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| 9 Birchtree Way<br>Maidstone<br>Kent ME15 7RP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | THE BUILDERS YARD<br>LOWER RANGE ROAD<br>GRAVESEND |  |                       |               |                   |                 |                |             |                               |              |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| Date 23/08/2022 12:36<br>File 1190-2202-B.MDX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Designed by RAC<br>Checked by                      |                                                                                     |                       |               |                   |                 |                |             |                               |              |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| Micro Drainage Network 2020.1.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                    |                                                                                     |                       |               |                   |                 |                |             |                               |              |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| <div>STORM SEWER DESIGN by the Modified Rational Method</div> <div>Design Criteria for Storm</div> <div>Pipe Sizes STANDARD Manhole Sizes STANDARD</div> <div>FSR Rainfall Model - England and Wales</div> <table><tr><td>Return Period (years)</td><td>1</td><td>PIMP (%)</td><td>100</td></tr><tr><td>M5-60 (mm)</td><td>26.250</td><td>Add Flow / Climate Change (%)</td><td>0</td></tr><tr><td>Ratio R</td><td>0.350</td><td>Minimum Backdrop Height (m)</td><td>0.000</td></tr><tr><td>Maximum Rainfall (mm/hr)</td><td>0</td><td>Maximum Backdrop Height (m)</td><td>10.000</td></tr><tr><td>Maximum Time of Concentration (mins)</td><td>30</td><td>Min Design Depth for Optimisation (m)</td><td>1.200</td></tr><tr><td>Foul Sewage (l/s/ha)</td><td>0.000</td><td>Min Vel for Auto Design only (m/s)</td><td>1.00</td></tr><tr><td>Volumetric Runoff Coeff.</td><td>0.750</td><td>Min Slope for Optimisation (1:X)</td><td>500</td></tr></table> <div>Designed with Level Soffits</div> <div>Time Area Diagram for Storm</div> <table><tr><td>Time (mins)</td><td>Area (ha)</td><td>Time (mins)</td><td>Area (ha)</td></tr><tr><td>0-4</td><td>0.071</td><td>4-8</td><td>0.013</td></tr></table> <div>Total Area Contributing (ha) = 0.084</div> <div>Total Pipe Volume (m³) = 6.432</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                    |                                                                                     | Return Period (years) | 1             | PIMP (%)          | 100             | M5-60 (mm)     | 26.250      | Add Flow / Climate Change (%) | 0            | Ratio R                                                                               | 0.350    | Minimum Backdrop Height (m) | 0.000       | Maximum Rainfall (mm/hr) | 0      | Maximum Backdrop Height (m) | 10.000 | Maximum Time of Concentration (mins) | 30   | Min Design Depth for Optimisation (m) | 1.200 | Foul Sewage (l/s/ha) | 0.000 | Min Vel for Auto Design only (m/s) | 1.00                                                                                  | Volumetric Runoff Coeff. | 0.750  | Min Slope for Optimisation (1:X) | 500   | Time (mins) | Area (ha) | Time (mins) | Area (ha) | 0-4 | 0.071 | 4-8          | 0.013                                                                                 |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| Return Period (years)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1                                                  | PIMP (%)                                                                            | 100                   |               |                   |                 |                |             |                               |              |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| M5-60 (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 26.250                                             | Add Flow / Climate Change (%)                                                       | 0                     |               |                   |                 |                |             |                               |              |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| Ratio R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.350                                              | Minimum Backdrop Height (m)                                                         | 0.000                 |               |                   |                 |                |             |                               |              |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| Maximum Rainfall (mm/hr)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0                                                  | Maximum Backdrop Height (m)                                                         | 10.000                |               |                   |                 |                |             |                               |              |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| Maximum Time of Concentration (mins)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 30                                                 | Min Design Depth for Optimisation (m)                                               | 1.200                 |               |                   |                 |                |             |                               |              |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| Foul Sewage (l/s/ha)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.000                                              | Min Vel for Auto Design only (m/s)                                                  | 1.00                  |               |                   |                 |                |             |                               |              |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| Volumetric Runoff Coeff.