

|                                                                                                |                     |                                  |                              |                                                                                     |        |
|------------------------------------------------------------------------------------------------|---------------------|----------------------------------|------------------------------|-------------------------------------------------------------------------------------|--------|
| CGS Civils Ltd                                                                                 |                     |                                  | Page 1                       |                                                                                     |        |
| 65 St Pauls Road<br>Chichester<br>West Sussex PO19 3DD                                         |                     | 98 Elmer Road<br>Soakaway Trench |                              |  |        |
| Date 14/06/2018 13:19<br>File SAT1.srcx                                                        |                     | Designed by CS<br>Checked by     |                              |                                                                                     |        |
| Micro Drainage                                                                                 |                     | Source Control 2017.1            |                              |                                                                                     |        |
| <p style="text-align: center;"><u>Summary of Results for 100 year Return Period (+30%)</u></p> |                     |                                  |                              |                                                                                     |        |
| <p style="text-align: center;">Half Drain Time : 221 minutes.</p>                              |                     |                                  |                              |                                                                                     |        |
| Storm<br>Event                                                                                 | Max<br>Level<br>(m) | Max<br>Depth<br>(m)              | Max<br>Infiltration<br>(l/s) | Max<br>Volume<br>(m³)                                                               | Status |
| 15 min Summer                                                                                  | 49.369              | 0.169                            | 0.1                          | 1.4                                                                                 | O K    |
| 30 min Summer                                                                                  | 49.422              | 0.222                            | 0.1                          | 1.9                                                                                 | O K    |
| 60 min Summer                                                                                  | 49.471              | 0.271                            | 0.1                          | 2.3                                                                                 | O K    |
| 120 min Summer                                                                                 | 49.506              | 0.306                            | 0.1                          | 2.6                                                                                 | O K    |
| 180 min Summer                                                                                 | 49.514              | 0.314                            | 0.1                          | 2.7                                                                                 | O K    |
| 240 min Summer                                                                                 | 49.514              | 0.314                            | 0.1                          | 2.7                                                                                 | O K    |
| 360 min Summer                                                                                 | 49.509              | 0.309                            | 0.1                          | 2.6                                                                                 | O K    |
| 480 min Summer                                                                                 | 49.501              | 0.301                            | 0.1                          | 2.6                                                                                 | O K    |
| 600 min Summer                                                                                 | 49.491              | 0.291                            | 0.1                          | 2.5                                                                                 | O K    |
| 720 min Summer                                                                                 | 49.481              | 0.281                            | 0.1                          | 2.4                                                                                 | O K    |
| 960 min Summer                                                                                 | 49.460              | 0.260                            | 0.1                          | 2.2                                                                                 | O K    |
| 1440 min Summer                                                                                | 49.421              | 0.221                            | 0.1                          | 1.9                                                                                 | O K    |
| 2160 min Summer                                                                                | 49.373              | 0.173                            | 0.1                          | 1.5                                                                                 | O K    |
| 2880 min Summer                                                                                | 49.335              | 0.135                            | 0.1                          | 1.2                                                                                 | O K    |
| 4320 min Summer                                                                                | 49.282              | 0.082                            | 0.1                          | 0.7                                                                                 | O K    |
| 5760 min Summer                                                                                | 49.253              | 0.053                            | 0.1                          | 0.5                                                                                 | O K    |
| 7200 min Summer                                                                                | 49.245              | 0.045                            | 0.1                          | 0.4                                                                                 | O K    |
| 8640 min Summer                                                                                | 49.239              | 0.039                            | 0.1                          | 0.3                                                                                 | O K    |
| 10080 min Summer                                                                               | 49.235              | 0.035                            | 0.1                          | 0.3                                                                                 | O K    |
