1800                           |

### Node 174 Online Orifice Control

|                          |   |                  |        |                       |       |
|--------------------------|---|------------------|--------|-----------------------|-------|
| Flap Valve               | x | Invert Level (m) | 47.509 | Discharge Coefficient | 0.600 |
| Replaces Downstream Link | x | Diameter (m)     | 0.450  |                       |       |

### Node 111 Online Orifice Control

|                          |   |                  |        |                       |       |
|--------------------------|---|------------------|--------|-----------------------|-------|
| Flap Valve               | x | Invert Level (m) | 47.558 | Discharge Coefficient | 0.600 |
| Replaces Downstream Link | x | Diameter (m)     | 0.825  |                       |       |

### Node 112 Flow through Pond Storage Structure

|                             |         |                           |        |                          |        |
|-----------------------------|---------|---------------------------|--------|--------------------------|--------|
| Base Inf Coefficient (m/hr) | 0.00000 | Porosity                  | 1.00   | Main Channel Length (m)  | 58.000 |
| Side Inf Coefficient (m/hr) | 0.00000 | Invert Level (m)          | 47.500 | Main Channel Slope (1:X) | 1000.0 |
| Safety Factor               | 2.0     | Time to half empty (mins) |        | Main Channel n           | 0.030  |

#### Inlets

111 | 174

| Depth (m) | Area (m²) | Inf Area (m²) | Depth (m) | Area (m²) | Inf Area (m²) | Depth (m) | Area (m²) | Inf Area (m²) | Depth (m) | Area (m²) | Inf Area (m²) |
|-----------|-----------|---------------|-----------|-----------|---------------|-----------|-----------|---------------|-----------|-----------|---------------|
| 0.000     | 1144.0    | 1144.0        | 0.500     | 1622.0    | 1626.5        | 1.000     | 2152.0    | 2162.0        | 1.500     | 2733.0    | 2749.6        |
| 0.100     | 1235.0    | 1235.8        | 0.600     | 1724.0    | 1729.5        | 1.100     | 2264.0    | 2275.3        | 1.600     | 2855.0    | 2873.0        |
| 0.200     | 1329.0    | 1330.7        | 0.700     | 1828.0    | 1834.6        | 1.200     | 2378.0    | 2390.5        | 1.700     | 2980.0    | 2999.5        |
| 0.300     | 1425.0    | 1427.6        | 0.800     | 1934.0    | 1941.7        | 1.300     | 2494.0    | 2507.9        | 1.800     | 3106.0    | 3127.0        |
| 0.400     | 1522.0    | 1525.5        | 0.900     | 2042.0    | 2050.9        | 1.400     | 2612.0    | 2627.2        |           |           |               |