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.750                                              | Min Slope for Optimisation (1:X)                                                    | 500                   |               |                   |                 |                |             |                               |              |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| Time (mins)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Area (ha)                                          | Time (mins)                                                                         | Area (ha)             |               |                   |                 |                |             |                               |              |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| 0-4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.071                                              | 4-8                                                                                 | 0.013                 |               |                   |                 |                |             |                               |              |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| <div>Network Design Table for Storm</div> <table><tr><th>PN</th><th>Length (m)</th><th>Fall (m)</th><th>Slope (1:X)</th><th>I.Area (ha)</th><th>T.E. (mins)</th><th>Base Flow (l/s)</th><th>k (mm)</th><th>HYD SECT</th><th>DIA (mm)</th><th>Section Type</th><th>Auto Design</th></tr><tr><td>1.000</td><td>31.000</td><td>0.150</td><td>206.7</td><td>0.020</td><td>5.00</td><td>0.0</td><td>0.600</td><td>o</td><td>300</td><td>Pipe/Conduit</td><td></td></tr><tr><td>1.001</td><td>15.000</td><td>0.100</td><td>150.0</td><td>0.000</td><td>0.00</td><td>0.0</td><td>0.600</td><td>o</td><td>300</td><td>Pipe/Conduit</td><td></td></tr><tr><td>2.000</td><td>21.000</td><td>0.100</td><td>210.0</td><td>0.010</td><td>5.00</td><td>0.0</td><td>0.600</td><td>o</td><td>300</td><td>Pipe/Conduit</td><td></td></tr><tr><td>2.001</td><td>11.000</td><td>0.050</td><td>220.0</td><td>0.005</td><td>0.00</td><td>0.0</td><td>0.600</td><td>o</td><td>300</td><td>Pipe/Conduit</td><td></td></tr><tr><td>2.002</td><td>7.000</td><td>0.050</td><td>140.0</td><td>0.049</td><td>0.00</td><td>0.0</td><td>0.600</td><td>o</td><td>300</td><td>Pipe/Conduit</td><td></td></tr></table> <div>Network Results Table</div> <table><tr><th>PN</th><th>Rain (mm/hr)</th><th>T.C. (mins)</th><th>US/IL E (m)</th><th>Σ I.Area (ha)</th><th>Σ Base Flow (l/s)</th><th>Foul (l/s)</th><th>Add Flow (l/s)</th><th>Vel (m/s)</th><th>Cap (l/s)</th><th>Flow (l/s)</th></tr><tr><td>1.000</td><td>0.00</td><td>5.47</td><td>3.200</td><td>0.020</td><td></td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.09</td><td>77.0</td></tr><tr><td>1.001</td><td>0.00</td><td>5.67</td><td>3.050</td><td>0.020</td><td></td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.28</td><td>90.6</td></tr><tr><td>2.000</td><td>0.00</td><td>5.32</td><td>3.250</td><td>0.010</td><td></td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.08</td><td>76.4</td></tr><tr><td>2.001</td><td>0.00</td><td>5.50</td><td>3.150</td><td>0.015</td><td></td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.06</td><td>74.6</td></tr><tr><td>2.002</td><td>0.00</td><td>5.59</td><td>3.100</td><td>0.064</td><td></td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.33</td><td>93.8</td></tr></table> |                                                    |                                                                                     | PN                    | Length (m)    | Fall (m)          | Slope (1:X)     | I.Area (ha)    | T.E. (mins) | Base Flow (l/s)               | k (mm)       | HYD SECT                                                                              | DIA (mm) | Section Type                | Auto Design | 1.000                    | 31.000 | 0.150                       | 206.7  | 0.020                                | 5.00 | 0.0                                   | 0.600 | o                    | 300   | Pipe/Conduit                       |  | 1.001                    | 15.000 | 0.100                            | 150.0 | 0.000       | 0.00      | 0.0         | 0.600     | o   | 300   | Pipe/Conduit |  | 2.000 | 21.000 | 0.100 | 210.0 | 0.010 | 5.00 | 0.0 | 0.600 | o | 300 | Pipe/Conduit |  | 2.001 | 11.000 | 0.050 | 220.0 | 0.005 | 0.00 | 0.0 | 0.600 | o | 300 | Pipe/Conduit |  | 2.002 | 7.000 | 0.050 | 140.0 | 0.049 | 0.00 | 0.0 | 0.600 | o | 300 | Pipe/Conduit |  | PN | Rain (mm/hr) | T.C. (mins) | US/IL E (m) | Σ I.Area (ha) | Σ Base Flow (l/s) | Foul (l/s) | Add Flow (l/s) | Vel (m/s) | Cap (l/s) | Flow (l/s) | 1.000 | 0.00 | 5.47 | 3.200 | 0.020 |  | 0.0 | 0.0 | 0.0 | 1.09 | 77.0 | 1.001 | 0.00 | 5.67 | 3.050 | 0.020 |  | 0.0 | 0.0 | 0.0 | 1.28 | 90.6 | 2.000 | 0.00 | 5.32 | 3.250 | 0.010 |  | 0.0 | 0.0 | 0.0 | 1.08 | 76.4 | 2.001 | 0.00 | 5.50 | 3.150 | 0.015 |  | 0.0 | 0.0 | 0.0 | 1.06 | 74.6 | 2.002 | 0.00 | 5.59 | 3.100 | 0.064 |  | 0.0 | 0.0 | 0.0 | 1.33 | 93.8 |
| PN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Length (m)                                         | Fall (m)                                                                            | Slope (1:X)           | I.Area (ha)   | T.E. (mins)       | Base Flow (l/s) | k (mm)         | HYD SECT    | DIA (mm)                      | Section Type | Auto Design                                                                           |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| 1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 31.000                                             | 0.150                                                                               | 206.7                 | 0.020         | 5.00              | 0.0             | 0.600          | o           | 300                           | Pipe/Conduit |  |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| 1.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 15.000                                             | 0.100                                                                               | 150.0                 | 0.000         | 0.00              | 0.0             | 0.600          | o           | 300                           | Pipe/Conduit |  |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| 2.