| 15 min Winter                                                                                  | 49.390              | 0.190                            | 0.1                          | 1.6                                                                                 | O K    |
| Storm<br>Event                                                                                 | Rain<br>(mm/hr)     | Flooded<br>Volume<br>(m³)        | Time-Peak<br>(mins)          |                                                                                     |        |
| 15 min Summer                                                                                  | 115.731             | 0.0                              | 18                           |                                                                                     |        |
| 30 min Summer                                                                                  | 77.804              | 0.0                              | 33                           |                                                                                     |        |
| 60 min Summer                                                                                  | 49.937              | 0.0                              | 62                           |                                                                                     |        |
| 120 min Summer                                                                                 | 30.956              | 0.0                              | 120                          |                                                                                     |        |
| 180 min Summer                                                                                 | 23.058              | 0.0                              | 162                          |                                                                                     |        |
| 240 min Summer                                                                                 | 18.577              | 0.0                              | 192                          |                                                                                     |        |
| 360 min Summer                                                                                 | 13.656              | 0.0                              | 258                          |                                                                                     |        |
| 480 min Summer                                                                                 | 10.974              | 0.0                              | 326                          |                                                                                     |        |
| 600 min Summer                                                                                 | 9.254               | 0.0                              | 396                          |                                                                                     |        |
| 720 min Summer                                                                                 | 8.046               | 0.0                              | 464                          |                                                                                     |        |
| 960 min Summer                                                                                 | 6.447               | 0.0                              | 600                          |                                                                                     |        |
| 1440 min Summer                                                                                | 4.709               | 0.0                              | 866                          |                                                                                     |        |
| 2160 min Summer                                                                                | 3.432               | 0.0                              | 1252                         |                                                                                     |        |
| 2880 min Summer                                                                                | 2.739               | 0.0                              | 1612                         |                                                                                     |        |
| 4320 min Summer                                                                                | 1.989               | 0.0                              | 2296                         |                                                                                     |        |
| 5760 min Summer                                                                                | 1.583               | 0.0                              | 2952                         |                                                                                     |        |
| 7200 min Summer                                                                                | 1.325               | 0.0                              | 3672                         |                                                                                     |        |
| 8640 min Summer                                                                                | 1.147               | 0.0                              | 4408                         |                                                                                     |        |
| 10080 min Summer                                                                               | 1.015               | 0.0                              | 5136                         |                                                                                     |        |
| 15 min Winter                                                                                  | 115.731             | 0.0                              | 18                           |                                                                                     |        |
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|--------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------|
| CGS Civils Ltd                                         |                                  | Page 2                                                                              |
| 65 St Pauls Road<br>Chichester<br>West Sussex PO19 3DD | 98 Elmer Road<br>Soakaway Trench |  |
| Date 14/06/2018 13:19                                  | Designed by CS                   |                                                                                     |
| File SAT1.srcx                                         | Checked by                       |                                                                                     |
| Micro Drainage                                         |                                  | Source Control 2017.1                                                               |

Summary of Results for 100 year Return Period (+30%)

| Storm<br>Event   | Max<br>Level<br>(m) | Max<br>Depth<br>(m) | Max<br>Infiltration<br>(l/s) | Max<br>Volume<br>(m³) | Status |
|------------------|---------------------|---------------------|------------------------------|-----------------------|--------|
| 30 min Winter    | 49.450              | 0.250               | 0.1                          | 2.1                   | O K    |
| 60 min Winter    | 49.507              | 0.307               | 0.1                          | 2.6                   | O K    |
| 120 min Winter   | 49.550              | 0.350               | 0.1                          | 3.0                   | O K    |
| 180 min Winter   | 49.561              | 0.361               | 0.1                          | 3.1                   | O K    |