**Results for 2 year +10% A Critical Storm Duration. Lowest mass balance: 99.91%**

| Node Event       | US<br>Node | Peak<br>(mins) | Level<br>(m) | Depth<br>(m) | Inflow<br>(l/s) | Node<br>Vol (m³) | Flood<br>(m³) | Status |
|------------------|------------|----------------|--------------|--------------|-----------------|------------------|---------------|--------|
| 15 minute winter | 100        | 10             | 52.602       | 0.090        | 12.1            | 0.1013           | 0.0000        | OK     |
| 15 minute winter | 101        | 10             | 52.522       | 0.087        | 12.0            | 0.0989           | 0.0000        | OK     |
| 15 minute winter | 102        | 10             | 52.414       | 0.070        | 21.6            | 0.0788           | 0.0000        | OK     |
| 15 minute winter | 103        | 11             | 51.479       | 0.072        | 26.7            | 0.0816           | 0.0000        | OK     |
| 15 minute winter | 120        | 12             | 49.647       | 0.086        | 10.9            | 0.1527           | 0.0000        | OK     |
| 15 minute winter | 104        | 11             | 49.642       | 0.212        | 50.0            | 0.3747           | 0.0000        | OK     |
| 15 minute winter | 130        | 10             | 54.393       | 0.048        | 12.2            | 0.0538           | 0.0000        | OK     |
| 15 minute winter | 131        | 10             | 52.982       | 0.074        | 23.5            | 0.0837           | 0.0000        | OK     |
| 15 minute winter | 140        | 10             | 52.072       | 0.073        | 18.3            | 0.0831           | 0.0000        | OK     |
| 15 minute winter | 132        | 10             | 51.400       | 0.092        | 57.7            | 0.1321           | 0.0000        | OK     |
| 15 minute winter | 105        | 11             | 49.625       | 0.247        | 115.9           | 0.4362           | 0.0000        | OK     |
| 15 minute winter | 106        | 11             | 49.451       | 0.137        | 126.6           | 0.2421           | 0.0000        | OK     |
| 15 minute winter | 107        | 11             | 48.231       | 0.327        | 136.1           | 0.5783           | 0.0000        | OK     |
| 15 minute winter | 150        | 10             | 53.493       | 0.057        | 11.1            | 0.0650           | 0.0000        | OK     |
| 15 minute winter | 151        | 10             | 53.252       | 0.062        | 16.8            | 0.0696           | 0.0000        | OK     |
| 15 minute winter | 152        | 11             | 52.078       | 0.082        | 23.9            | 0.0924           | 0.0000        | OK     |
| 15 minute winter | 160        | 10             | 52.150       | 0.054        | 14.3            | 0.0616           | 0.0000        | OK     |
| 15 minute winter | 161        | 10             | 50.932       | 0.069        | 18.0            | 0.0778           | 0.0000        | OK     |
| 15 minute winter | 153        | 11             | 50.450       | 0.096        | 54.7            | 0.1379           | 0.0000        | OK     |
| 15 minute winter | 154        | 11             | 48.292       | 0.143        | 68.3            | 0.2534           | 0.0000        | OK     |
| 15 minute winter | 108        | 11             | 48.204       | 0.384        | 202.7           | 0.9785           | 0.0000        | OK     |
| 15 minute winter | 109        | 12             | 48.167       | 0.363        | 200.8           | 0.9240           | 0.0000        | OK     |
| 15 minute winter | 110        | 12             | 47.975       | 0.325        | 228.5           | 0.8276           | 0.0000        | OK     |
| 15 minute winter | 111        | 12             | 47.893       | 0.335        | 228.5           | 0.0000           | 0.0000        | OK     |
| 15 minute winter | 170        | 10             | 48.596       | 0.077        | 13.0            | 0.0874           | 0.0000        | OK     |

| Link Event<br>(Upstream Depth) | US<br>Node | Link              | DS<br>Node | Outflow<br>(l/s) | Flow/Cap | Link<br>Vol (m³) | Discharge<br>Vol (m³) |
|--------------------------------|------------|-------------------|------------|------------------|----------|------------------|-----------------------|
| 15 minute winter               | 100        | 1.000             | 101        | 12.0             | 0.300    | 0.1887           |                       |
| 15 minute winter               | 101        | 1.001             | 102        | 11.8             | 0.295    | 0.1898           |                       |
| 15 minute winter               | 102        | 1.002             | 103        | 21.4             | 0.199    | 0.2369           |                       |
| 15 minute winter               | 103        | 1.003             | 104        | 26.5             | 0.212    | 0.3169           |                       |
| 15 minute winter               | 120        | 2.000             | 104        | 10.3             | 0.043    | 2.7726           |                       |
| 15 minute winter               | 104        | 1.004             | 105        | 48.9             | 0.224    | 2.3037           |                       |
| 15 minute winter               | 130        | 3.000             | 131        | 12.1             | 0.098    | 0.2266           |                       |
| 15 minute winter               | 131        | 3.001             | 132        | 23.0             | 0.224    | 0.4431           |                       |
| 15 minute winter               | 140        | 4.000             | 132        | 18.0             | 0.216    | 0.2648           |                       |
| 15 minute winter               | 132        | 3.002             | 105        | 57.5             | 0.127    | 0.7477           |                       |
| 15 minute winter               | 105        | 1.005             | 106        | 117.0            | 0.540    | 2.2835           |                       |
| 15 minute winter               | 106        | 1.006             | 107        | 127.1            | 0.154    | 2.3904           |                       |
| 15 minute winter               | 107        | 1.007             | 108        | 134.4            | 0.370    | 0.9772           |                       |
| 15 minute winter               | 150        | 5.000             | 151        | 11.0             | 0.131    | 0.0794           |                       |
| 15 minute winter               | 151        | 5.001             | 152        | 16.7             | 0.165    | 0.3444           |                       |
| 15 minute winter               | 152        | 5.002             | 153        | 23.4             | 0.275    | 0.7237           |                       |
| 15 minute winter               | 160        | 6.000             | 161        | 14.2             | 0.129    | 0.2464           |                       |
| 15 minute winter               | 161        | 6.001             | 153        | 17.8             | 0.176    | 0.0941           |                       |
| 15 minute winter               | 153        | 5.003             | 154        | 54.6             | 0.141    | 1.2227           |                       |
| 15 minute winter               | 154        | 5.004             | 108        | 68.3             | 0.109    | 0.3200           |                       |
| 15 minute winter               | 108        | 1.008             | 109        | 200.8            | 0.450    | 2.6404           |                       |
| 15 minute winter               | 109        | 1.009             | 109a       | 197.7            | 0.446    | 6.0246           |                       |
| 15 minute winter               | 110        | 1.010             | 111        | 228.5            | 0.373    | 5.3779           |                       |
| 15 minute winter               | 111        | Flow through Pond | 112        | 278.3            | 0.006    | 127.8489         |                       |
| 15 minute winter               | 170        | 7.000             | 171        | 12.7             | 0.239    | 0.3012           |                       |

