

|                                                    |                                                                |                                                                                     |
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| Archibald Shaw Limited                             |                                                                | Page 1                                                                              |
| One Little London<br>Chichester<br>Sussex PO19 1PP | ATTENUATION POND<br>M100 + 40 PERC. STORM<br>STANFORD END FARM |  |
| Date MAR. 2024                                     | Designed By PF                                                 |                                                                                     |
| File POND FINAL DESIGN.SRC                         | Checked By                                                     |                                                                                     |
| Micro Drainage                                     |                                                                | Source Control W.11.2                                                               |

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

| Storm<br>Duration<br>(mins) | Maximum<br>Control<br>(l/s) | Maximum<br>Outflow<br>(l/s) | Maximum<br>Water Level<br>(m OD) | Maximum<br>Depth<br>(m) | Maximum<br>Volume<br>(m³) | Status |
|-----------------------------|-----------------------------|-----------------------------|----------------------------------|-------------------------|---------------------------|--------|
| 15 Summer                   | 1.3                         | 1.3                         | 6.8122                           | 0.2122                  | 21.3                      | O K    |
| 30 Summer                   | 1.4                         | 1.4                         | 6.8727                           | 0.2727                  | 28.0                      | O K    |
| 60 Summer                   | 1.5                         | 1.5                         | 6.9272                           | 0.3272                  | 34.4                      | O K    |
| 120 Summer                  | 1.5                         | 1.5                         | 6.9647                           | 0.3647                  | 38.9                      | O K    |
| 180 Summer                  | 1.5                         | 1.5                         | 6.9722                           | 0.3722                  | 39.8                      | O K    |
| 240 Summer                  | 1.5                         | 1.5                         | 6.9682                           | 0.3682                  | 39.3                      | O K    |
| 360 Summer                  | 1.5                         | 1.5                         | 6.9572                           | 0.3572                  | 38.0                      | O K    |
| 480 Summer                  | 1.5                         | 1.5                         | 6.9462                           | 0.3462                  | 36.6                      | O K    |
| 600 Summer                  | 1.5                         | 1.5                         | 6.9357                           | 0.3357                  | 35.3                      | O K    |
| 720 Summer                  | 1.5                         | 1.5                         | 6.9252                           | 0.3252                  | 34.1                      | O K    |
| 960 Summer                  | 1.4                         | 1.4                         | 6.9052                           | 0.3052                  | 31.7                      | O K    |
| 1440 Summer                 | 1.4                         | 1.4                         | 6.8652                           | 0.2652                  | 27.1                      | O K    |
| 2160 Summer                 | 1.3                         | 1.3                         | 6.8107                           | 0.2107                  | 21.1                      | O K    |
| 2880 Summer                 | 1.3                         | 1.3                         | 6.7633                           | 0.1632                  | 16.0                      | O K    |
| 4320 Summer                 | 1.2                         | 1.2                         | 6.6898                           | 0.0898                  | 8.5                       | O K    |
| 5760 Summer                 | 1.1                         | 1.1                         | 6.6403                           | 0.0402                  | 3.7                       | O K    |
| 7200 Summer                 | 1.0                         | 1.0                         | 6.6103                           | 0.0103                  | 0.9                       | O K    |
| 8640 Summer                 | 1.0                         | 1.0                         | 6.6000                           | 0.0000                  | 0.0                       | O K    |
| 10080 Summer                | 0.9                         | 0.9                         | 6.6000                           | 0.0000                  | 0.0                       | O K    |
| 15 Winter                   | 1.4                         | 1.4                         | 6.8372                           | 0.2372                  | 24.0                      | O K    |
| 30 Winter                   | 1.4                         | 1.4                         | 6.9047                           | 0.3047                  | 31.7                      | O K    |
| 60 Winter                   | 1.5                         | 1.5                         | 6.9657                           | 0.3657                  | 39.0                      | O K    |

| Storm<br>Duration<br>(mins) | Rain<br>(mm/hr) | Time-Peak<br>(mins) |
|-----------------------------|-----------------|---------------------|
| 15 Summer                   | 131.85          | 22                  |
| 30 Summer                   | 88.57           | 37                  |
| 60 Summer                   | 56.71           | 66                  |
| 120 Summer                  | 35.00           | 124                 |
| 180 Summer                  | 25.97           | 182                 |
| 240 Summer                  | 20.88           | 216                 |
| 360 Summer                  | 15.37           | 280                 |
| 480 Summer                  | 12.34           | 346                 |
| 600 Summer                  | 10.40           | 414                 |
| 720 Summer                  | 9.04            | 484                 |
| 960 Summer                  | 7.24            | 620                 |
| 1440 Summer                 | 5.28            | 886                 |
| 2160 Summer                 | 3.85            | 1280                |
| 2880 Summer                 | 3.07            | 1648                |
| 4320 Summer                 | 2.23            | 2380                |
| 5760 Summer                 | 1.77            | 3056                |
| 7200 Summer                 | 1.48            | 3680                |
| 8640 Summer                 | 1.28            | 0                   |
| 10080 Summer                | 1.14            | 0                   |
| 15 Winter                   | 131.85          | 22                  |
| 30 Winter                   | 88.57           | 36                  |
| 60 Winter                   | 56.71           | 66                  |

|                                                    |                                                                |                                                                                     |
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| One Little London<br>Chichester<br>Sussex PO19 1PP | ATTENUATION POND<br>M100 + 40 PERC. STORM<br>STANFORD END FARM |  |
| Date MAR. 2024                                     | Designed By PF                                                 |                                                                                     |
| File POND FINAL DESIGN.SRC                         | Checked By                                                     |                                                                                     |
| Micro Drainage                                     |                                                                | Source Control W.11.2                                                               |