| 240 min Winter   | 49.559              | 0.359               | 0.1                          | 3.1                   | O K    |
| 360 min Winter   | 49.552              | 0.352               | 0.1                          | 3.0                   | O K    |
| 480 min Winter   | 49.540              | 0.340               | 0.1                          | 2.9                   | O K    |
| 600 min Winter   | 49.525              | 0.325               | 0.1                          | 2.8                   | O K    |
| 720 min Winter   | 49.509              | 0.309               | 0.1                          | 2.6                   | O K    |
| 960 min Winter   | 49.478              | 0.278               | 0.1                          | 2.4                   | O K    |
| 1440 min Winter  | 49.422              | 0.222               | 0.1                          | 1.9                   | O K    |
| 2160 min Winter  | 49.354              | 0.154               | 0.1                          | 1.3                   | O K    |
| 2880 min Winter  | 49.303              | 0.103               | 0.1                          | 0.9                   | O K    |
| 4320 min Winter  | 49.249              | 0.049               | 0.1                          | 0.4                   | O K    |
| 5760 min Winter  | 49.239              | 0.039               | 0.1                          | 0.3                   | O K    |
| 7200 min Winter  | 49.233              | 0.033               | 0.1                          | 0.3                   | O K    |
| 8640 min Winter  | 49.229              | 0.029               | 0.0                          | 0.2                   | O K    |
| 10080 min Winter | 49.225              | 0.025               | 0.0                          | 0.2                   | O K    |

| Storm<br>Event   | Rain<br>(mm/hr) | Flooded<br>Volume<br>(m³) | Time-Peak<br>(mins) |
|------------------|-----------------|---------------------------|---------------------|
| 30 min Winter    | 77.804          | 0.0                       | 32                  |
| 60 min Winter    | 49.937          | 0.0                       | 62                  |
| 120 min Winter   | 30.956          | 0.0                       | 118                 |
| 180 min Winter   | 23.058          | 0.0                       | 172                 |
| 240 min Winter   | 18.577          | 0.0                       | 218                 |
| 360 min Winter   | 13.656          | 0.0                       | 274                 |
| 480 min Winter   | 10.974          | 0.0                       | 352                 |
| 600 min Winter   | 9.254           | 0.0                       | 428                 |
| 720 min Winter   | 8.046           | 0.0                       | 504                 |
| 960 min Winter   | 6.447           | 0.0                       | 646                 |
| 1440 min Winter  | 4.709           | 0.0                       | 924                 |
| 2160 min Winter  | 3.432           | 0.0                       | 1316                |
| 2880 min Winter  | 2.739           | 0.0                       | 1672                |
| 4320 min Winter  | 1.989           | 0.0                       | 2244                |
| 5760 min Winter  | 1.583           | 0.0                       | 2944                |
| 7200 min Winter  | 1.325           | 0.0                       | 3672                |
| 8640 min Winter  | 1.147           | 0.0                       | 4392                |
| 10080 min Winter | 1.015           | 0.0                       | 5144                |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                                                                                     |                |     |               |     |                       |     |             |       |        |                   |             |       |            |        |                       |    |         |       |                      |       |               |     |                  |     |             |      |           |      |   |         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------|----------------|-----|---------------|-----|-----------------------|-----|-------------|-------|--------|-------------------|-------------|-------|------------|--------|-----------------------|----|---------|-------|----------------------|-------|---------------|-----|------------------|-----|-------------|------|-----------|------|---|---------|
| CGS Civils Ltd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   | Page 3                                                                              |                |     |               |     |                       |     |             |       |        |                   |             |       |            |        |                       |    |         |       |                      |       |               |     |                  |     |             |      |           |      |   |         |
| 65 St Pauls Road                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 98 Elmer Road     |  |                |     |               |     |                       |     |             |       |        |                   |             |       |            |        |                       |    |         |       |                      |       |               |     |                  |     |             |      |           |      |   |         |
| Chichester                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Soakaway Trench   |                                                                                     |                |     |               |     |                       |     |             |       |        |                   |             |       |            |        |                       |    |         |       |                      |       |               |     |                  |     |             |      |           |      |   |         |
| West Sussex PO19 3DD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                                                                                     |                |     |               |     |                       |     |             |       |        |                   |             |       |            |        |                       |    |         |       |                      |       |               |     |                  |     |             |      |           |      |   |         |
| Date 14/06/2018 13:19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Designed by CS    |                                                                                     |                |     |               |     |                       |     |             |       |        |                   |             |       |            |        |                       |    |         |       |                      |       |               |     |                  |     |             |      |           |      |   |         |
| File SAT1.srcx                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Checked by        |                                                                                     |                |     |               |     |                       |     |             |       |        |                   |             |       |            |        |                       |    |         |       |                      |       |               |     |                  |     |             |      |           |      |   |         |
| Micro Drainage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   | Source Control 2017.1                                                               |                |     |               |     |                       |     |             |       |        |                   |             |       |            |        |                       |    |         |       |                      |       |               |     |                  |     |             |      |           |      |   |         |