**Results for 2 year +10% A Critical Storm Duration. Lowest mass balance: 99.91%**

| Node Event        | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status     |
|-------------------|---------|-------------|-----------|-----------|--------------|---------------|------------|------------|
| 15 minute winter  | 171     | 11          | 48.209    | 0.107     | 30.3         | 0.1528        | 0.0000     | OK         |
| 15 minute winter  | 172     | 11          | 47.819    | 0.194     | 48.8         | 0.2779        | 0.0000     | OK         |
| 360 minute winter | 173     | 280         | 47.781    | 0.181     | 9.8          | 0.2596        | 0.0000     | OK         |
| 360 minute winter | 174     | 272         | 47.781    | 0.272     | 9.6          | 0.0000        | 0.0000     | OK         |
| 360 minute winter | 112     | 280         | 47.781    | 0.281     | 36.0         | 0.0000        | 0.0000     | SURCHARGED |
| 360 minute winter | 180     | 280         | 47.769    | 0.328     | 16.0         | 2.3205        | 0.0000     | SURCHARGED |
| 360 minute winter | 181     | 280         | 47.299    | 0.103     | 16.0         | 0.0000        | 0.0000     | OK         |
| 360 minute winter | 182     | 280         | 47.217    | 0.103     | 16.0         | 0.0000        | 0.0000     | OK         |
| 360 minute winter | 183     | 280         | 47.159    | 0.103     | 16.0         | 0.0000        | 0.0000     | OK         |
| 15 minute winter  | 109a    | 12          | 48.103    | 0.338     | 209.6        | 0.8597        | 0.0000     | OK         |

| Link Event (Upstream Depth) | US Node | Link              | DS Node | Outflow (l/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|-----------------------------|---------|-------------------|---------|---------------|----------|---------------|--------------------|
| 15 minute winter            | 171     | 7.001             | 172     | 29.6          | 0.182    | 3.0027        |                    |
| 15 minute winter            | 172     | 7.002             | 173     | 47.4          | 0.429    | 0.4505        |                    |
| 360 minute winter           | 173     | 7.003             | 174     | 9.6           | 0.087    | 2.0383        |                    |
| 360 minute winter           | 174     | Flow through Pond | 112     | 36.0          | 0.001    | 318.6599      |                    |
| 360 minute winter           | 112     | 8.000             | 180     | 16.0          | 0.401    | 0.3959        |                    |
| 360 minute winter           | 180     | 8.001             | 181     | 16.0          | 0.401    | 0.7164        |                    |
| 360 minute winter           | 181     | 1.013             | 182     | 16.0          | 0.437    | 0.2887        |                    |
| 360 minute winter           | 182     | 1.014             | 183     | 16.0          | 0.437    | 0.2061        | 383.3              |
| 15 minute winter            | 109a    | 1.010_1           | 110     | 211.8         | 0.447    | 4.6021        |                    |