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

| Storm<br>Duration<br>(mins) | Maximum<br>Control<br>(l/s) | Maximum<br>Outflow<br>(l/s) | Maximum<br>Water Level<br>(m OD) | Maximum<br>Depth<br>(m) | Maximum<br>Volume<br>(m³) | Status |
|-----------------------------|-----------------------------|-----------------------------|----------------------------------|-------------------------|---------------------------|--------|
| 120 Winter                  | 1.6                         | 1.6                         | 7.0117                           | 0.4117                  | 44.7                      | O K    |
| * 180 Winter                | 1.6                         | 1.6                         | 7.0242                           | 0.4242                  | 46.3                      | O K *  |
| 240 Winter                  | 1.6                         | 1.6                         | 7.0232                           | 0.4232                  | 46.2                      | O K    |
| 360 Winter                  | 1.6                         | 1.6                         | 7.0117                           | 0.4117                  | 44.7                      | O K    |
| 480 Winter                  | 1.6                         | 1.6                         | 6.9977                           | 0.3977                  | 43.0                      | O K    |
| 600 Winter                  | 1.5                         | 1.5                         | 6.9812                           | 0.3812                  | 40.9                      | O K    |
| 720 Winter                  | 1.5                         | 1.5                         | 6.9667                           | 0.3667                  | 39.1                      | O K    |
| 960 Winter                  | 1.5                         | 1.5                         | 6.9367                           | 0.3367                  | 35.5                      | O K    |
| 1440 Winter                 | 1.4                         | 1.4                         | 6.8777                           | 0.2777                  | 28.5                      | O K    |
| 2160 Winter                 | 1.3                         | 1.3                         | 6.7978                           | 0.1977                  | 19.7                      | O K    |
| 2880 Winter                 | 1.2                         | 1.2                         | 6.7318                           | 0.1318                  | 12.8                      | O K    |
| 4320 Winter                 | 1.1                         | 1.1                         | 6.6373                           | 0.0372                  | 3.5                       | O K    |
| 5760 Winter                 | 1.0                         | 1.0                         | 6.6000                           | 0.0000                  | 0.0                       | O K    |
| 7200 Winter                 | 0.8                         | 0.8                         | 6.6000                           | 0.0000                  | 0.0                       | O K    |
| 8640 Winter                 | 0.7                         | 0.7                         | 6.6000                           | 0.0000                  | 0.0                       | O K    |
| 10080 Winter                | 0.6                         | 0.6                         | 6.6000                           | 0.0000                  | 0.0                       | O K    |

| Storm<br>Duration<br>(mins) | Rain<br>(mm/hr) | Time-Peak<br>(mins) |
|-----------------------------|-----------------|---------------------|
| 120 Winter                  | 35.00           | 122                 |
| 180 Winter                  | 25.97           | 178                 |
| 240 Winter                  | 20.88           | 232                 |
| 360 Winter                  | 15.37           | 294                 |
| 480 Winter                  | 12.34           | 370                 |
| 600 Winter                  | 10.40           | 448                 |
| 720 Winter                  | 9.04            | 524                 |
| 960 Winter                  | 7.24            | 672                 |
| 1440 Winter                 | 5.28            | 956                 |
| 2160 Winter                 | 3.85            | 1360                |
| 2880 Winter                 | 3.07            | 1732                |
| 4320 Winter                 | 2.23            | 2420                |
| 5760 Winter                 | 1.77            | 0                   |
| 7200 Winter                 | 1.48            | 0                   |
| 8640 Winter                 | 1.28            | 0                   |
| 10080 Winter                | 1.14            | 0                   |

|                                                    |                                                                |                                                                                     |
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| Micro Drainage                                     | Source Control W.11.2                                          |                                                                                     |

#### Rainfall Details

|                       |         |                       |       |
|-----------------------|---------|-----------------------|-------|
| Region                | ENG+WAL | Shortest Storm (mins) | 15    |
| Return Period (years) | 100     | Longest Storm (mins)  | 10080 |
| M5-60 (mm)            | 20.000  | Summer Storms         | Yes   |
| Ratio-R               | 0.350   | Winter Storms         | Yes   |
| Cv (Summer)           | 0.750   | Climate Change %      | +40   |
| Cv (Winter)           | 0.840   |                       |       |

#### Time / Area Diagram

Total Area (ha) = 0.092

| Time<br>from: | (mins)<br>to: | Area<br>(ha) | Time<br>from: | (mins)<br>to: | Area<br>(ha) |
|---------------|---------------|--------------|---------------|---------------|--------------|
| 0             | 4             | 0.014        | 4             | 8             | 0.078        |

|                                                    |                                                                |                                                                                     |
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| Micro Drainage                                     |                                                                | Source Control W.11.2                                                               |

Tank/Pond Details

|                  |                           |              |                           |              |                           |              |                           |  |       |
|------------------|---------------------------|--------------|---------------------------|--------------|---------------------------|--------------|---------------------------|--|-------|
| Invert Level (m) |                           |              |                           | 6.600        | Ground Level (m)          |              |                           |  | 7.300 |
| Depth<br>(m)     | Area<br>(m <sup>2</sup> ) | Depth<br>(m) | Area<br>(m <sup>2</sup> ) | Depth<br>(m) | Area<br>(m <sup>2</sup> ) | Depth<br>(m) | Area<br>(m <sup>2</sup> ) |  |       |
| 0.00             | 91.8                      | 0.20         | 107.5                     | 0.40         | 125.7                     | 0.60         | 144.7                     |  |       |

Orifice Outflow Control

|                       |       |                  |       |
|-----------------------|-------|------------------|-------|
| Diameter (m)          | 0.030 | Invert Level (m) | 6.300 |
| Discharge Coefficient | 0.600 |                  |       |