| <p align="center"><u>Rainfall Details</u></p> <table> <tr> <td>Rainfall Model</td> <td>FSR</td> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Return Period (years)</td> <td>100</td> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Region</td> <td>England and Wales</td> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>M5-60 (mm)</td> <td>19.000</td> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Ratio R</td> <td>0.350</td> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> <td>Climate Change %</td> <td>+30</td> </tr> </table> <p align="center"><u>Time Area Diagram</u></p> <p>Total Area (ha) 0.007</p> <table> <tr> <td>Time (mins)</td> <td>Area</td> </tr> <tr> <td>From: To:</td> <td>(ha)</td> </tr> <tr> <td>0</td> <td>4 0.007</td> </tr> </table> |                   |                                                                                     | 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) | 19.000 | Shortest Storm (mins) | 15 | Ratio R | 0.350 | Longest Storm (mins) | 10080 | Summer Storms | Yes | Climate Change % | +30 | Time (mins) | Area | From: To: | (ha) | 0 | 4 0.007 |
| 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)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 19.000            | Shortest Storm (mins)                                                               | 15             |     |               |     |                       |     |             |       |        |                   |             |       |            |        |                       |    |         |       |                      |       |               |     |                  |     |             |      |           |      |   |         |
| Ratio R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0.350             | Longest Storm (mins)                                                                | 10080          |     |               |     |                       |     |             |       |        |                   |             |       |            |        |                       |    |         |       |                      |       |               |     |                  |     |             |      |           |      |   |         |
| Summer Storms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Yes               | Climate Change %                                                                    | +30            |     |               |     |                       |     |             |       |        |                   |             |       |            |        |                       |    |         |       |                      |       |               |     |                  |     |             |      |           |      |   |         |
| Time (mins)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Area              |                                                                                     |                |     |               |     |                       |     |             |       |        |                   |             |       |            |        |                       |    |         |       |                      |       |               |     |                  |     |             |      |           |      |   |         |
| From: To:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | (ha)              |                                                                                     |                |     |               |     |                       |     |             |       |        |                   |             |       |            |        |                       |    |         |       |                      |       |               |     |                  |     |             |      |           |      |   |         |
| 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 4 0.007           |                                                                                     |                |     |               |     |                       |     |             |       |        |                   |             |       |            |        |                       |    |         |       |                      |       |               |     |                  |     |             |      |           |      |   |         |
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| CGS Civils Ltd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                  | Page 4                                                                              |           |           |                |           |           |                |       |     |     |       |     |      |       |     |      |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------|-----------|-----------|----------------|-----------|-----------|----------------|-------|-----|-----|-------|-----|------|-------|-----|------|--|--|--|
| 65 St Pauls Road<br>Chichester<br>west Sussex PO19 3DD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 98 Elmer Road<br>Soakaway Trench |  |           |           |                |           |           |                |       |     |     |       |     |      |       |     |      |  |  |  |
| Date 14/06/2018 13:19<br>File SAT1.srcx                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Designed by CS<br>Checked by     |                                                                                     |           |           |                |           |           |                |       |     |     |       |     |      |       |     |      |  |  |  |
| Micro Drainage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                  | Source Control 2017.1                                                               |           |           |                |           |           |                |       |     |     |       |     |      |       |     |      |  |  |  |
| <p align="center"><u>Model Details</u></p> <p align="center">Storage is Online Cover Level (m) 50.000</p> <p align="center"><u>Cellular Storage Structure</u></p> <p align="center">Invert Level (m) 49.200 Safety Factor 2.0<br/> Infiltration Coefficient Base (m/hr) 0.05940 Porosity 0.95<br/> Infiltration Coefficient Side (m/hr) 0.05940</p> <table border="1"> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>9.0</td> <td>9.0</td> <td>0.500</td> <td>0.0</td> <td>17.0</td> </tr> <tr> <td>0.400</td> <td>9.0</td> <td>17.0</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> |                                  |                                                                                     | Depth (m) | Area (m²) | Inf. Area (m²) | Depth (m) | Area (m²) | Inf. Area (m²) | 0.000 | 9.0 | 9.0 | 0.500 | 0.0 | 17.0 | 0.400 | 9.0 | 17.0 |  |  |  |
| Depth (m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Area (m²)                        | Inf. Area (m²)                                                                      | Depth (m) | Area (m²) | Inf. Area (m²) |           |           |                |       |     |     |       |     |      |       |     |      |  |  |  |
| 0.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 9.0                              | 9.0                                                                                 | 0.500     | 0.0       | 17.0           |           |           |                |       |     |     |       |     |      |       |     |      |  |  |  |
| 0.400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 9.0                              | 17.0                                                                                |           |           |                |           |           |                |       |     |     |       |     |      |       |     |      |  |  |  |
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