**Results for 30 year +10% A Critical Storm Duration. Lowest mass balance: 99.08%**

| Node Event       | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status     |
|------------------|---------|-------------|-----------|-----------|--------------|---------------|------------|------------|
| 15 minute winter | 100     | 10          | 52.688    | 0.176     | 33.7         | 0.1993        | 0.0000     | OK         |
| 15 minute winter | 101     | 10          | 52.597    | 0.162     | 33.3         | 0.1829        | 0.0000     | OK         |
| 15 minute winter | 102     | 10          | 52.470    | 0.126     | 60.2         | 0.1429        | 0.0000     | OK         |
| 15 minute winter | 103     | 10          | 51.539    | 0.132     | 74.6         | 0.1490        | 0.0000     | OK         |
| 15 minute winter | 120     | 11          | 49.866    | 0.305     | 30.4         | 0.5390        | 0.0000     | OK         |
| 15 minute winter | 104     | 11          | 49.858    | 0.428     | 141.3        | 0.7559        | 0.0000     | OK         |
| 15 minute winter | 130     | 10          | 54.425    | 0.080     | 34.1         | 0.0910        | 0.0000     | OK         |
| 15 minute winter | 131     | 10          | 53.043    | 0.135     | 65.7         | 0.1531        | 0.0000     | OK         |
| 15 minute winter | 140     | 10          | 52.134    | 0.135     | 51.1         | 0.1528        | 0.0000     | OK         |
| 15 minute winter | 132     | 10          | 51.460    | 0.152     | 161.5        | 0.2182        | 0.0000     | OK         |
| 15 minute winter | 105     | 11          | 49.825    | 0.447     | 328.1        | 0.7893        | 0.0000     | OK         |
| 15 minute winter | 106     | 11          | 49.549    | 0.235     | 353.3        | 0.4156        | 0.0000     | OK         |
| 15 minute winter | 107     | 11          | 48.627    | 0.723     | 378.2        | 1.2767        | 0.0000     | SURCHARGED |
| 15 minute winter | 150     | 10          | 53.540    | 0.104     | 31.1         | 0.1178        | 0.0000     | OK         |
| 15 minute winter | 151     | 10          | 53.297    | 0.107     | 47.2         | 0.1210        | 0.0000     | OK         |
| 15 minute winter | 152     | 11          | 52.149    | 0.153     | 66.8         | 0.1726        | 0.0000     | OK         |
| 15 minute winter | 160     | 10          | 52.189    | 0.093     | 40.0         | 0.1054        | 0.0000     | OK         |
| 15 minute winter | 161     | 10          | 50.991    | 0.128     | 50.4         | 0.1448        | 0.0000     | OK         |
| 15 minute summer | 153     | 10          | 50.516    | 0.162     | 146.7        | 0.2320        | 0.0000     | OK         |
| 15 minute winter | 154     | 11          | 48.612    | 0.463     | 193.7        | 0.8174        | 0.0000     | OK         |
| 15 minute winter | 108     | 12          | 48.591    | 0.771     | 555.6        | 1.9627        | 0.0000     | SURCHARGED |
| 15 minute winter | 109     | 12          | 48.532    | 0.728     | 553.3        | 1.8529        | 0.0000     | OK         |
| 15 minute winter | 110     | 12          | 48.305    | 0.655     | 633.9        | 1.6668        | 0.0000     | OK         |
| 15 minute winter | 111     | 12          | 48.222    | 0.664     | 635.3        | 0.0000        | 0.0000     | OK         |
| 15 minute winter | 170     | 10          | 48.662    | 0.143     | 36.3         | 0.1620        | 0.0000     | OK         |

