

|                                                   |  |                                  |  |
|---------------------------------------------------|--|----------------------------------|--|
| Pell Frischmann                                   |  | Page 1                           |  |
| 5 Manchester Square<br>London<br>W1U 3PD          |  | Well St Mill<br>Leek<br>ST13 6BL |  |
| Date 19/09/2025<br>File Attenuation Tank 5ls.SRCX |  | Designed by YL<br>Checked by     |  |
| Innovyze                                          |  | Source Control 2020.1.3          |  |

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 55 minutes.

| Storm Event      | Max Level (m) | Max Depth (m) | Max Infiltration (l/s) | Max Control (l/s) | Max Σ Outflow (l/s) | Max Volume (m³) | Status |
|------------------|---------------|---------------|------------------------|-------------------|---------------------|-----------------|--------|
| 15 min Summer    | 98.965        | 0.565         | 0.0                    | 3.7               | 3.7                 | 15.0            | O K    |
| 30 min Summer    | 99.123        | 0.723         | 0.0                    | 4.2               | 4.2                 | 19.2            | O K    |
| 60 min Summer    | 99.226        | 0.826         | 0.0                    | 4.5               | 4.5                 | 22.0            | O K    |
| 120 min Summer   | 99.264        | 0.864         | 0.0                    | 4.6               | 4.6                 | 23.0            | O K    |
| 180 min Summer   | 99.241        | 0.841         | 0.0                    | 4.5               | 4.5                 | 22.4            | O K    |
| 240 min Summer   | 99.200        | 0.800         | 0.0                    | 4.4               | 4.4                 | 21.3            | O K    |
| 360 min Summer   | 99.113        | 0.713         | 0.0                    | 4.2               | 4.2                 | 19.0            | O K    |
| 480 min Summer   | 99.038        | 0.638         | 0.0                    | 3.9               | 3.9                 | 17.0            | O K    |
| 600 min Summer   | 98.974        | 0.574         | 0.0                    | 3.7               | 3.7                 | 15.3            | O K    |
| 720 min Summer   | 98.919        | 0.519         | 0.0                    | 3.5               | 3.5                 | 13.8            | O K    |
| 960 min Summer   | 98.831        | 0.431         | 0.0                    | 3.2               | 3.2                 | 11.5            | O K    |
| 1440 min Summer  | 98.714        | 0.314         | 0.0                    | 2.7               | 2.7                 | 8.3             | O K    |
| 2160 min Summer  | 98.615        | 0.215         | 0.0                    | 2.2               | 2.2                 | 5.7             | O K    |
| 2880 min Summer  | 98.560        | 0.160         | 0.0                    | 1.8               | 1.8                 | 4.2             | O K    |
| 4320 min Summer  | 98.504        | 0.104         | 0.0                    | 1.4               | 1.4                 | 2.8             | O K    |
| 5760 min Summer  | 98.477        | 0.077         | 0.0                    | 1.2               | 1.2                 | 2.0             | O K    |
| 7200 min Summer  | 98.465        | 0.065         | 0.0                    | 1.0               | 1.0                 | 1.7             | O K    |
| 8640 min Summer  | 98.459        | 0.059         | 0.0                    | 0.8               | 0.8                 | 1.6             | O K    |
| 10080 min Summer | 98.455        | 0.055         | 0.0                    | 0.7               | 0.7                 | 1.5             | O K    |
| 15 min Winter    | 99.037        | 0.637         | 0.0                    | 3.9               | 3.9                 | 16.9            | O K    |