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 21.000                                             | 0.100                                                                               | 210.0                 | 0.010         | 5.00              | 0.0             | 0.600          | o           | 300                           | Pipe/Conduit |  |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| 2.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 11.000                                             | 0.050                                                                               | 220.0                 | 0.005         | 0.00              | 0.0             | 0.600          | o           | 300                           | Pipe/Conduit |  |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| 2.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7.000                                              | 0.050                                                                               | 140.0                 | 0.049         | 0.00              | 0.0             | 0.600          | o           | 300                           | Pipe/Conduit |  |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| PN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Rain (mm/hr)                                       | T.C. (mins)                                                                         | US/IL E (m)           | Σ I.Area (ha) | Σ Base Flow (l/s) | Foul (l/s)      | Add Flow (l/s) | Vel (m/s)   | Cap (l/s)                     | Flow (l/s)   |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| 1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.00                                               | 5.47                                                                                | 3.200                 | 0.020         |                   | 0.0             | 0.0            | 0.0         | 1.09                          | 77.0         |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| 1.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.00                                               | 5.67                                                                                | 3.050                 | 0.020         |                   | 0.0             | 0.0            | 0.0         | 1.28                          | 90.6         |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| 2.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.00                                               | 5.32                                                                                | 3.250                 | 0.010         |                   | 0.0             | 0.0            | 0.0         | 1.08                          | 76.4         |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| 2.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.00                                               | 5.50                                                                                | 3.150                 | 0.015         |                   | 0.0             | 0.0            | 0.0         | 1.06                          | 74.6         |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| 2.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.00                                               | 5.59                                                                                | 3.100                 | 0.064         |                   | 0.0             | 0.0            | 0.0         | 1.33                          | 93.8         |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |
| ©1982-2020 Innovyze                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                    |                                                                                     |                       |               |                   |                 |                |             |                               |              |                                                                                       |          |                             |             |                          |        |                             |        |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |             |           |             |           |     |       |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |        |       |       |       |      |     |       |   |     |              |                                                                                       |       |       |       |       |       |      |     |       |   |     |              |                                                                                       |    |              |             |             |               |                   |            |                |           |           |            |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |       |      |      |       |       |  |     |     |     |      |      |

| RCD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |                |                |                  |                                                    |                    |                   |              |              | Page 2                                                                              |                                                                                     |    |               |             |                |                |                |                    |           |             |             |              |                |       |       |       |       |       |      |     |       |   |     |              |                                                                                     |    |                 |                |              |                  |                      |               |                   |              |              |               |       |      |      |       |       |     |     |     |      |       |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------|----------------|------------------|----------------------------------------------------|--------------------|-------------------|--------------|--------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----|---------------|-------------|----------------|----------------|----------------|--------------------|-----------|-------------|-------------|--------------|----------------|-------|-------|-------|-------|-------|------|-----|-------|---|-----|--------------|-------------------------------------------------------------------------------------|----|-----------------|----------------|--------------|------------------|----------------------|---------------|-------------------|--------------|--------------|---------------|-------|------|------|-------|-------|-----|-----|-----|------|-------|-----|