| Link Event<br>(Upstream Depth) | US Node | Link              | DS Node | Outflow (l/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|--------------------------------|---------|-------------------|---------|---------------|----------|---------------|--------------------|
| 15 minute winter               | 100     | 1.000             | 101     | 33.3          | 0.836    | 0.4163        |                    |
| 15 minute winter               | 101     | 1.001             | 102     | 32.9          | 0.824    | 0.4114        |                    |
| 15 minute winter               | 102     | 1.002             | 103     | 59.8          | 0.557    | 0.5218        |                    |
| 15 minute winter               | 103     | 1.003             | 104     | 73.7          | 0.591    | 0.6933        |                    |
| 15 minute winter               | 120     | 2.000             | 104     | 32.0          | 0.134    | 8.4895        |                    |
| 15 minute winter               | 104     | 1.004             | 105     | 141.6         | 0.650    | 4.8814        |                    |
| 15 minute winter               | 130     | 3.000             | 131     | 33.9          | 0.276    | 0.4892        |                    |
| 15 minute winter               | 131     | 3.001             | 132     | 64.5          | 0.630    | 0.9614        |                    |
| 15 minute winter               | 140     | 4.000             | 132     | 50.5          | 0.606    | 0.5754        |                    |
| 15 minute winter               | 132     | 3.002             | 105     | 160.9         | 0.355    | 2.3625        |                    |
| 15 minute winter               | 105     | 1.005             | 106     | 326.8         | 1.508    | 4.5755        |                    |
| 15 minute winter               | 106     | 1.006             | 107     | 353.1         | 0.429    | 6.8032        |                    |
| 15 minute winter               | 107     | 1.007             | 108     | 373.0         | 1.026    | 2.1080        |                    |
| 15 minute winter               | 150     | 5.000             | 151     | 30.9          | 0.368    | 0.1730        |                    |
| 15 minute winter               | 151     | 5.001             | 152     | 46.9          | 0.463    | 0.7511        |                    |
| 15 minute winter               | 152     | 5.002             | 153     | 65.4          | 0.771    | 1.5805        |                    |
| 15 minute winter               | 160     | 6.000             | 161     | 39.7          | 0.362    | 0.5420        |                    |
| 15 minute winter               | 161     | 6.001             | 153     | 49.9          | 0.495    | 0.2070        |                    |
| 15 minute summer               | 153     | 5.003             | 154     | 148.7         | 0.385    | 3.6152        |                    |
| 15 minute winter               | 154     | 5.004             | 108     | 182.6         | 0.291    | 1.2965        |                    |
| 15 minute winter               | 108     | 1.008             | 109     | 553.3         | 1.240    | 5.2973        |                    |
| 15 minute winter               | 109     | 1.009             | 109a    | 548.7         | 1.238    | 12.7391       |                    |
| 15 minute winter               | 110     | 1.010             | 111     | 635.3         | 1.037    | 13.1348       |                    |
| 15 minute winter               | 111     | Flow through Pond | 112     | 701.7         | 0.015    | 358.3698      |                    |
| 15 minute winter               | 170     | 7.000             | 171     | 35.6          | 0.671    | 0.6566        |                    |

**Results for 30 year +10% A Critical Storm Duration. Lowest mass balance: 99.08%**

| Node Event        | US<br>Node | Peak<br>(mins) | Level<br>(m) | Depth<br>(m) | Inflow<br>(l/s) | Node<br>Vol (m³) | Flood<br>(m³) | Status     |
|-------------------|------------|----------------|--------------|--------------|-----------------|------------------|---------------|------------|
| 15 minute winter  | 171        | 10             | 48.289       | 0.187        | 84.7            | 0.2670           | 0.0000        | OK         |
| 15 minute winter  | 172        | 11             | 48.152       | 0.527        | 137.8           | 0.7535           | 0.0000        | SURCHARGED |
| 360 minute winter | 173        | 344            | 48.086       | 0.486        | 20.0            | 0.6959           | 0.0000        | SURCHARGED |
| 360 minute winter | 174        | 344            | 48.086       | 0.577        | 19.5            | 0.0000           | 0.0000        | OK         |
| 360 minute winter | 112        | 344            | 48.085       | 0.585        | 70.4            | 0.0000           | 0.0000        | SURCHARGED |
| 360 minute winter | 180        | 344            | 48.072       | 0.631        | 17.6            | 4.4584           | 0.0000        | SURCHARGED |
| 180 minute summer | 181        | 168            | 47.303       | 0.107        | 17.2            | 0.0000           | 0.0000        | OK         |
| 480 minute summer | 182        | 504            | 47.221       | 0.107        | 17.2            | 0.0000           | 0.0000        | OK         |
| 480 minute summer | 183        | 504            | 47.163       | 0.107        | 17.2            | 0.0000           | 0.0000        | OK         |
| 15 minute winter  | 109a       | 12             | 48.438       | 0.673        | 585.3           | 1.7133           | 0.0000        | OK         |