  

| Storm Event      | Rain (mm/hr) | Flooded Volume (m³) | Discharge Volume (m³) | Time-Peak (mins) |
|------------------|--------------|---------------------|-----------------------|------------------|
| 15 min Summer    | 116.827      | 0.0                 | 17.9                  | 22               |
| 30 min Summer    | 79.249       | 0.0                 | 24.3                  | 33               |
| 60 min Summer    | 51.407       | 0.0                 | 31.6                  | 52               |
| 120 min Summer   | 32.241       | 0.0                 | 39.6                  | 86               |
| 180 min Summer   | 24.185       | 0.0                 | 44.6                  | 120              |
| 240 min Summer   | 19.581       | 0.0                 | 48.2                  | 154              |
| 360 min Summer   | 14.452       | 0.0                 | 53.3                  | 220              |
| 480 min Summer   | 11.653       | 0.0                 | 57.3                  | 284              |
| 600 min Summer   | 9.852        | 0.0                 | 60.6                  | 348              |
| 720 min Summer   | 8.584        | 0.0                 | 63.3                  | 408              |
| 960 min Summer   | 6.900        | 0.0                 | 67.9                  | 530              |
| 1440 min Summer  | 5.062        | 0.0                 | 74.7                  | 770              |
| 2160 min Summer  | 3.705        | 0.0                 | 82.0                  | 1128             |
| 2880 min Summer  | 2.965        | 0.0                 | 87.5                  | 1480             |
| 4320 min Summer  | 2.161        | 0.0                 | 95.7                  | 2208             |
| 5760 min Summer  | 1.725        | 0.0                 | 101.8                 | 2936             |
| 7200 min Summer  | 1.447        | 0.0                 | 106.8                 | 3656             |
| 8640 min Summer  | 1.255        | 0.0                 | 111.1                 | 4336             |
| 10080 min Summer | 1.113        | 0.0                 | 115.0                 | 5136             |
| 15 min Winter    | 116.827      | 0.0                 | 20.1                  | 23               |

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Pell Frischmann

5 Manchester Square  
London  
W1U 3PD

Date 19/09/2025  
File Attenuation Tank 5ls.SRCX

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Well St Mill  
Leek  
ST13 6BL

Designed by YL  
Checked by

Source Control 2020.1.3

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Summary of Results for 100 year Return Period (+40%)

| Storm Event      | Max Level (m) | Max Depth (m) | Max Infiltration (l/s) | Max Control (l/s) | Max Σ Outflow (l/s) | Max Volume (m³) | Status   |
|------------------|---------------|---------------|------------------------|-------------------|---------------------|-----------------|----------|
| 30 min Winter    | 99.219        | 0.819         |                        | 0.0               | 4.5                 | 4.5             | 21.8 O K |
| 60 min Winter    | 99.338        | 0.938         |                        | 0.0               | 4.8                 | 4.8             | 24.9 O K |
| 120 min Winter   | 99.363        | 0.963         |                        | 0.0               | 4.9                 | 4.9             | 25.6 O K |
| 180 min Winter   | 99.317        | 0.917         |                        | 0.0               | 4.7                 | 4.7             | 24.4 O K |
| 240 min Winter   | 99.251        | 0.851         |                        | 0.0               | 4.6                 | 4.6             | 22.6 O K |
| 360 min Winter   | 99.121        | 0.721         |                        | 0.0               | 4.2                 | 4.2             | 19.2 O K |
| 480 min Winter   | 99.015        | 0.615         |                        | 0.0               | 3.9                 | 3.9             | 16.4 O K |
| 600 min Winter   | 98.929        | 0.529         |                        | 0.0               | 3.6                 | 3.6             | 14.1 O K |
| 720 min Winter   | 98.859        | 0.459         |                        | 0.0               | 3.3                 | 3.3             | 12.2 O K |
| 960 min Winter   | 98.755        | 0.355         |                        | 0.0               | 2.9                 | 2.9             | 9.5 O K  |
| 1440 min Winter  | 98.632        | 0.232         |                        | 0.0               | 2.3                 | 2.3             | 6.2 O K  |
| 2160 min Winter  | 98.546        | 0.146         |                        | 0.0               | 1.7                 | 1.7             | 3.9 O K  |
| 2880 min Winter  | 98.504        | 0.104         |                        | 0.0               | 1.4                 | 1.4             | 2.8 O K  |
| 4320 min Winter  | 98.469        | 0.069         |                        | 0.0               | 1.0                 | 1.0             | 1.8 O K  |
| 5760 min Winter  | 98.459        | 0.059         |                        | 0.0               | 0.8                 | 0.8             | 1.6 O K  |
| 7200 min Winter  | 98.453        | 0.053         |                        | 0.0               | 0.7                 | 0.7             | 1.4 O K  |
| 8640 min Winter  | 98.448        | 0.048         |                        | 0.0               | 0.6                 | 0.6             | 1.3 O K  |
| 10080 min Winter | 98.445        | 0.045         |                        | 0.0               | 0.5                 | 0.5             | 1.2 O K  |