| 9 Birchtree Way<br>Maidstone<br>Kent ME15 7RP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |                |                |                  | THE BUILDERS YARD<br>LOWER RANGE ROAD<br>GRAVESEND |                    |                   |              |              |  |                                                                                     |    |               |             |                |                |                |                    |           |             |             |              |                |       |       |       |       |       |      |     |       |   |     |              |                                                                                     |    |                 |                |              |                  |                      |               |                   |              |              |               |       |      |      |       |       |     |     |     |      |       |     |
| Date 23/08/2022 12:36<br>File 1190-2202-B.MDX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |                |                |                  | Designed by RAC<br>Checked by                      |                    |                   |              |              |                                                                                     |                                                                                     |    |               |             |                |                |                |                    |           |             |             |              |                |       |       |       |       |       |      |     |       |   |     |              |                                                                                     |    |                 |                |              |                  |                      |               |                   |              |              |               |       |      |      |       |       |     |     |     |      |       |     |
| Micro Drainage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |                |                |                  | Network 2020.1.3                                   |                    |                   |              |              |                                                                                     |                                                                                     |    |               |             |                |                |                |                    |           |             |             |              |                |       |       |       |       |       |      |     |       |   |     |              |                                                                                     |    |                 |                |              |                  |                      |               |                   |              |              |               |       |      |      |       |       |     |     |     |      |       |     |
| <p style="text-align: center;"><u>Network Design Table for Storm</u></p> <table><tr><th>PN</th><th>Length<br/>(m)</th><th>Fall<br/>(m)</th><th>Slope<br/>(1:X)</th><th>I.Area<br/>(ha)</th><th>T.E.<br/>(mins)</th><th>Base<br/>Flow (l/s)</th><th>k<br/>(mm)</th><th>HYD<br/>SECT</th><th>DIA<br/>(mm)</th><th>Section Type</th><th>Auto<br/>Design</th></tr><tr><td>1.002</td><td>6.000</td><td>0.050</td><td>120.0</td><td>0.000</td><td>0.00</td><td>0.0</td><td>0.600</td><td>o</td><td>300</td><td>Pipe/Conduit</td><td></td></tr></table> <p style="text-align: center;"><u>Network Results Table</u></p> <table><tr><th>PN</th><th>Rain<br/>(mm/hr)</th><th>T.C.<br/>(mins)</th><th>US/IL<br/>(m)</th><th>Σ I.Area<br/>(ha)</th><th>Σ Base<br/>Flow (l/s)</th><th>Foul<br/>(l/s)</th><th>Add Flow<br/>(l/s)</th><th>Vel<br/>(m/s)</th><th>Cap<br/>(l/s)</th><th>Flow<br/>(l/s)</th></tr><tr><td>1.002</td><td>0.00</td><td>5.74</td><td>2.950</td><td>0.084</td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.43</td><td>101.4</td><td>0.0</td></tr></table> |                 |                |                |                  |                                                    |                    |                   |              |              |                                                                                     |                                                                                     | PN | Length<br>(m) | Fall<br>(m) | Slope<br>(1:X) | I.Area<br>(ha) | T.E.<br>(mins) | Base<br>Flow (l/s) | k<br>(mm) | HYD<br>SECT | DIA<br>(mm) | Section Type | Auto<br>Design | 1.002 | 6.000 | 0.050 | 120.0 | 0.000 | 0.00 | 0.0 | 0.600 | o | 300 | Pipe/Conduit |  | PN | Rain<br>(mm/hr) | T.C.<br>(mins) | US/IL<br>(m) | Σ I.Area<br>(ha) | Σ Base<br>Flow (l/s) | Foul<br>(l/s) | Add Flow<br>(l/s) | Vel<br>(m/s) | Cap<br>(l/s) | Flow<br>(l/s) | 1.002 | 0.00 | 5.74 | 2.950 | 0.084 | 0.0 | 0.0 | 0.0 | 1.43 | 101.4 | 0.0 |
| PN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Length<br>(m)   | Fall<br>(m)    | Slope<br>(1:X) | I.Area<br>(ha)   | T.E.<br>(mins)                                     | Base<br>Flow (l/s) | k<br>(mm)         | HYD<br>SECT  | DIA<br>(mm)  | Section Type                                                                        | Auto<br>Design                                                                      |    |               |             |                |                |                |                    |           |             |             |              |                |       |       |       |       |       |      |     |       |   |     |              |                                                                                     |    |                 |                |              |                  |                      |               |                   |              |              |               |       |      |      |       |       |     |     |     |      |       |     |