| Link Event<br>(Upstream Depth) | US<br>Node | Link              | DS<br>Node | Outflow<br>(l/s) | Flow/Cap | Link<br>Vol (m³) | Discharge<br>Vol (m³) |
|--------------------------------|------------|-------------------|------------|------------------|----------|------------------|-----------------------|
| 15 minute winter               | 171        | 7.001             | 172        | 83.0             | 0.511    | 5.9428           |                       |
| 15 minute winter               | 172        | 7.002             | 173        | 133.9            | 1.212    | 0.9068           |                       |
| 360 minute winter              | 173        | 7.003             | 174        | 19.5             | 0.176    | 3.2501           |                       |
| 360 minute winter              | 174        | Flow through Pond | 112        | 70.4             | 0.001    | 783.2855         |                       |
| 360 minute winter              | 112        | 8.000             | 180        | 17.6             | 0.440    | 0.3959           |                       |
| 360 minute winter              | 180        | 8.001             | 181        | 17.2             | 0.431    | 0.7563           |                       |
| 180 minute summer              | 181        | 1.013             | 182        | 17.2             | 0.469    | 0.3047           |                       |
| 480 minute summer              | 182        | 1.014             | 183        | 17.2             | 0.469    | 0.2175           | 580.0                 |
| 15 minute winter               | 109a       | 1.010_1           | 110        | 585.0            | 1.234    | 10.5537          |                       |