| Storm Event      | Rain (mm/hr) | Flooded Volume (m³) | Discharge Volume (m³) | Time-Peak (mins) |
|------------------|--------------|---------------------|-----------------------|------------------|
| 30 min Winter    | 79.249       | 0.0                 | 27.3                  | 34               |
| 60 min Winter    | 51.407       | 0.0                 | 35.4                  | 56               |
| 120 min Winter   | 32.241       | 0.0                 | 44.4                  | 92               |
| 180 min Winter   | 24.185       | 0.0                 | 50.0                  | 130              |
| 240 min Winter   | 19.581       | 0.0                 | 53.9                  | 166              |
| 360 min Winter   | 14.452       | 0.0                 | 59.7                  | 234              |
| 480 min Winter   | 11.653       | 0.0                 | 64.2                  | 298              |
| 600 min Winter   | 9.852        | 0.0                 | 67.8                  | 362              |
| 720 min Winter   | 8.584        | 0.0                 | 70.9                  | 424              |
| 960 min Winter   | 6.900        | 0.0                 | 76.0                  | 546              |
| 1440 min Winter  | 5.062        | 0.0                 | 83.7                  | 782              |
| 2160 min Winter  | 3.705        | 0.0                 | 91.9                  | 1132             |
| 2880 min Winter  | 2.965        | 0.0                 | 98.0                  | 1484             |
| 4320 min Winter  | 2.161        | 0.0                 | 107.2                 | 2204             |
| 5760 min Winter  | 1.725        | 0.0                 | 114.0                 | 2936             |
| 7200 min Winter  | 1.447        | 0.0                 | 119.6                 | 3624             |
| 8640 min Winter  | 1.255        | 0.0                 | 124.5                 | 4400             |
| 10080 min Winter | 1.113        | 0.0                 | 128.8                 | 5144             |

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| Innovyze Source Control 2020.1.3                  |                                  |                                                                                     |

Rainfall Details

|                       |                   |                       |       |
|-----------------------|-------------------|-----------------------|-------|
| Rainfall Model        | FSR               | Winter Storms         | Yes   |
| Return Period (years) | 100               | Cv (Summer)           | 0.750 |
| Region                | England and Wales | Cv (Winter)           | 0.840 |
| M5-60 (mm)            | 18.200            | Shortest Storm (mins) | 15    |
| Ratio R               | 0.333             | Longest Storm (mins)  | 10080 |
| Summer Storms         | Yes               | Climate Change %      | +40   |

Time Area Diagram

Total Area (ha) 0.082

| Time (mins) | Area  | Time (mins) | Area  | Time (mins) | Area  |
|-------------|-------|-------------|-------|-------------|-------|
| From: To:   | (ha)  | From: To:   | (ha)  | From: To:   | (ha)  |
| 0 4         | 0.027 | 4 8         | 0.027 | 8 12        | 0.027 |

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|                                                   |                                  |                                                                                     |
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Model Details

Storage is Online Cover Level (m) 100.000

Cellular Storage Structure

Invert Level (m) 98.400 Safety Factor 2.0  
Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95  
Infiltration Coefficient Side (m/hr) 0.00000

| Depth (m) | Area (m <sup>2</sup> ) | Inf. Area (m <sup>2</sup> ) | Depth (m) | Area (m <sup>2</sup> ) | Inf. Area (m <sup>2</sup> ) |
|-----------|------------------------|-----------------------------|-----------|------------------------|-----------------------------|
| 0.000     | 28.0                   | 28.0                        | 1.001     | 0.0                    | 50.0                        |
| 1.000     | 28.0                   | 50.0                        |           |                        |                             |

Orifice Outflow Control

Diameter (m) 0.049 Discharge Coefficient 0.600 Invert Level (m) 98.400

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