| 1.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.000           | 0.050          | 120.0          | 0.000            | 0.00                                               | 0.0                | 0.600             | o            | 300          | Pipe/Conduit                                                                        |  |    |               |             |                |                |                |                    |           |             |             |              |                |       |       |       |       |       |      |     |       |   |     |              |                                                                                     |    |                 |                |              |                  |                      |               |                   |              |              |               |       |      |      |       |       |     |     |     |      |       |     |
| PN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Rain<br>(mm/hr) | T.C.<br>(mins) | US/IL<br>(m)   | Σ I.Area<br>(ha) | Σ Base<br>Flow (l/s)                               | Foul<br>(l/s)      | Add Flow<br>(l/s) | Vel<br>(m/s) | Cap<br>(l/s) | Flow<br>(l/s)                                                                       |                                                                                     |    |               |             |                |                |                |                    |           |             |             |              |                |       |       |       |       |       |      |     |       |   |     |              |                                                                                     |    |                 |                |              |                  |                      |               |                   |              |              |               |       |      |      |       |       |     |     |     |      |       |     |
| 1.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.00            | 5.74           | 2.950          | 0.084            | 0.0                                                | 0.0                | 0.0               | 1.43         | 101.4        | 0.0                                                                                 |                                                                                     |    |               |             |                |                |                |                    |           |             |             |              |                |       |       |       |       |       |      |     |       |   |     |              |                                                                                     |    |                 |                |              |                  |                      |               |                   |              |              |               |       |      |      |       |       |     |     |     |      |       |     |
| ©1982-2020 Innovyze                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |                |                |                  |                                                    |                    |                   |              |              |                                                                                     |                                                                                     |    |               |             |                |                |                |                    |           |             |             |              |                |       |       |       |       |       |      |     |       |   |     |              |                                                                                     |    |                 |                |              |                  |                      |               |                   |              |              |               |       |      |      |       |       |     |     |     |      |       |     |

|                                                                            |           |                                                    |               |                    |             |                  |               |             |                  |               |               |
|----------------------------------------------------------------------------|-----------|----------------------------------------------------|---------------|--------------------|-------------|------------------|---------------|-------------|------------------|---------------|---------------|
| RCD                                                                        |           | Page 3                                             |               |                    |             |                  |               |             |                  |               |               |
| 9 Birchtree Way<br>Maidstone<br>Kent ME15 7RP                              |           | THE BUILDERS YARD<br>LOWER RANGE ROAD<br>GRAVESEND |               |                    |             |                  |               |             |                  |               |               |
| Date 23/08/2022 12:36<br>File 1190-2202-B.MDX                              |           | Designed by RAC<br>Checked by                      |               |                    |             |                  |               |             |                  |               |               |
| Micro Drainage                                                             |           | Network 2020.1.3                                   |               |                    |             |                  |               |             |                  |               |               |
| Manhole Schedules for Storm                                                |           |                                                    |               |                    |             |                  |               |             |                  |               |               |