**Results for 100 year +45% CC +10% A Critical Storm Duration. Lowest mass balance: 98.95%**

| Node Event       | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status     |
|------------------|---------|-------------|-----------|-----------|--------------|---------------|------------|------------|
| 15 minute winter | 100     | 12          | 53.855    | 1.343     | 62.3         | 1.5185        | 0.0000     | FLOOD RISK |
| 15 minute winter | 101     | 12          | 53.697    | 1.262     | 55.4         | 1.4279        | 0.0000     | SURCHARGED |
| 15 minute winter | 102     | 12          | 53.517    | 1.173     | 100.9        | 1.3270        | 0.0000     | SURCHARGED |
| 15 minute winter | 103     | 12          | 52.720    | 1.313     | 124.6        | 1.4849        | 0.0000     | FLOOD RISK |
| 15 minute winter | 120     | 11          | 51.135    | 1.574     | 56.1         | 2.7817        | 0.0000     | FLOOD RISK |
| 15 minute winter | 104     | 12          | 51.117    | 1.687     | 239.9        | 2.9805        | 0.0000     | SURCHARGED |
| 15 minute winter | 130     | 11          | 54.467    | 0.122     | 63.0         | 0.1384        | 0.0000     | OK         |
| 15 minute winter | 131     | 12          | 53.716    | 0.808     | 121.4        | 0.9140        | 0.0000     | SURCHARGED |
| 15 minute winter | 140     | 11          | 52.553    | 0.554     | 94.5         | 0.6261        | 0.0000     | SURCHARGED |
| 15 minute winter | 132     | 11          | 51.790    | 0.482     | 283.6        | 0.6896        | 0.0000     | SURCHARGED |
| 15 minute winter | 105     | 12          | 51.035    | 1.657     | 568.4        | 2.9287        | 0.0000     | SURCHARGED |
| 15 minute winter | 106     | 12          | 50.488    | 1.174     | 583.9        | 2.0750        | 0.0000     | SURCHARGED |
| 15 minute winter | 107     | 11          | 49.668    | 1.764     | 625.5        | 3.1164        | 0.0000     | FLOOD RISK |
| 15 minute winter | 150     | 12          | 54.161    | 0.725     | 57.5         | 0.8199        | 0.0000     | SURCHARGED |
| 15 minute winter | 151     | 12          | 54.038    | 0.848     | 81.6         | 0.9589        | 0.0000     | SURCHARGED |
| 15 minute winter | 152     | 12          | 53.249    | 1.253     | 109.9        | 1.4172        | 0.0000     | FLOOD RISK |
| 15 minute winter | 160     | 10          | 52.230    | 0.134     | 74.0         | 0.1516        | 0.0000     | OK         |
| 15 minute winter | 161     | 11          | 51.137    | 0.274     | 93.6         | 0.3097        | 0.0000     | SURCHARGED |
| 15 minute winter | 153     | 11          | 50.653    | 0.299     | 265.2        | 0.4281        | 0.0000     | OK         |
| 15 minute winter | 154     | 11          | 49.652    | 1.503     | 333.9        | 2.6552        | 0.0000     | FLOOD RISK |
| 15 minute winter | 108     | 11          | 49.565    | 1.745     | 948.4        | 4.4400        | 0.0000     | FLOOD RISK |
| 15 minute winter | 109     | 11          | 49.377    | 1.573     | 952.6        | 4.0038        | 0.0000     | SURCHARGED |
| 15 minute winter | 110     | 11          | 48.776    | 1.126     | 1109.3       | 2.8649        | 0.0000     | SURCHARGED |
| 15 minute winter | 111     | 12          | 48.577    | 1.019     | 1106.7       | 0.0000        | 0.0000     | OK         |
| 15 minute winter | 170     | 11          | 49.845    | 1.326     | 67.1         | 1.5000        | 0.0000     | FLOOD RISK |

| Link Event<br>(Upstream Depth) | US Node | Link              | DS Node | Outflow (l/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|--------------------------------|---------|-------------------|---------|---------------|----------|---------------|--------------------|
| 15 minute winter               | 100     | 1.000             | 101     | 55.4          | 1.391    | 0.5180        |                    |
| 15 minute winter               | 101     | 1.001             | 102     | 54.8          | 1.374    | 0.6116        |                    |
| 15 minute winter               | 102     | 1.002             | 103     | 98.9          | 0.921    | 0.8815        |                    |
| 15 minute winter               | 103     | 1.003             | 104     | 116.1         | 0.931    | 1.1724        |                    |
| 15 minute winter               | 120     | 2.000             | 104     | 64.7          | 0.271    | 11.5154       |                    |
| 15 minute winter               | 104     | 1.004             | 105     | 249.1         | 1.144    | 5.4887        |                    |
| 15 minute winter               | 130     | 3.000             | 131     | 62.5          | 0.508    | 0.8030        |                    |
| 15 minute winter               | 131     | 3.001             | 132     | 106.9         | 1.045    | 1.5797        |                    |
| 15 minute winter               | 140     | 4.000             | 132     | 92.2          | 1.107    | 0.9610        |                    |
| 15 minute winter               | 132     | 3.002             | 105     | 275.1         | 0.608    | 3.8678        |                    |
| 15 minute winter               | 105     | 1.005             | 106     | 539.5         | 2.490    | 6.8299        |                    |
| 15 minute winter               | 106     | 1.006             | 107     | 585.4         | 0.711    | 9.4920        |                    |
| 15 minute winter               | 107     | 1.007             | 108     | 627.2         | 1.726    | 2.1080        |                    |
| 15 minute winter               | 150     | 5.000             | 151     | 53.2          | 0.633    | 0.3764        |                    |
| 15 minute winter               | 151     | 5.001             | 152     | 75.3          | 0.744    | 1.2655        |                    |
| 15 minute winter               | 152     | 5.002             | 153     | 106.8         | 1.257    | 2.2389        |                    |
| 15 minute winter               | 160     | 6.000             | 161     | 73.7          | 0.671    | 0.8994        |                    |
| 15 minute winter               | 161     | 6.001             | 153     | 90.5          | 0.899    | 0.3429        |                    |
| 15 minute winter               | 153     | 5.003             | 154     | 262.9         | 0.681    | 5.6834        |                    |
| 15 minute winter               | 154     | 5.004             | 108     | 325.8         | 0.519    | 1.3416        |                    |
| 15 minute winter               | 108     | 1.008             | 109     | 952.6         | 2.135    | 5.3189        |                    |
| 15 minute winter               | 109     | 1.009             | 109a    | 956.3         | 2.158    | 13.1438       |                    |
| 15 minute winter               | 110     | 1.010             | 111     | 1106.7        | 1.807    | 15.8879       |                    |
| 15 minute winter               | 111     | Flow through Pond | 112     | 1093.1        | 0.023    | 670.4376      |                    |
| 15 minute winter               | 170     | 7.000             | 171     | 64.0          | 1.207    | 1.0200        |                    |

**Results for 100 year +45% CC +10% A Critical Storm Duration. Lowest mass balance: 98.95%**

| Node Event        | US Node | Peak (mins) | Level (m) | Depth (m) | Inflow (l/s) | Node Vol (m³) | Flood (m³) | Status     |
|-------------------|---------|-------------|-----------|-----------|--------------|---------------|------------|------------|
| 15 minute winter  | 171     | 11          | 49.371    | 1.269     | 151.2        | 1.8159        | 0.0000     | SURCHARGED |
| 15 minute winter  | 172     | 11          | 48.905    | 1.280     | 246.5        | 1.8318        | 0.0000     | FLOOD RISK |
| 15 minute winter  | 173     | 11          | 48.650    | 1.050     | 247.0        | 1.5019        | 0.0000     | SURCHARGED |
| 720 minute winter | 174     | 720         | 48.577    | 1.068     | 22.3         | 0.0000        | 0.0000     | OK         |
| 720 minute winter | 112     | 705         | 48.571    | 1.071     | 73.9         | 0.0000        | 0.0000     | SURCHARGED |
| 720 minute winter | 180     | 705         | 48.561    | 1.120     | 17.6         | 7.9177        | 0.0000     | SURCHARGED |
| 30 minute summer  | 181     | 195         | 47.303    | 0.107     | 17.2         | 0.0000        | 0.0000     | OK         |
| 30 minute summer  | 182     | 195         | 47.221    | 0.107     | 17.2         | 0.0000        | 0.0000     | OK         |
| 30 minute summer  | 183     | 195         | 47.163    | 0.107     | 17.2         | 0.0000        | 0.0000     | OK         |
| 15 minute winter  | 109a    | 11          | 49.088    | 1.323     | 1014.4       | 3.3665        | 0.0000     | SURCHARGED |

| Link Event (Upstream Depth) | US Node | Link              | DS Node | Outflow (l/s) | Flow/Cap | Link Vol (m³) | Discharge Vol (m³) |
|-----------------------------|---------|-------------------|---------|---------------|----------|---------------|--------------------|
| 15 minute winter            | 171     | 7.001             | 172     | 150.9         | 0.928    | 7.9434        |                    |
| 15 minute winter            | 172     | 7.002             | 173     | 247.0         | 2.235    | 0.9068        |                    |
| 15 minute winter            | 173     | 7.003             | 174     | 247.4         | 2.238    | 3.2501        |                    |
| 720 minute winter           | 174     | Flow through Pond | 112     | 73.9          | 0.002    | 1722.6589     |                    |
| 720 minute winter           | 112     | 8.000             | 180     | 17.6          | 0.442    | 0.3959        |                    |
| 720 minute winter           | 180     | 8.001             | 181     | 17.2          | 0.431    | 0.7563        |                    |
| 30 minute summer            | 181     | 1.013             | 182     | 17.2          | 0.469    | 0.3047        |                    |
| 30 minute summer            | 182     | 1.014             | 183     | 17.2          | 0.469    | 0.2175        | 261.0              |
| 15 minute winter            | 109a    | 1.010_1           | 110     | 1017.3        | 2.146    | 11.8797       |                    |