| MH Name                                                                    | MH CL (m) | MH Depth (m)                                       | MH Connection | MH Diam., L*W (mm) | Pipe Out PN | Invert Level (m) | Diameter (mm) | Pipes In PN | Invert Level (m) | Diameter (mm) | Backdrop (mm) |
| 1                                                                          | 4.000     | 0.800                                              | Open Manhole  | 600                | 1.000       | 3.200            | 300           |             |                  |               |               |
| 2                                                                          | 4.000     | 0.950                                              | Open Manhole  | 600                | 1.001       | 3.050            | 300           | 1.000       | 3.050            | 300           |               |
| re                                                                         | 4.000     | 0.750                                              | Open Manhole  | 600                | 2.000       | 3.250            | 300           |             |                  |               |               |
| 3                                                                          | 4.000     | 0.850                                              | Open Manhole  | 600                | 2.001       | 3.150            | 300           | 2.000       | 3.150            | 300           |               |
| 4                                                                          | 4.000     | 0.900                                              | Open Manhole  | 600                | 2.002       | 3.100            | 300           | 2.001       | 3.100            | 300           |               |
| 5                                                                          | 4.000     | 1.050                                              | Open Manhole  | 1200               | 1.002       | 2.950            | 300           | 1.001       | 2.950            | 300           |               |
|                                                                            |           |                                                    |               |                    |             |                  |               | 2.002       | 3.050            | 300           | 100           |
| ex                                                                         | 4.000     | 1.100                                              | Open Manhole  | 1200               |             | OUTFALL          |               | 1.002       | 2.900            | 300           |               |
| No coordinates have been specified, layout information cannot be produced. |           |                                                    |               |                    |             |                  |               |             |                  |               |               |
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| RCD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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  |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
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-----|------------------|---|-------------------|-------|----------------------|---|-------------------------------------|-------|---------------------------------|-------|-----------------|----|-------------------------------|-------|------------------------|---|
| 9 Birchtree Way<br>Maidstone<br>Kent ME15 7RP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | THE BUILDERS YARD<br>LOWER RANGE ROAD<br>GRAVESEND |  |               |                  |             |             |               |                    |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| Date 23/08/2022 12:36<br>File 1190-2202-B.MDX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Designed by RAC<br>Checked by                      |                                                                                     |               |                  |             |             |               |                    |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| Micro Drainage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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  |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| <div>PIPELINE SCHEDULES for Storm</div> <div>Upstream Manhole</div> <table><thead><tr><th>PN</th><th>Hyd Sect</th><th>Diam (mm)</th><th>MH Name</th><th>C.Level (m)</th><th>I.Level (m)</th><th>D.Depth (m)</th><th>MH Connection</th><th>MH DIAM., L*W (mm)</th></tr></thead><tbody><tr><td>1.000</td><td>o</td><td>300</td><td>1</td><td>4.000</td><td>3.200</td><td>0.500</td><td>Open Manhole</td><td>600</td></tr><tr><td>1.001</td><td>o</td><td>300</td><td>2</td><td>4.000</td><td>3.050</td><td>0.650</td><td>Open Manhole</td><td>600</td></tr><tr><td>2.000</td><td>o</td><td>300</td><td>re</td><td>4.000</td><td>3.250</td><td>0.450</td><td>Open Manhole</td><td>600</td></tr><tr><td>2.001</td><td>o</td><td>300</td><td>3</td><td>4.000</td><td>3.150</td><td>0.550</td><td>Open Manhole</td><td>600</td></tr><tr><td>2.002</td><td>o</td><td>300</td><td>4</td><td>4.000</td><td>3.100</td><td>0.600</td><td>Open Manhole</td><td>600</td></tr><tr><td>1.002</td><td>o</td><td>300</td><td>5</td><td>4.000</td><td>2.950</td><td>0.750</td><td>Open Manhole</td><td>1200</td></tr></tbody></table> <div>Downstream Manhole</div> <table><thead><tr><th>PN</th><th>Length (m)</th><th>Slope (1:X)</th><th>MH Name</th><th>C.Level (m)</th><th>I.Level (m)</th><th>D.Depth (m)</th><th>MH Connection</th><th>MH DIAM., L*W (mm)</th></tr></thead><tbody><tr><td>1.000</td><td>31.000</td><td>206.7</td><td>2</td><td>4.000</td><td>3.050</td><td>0.650</td><td>Open Manhole</td><td>600</td></tr><tr><td>1.001</td><td>15.000</td><td>150.0</td><td>5</td><td>4.000</td><td>2.950</td><td>0.750</td><td>Open Manhole</td><td>1200</td></tr><tr><td>2.000</td><td>21.000</td><td>210.0</td><td>3</td><td>4.000</td><td>3.150</td><td>0.550</td><td>Open Manhole</td><td>600</td></tr><tr><td>2.001</td><td>11.000</td><td>220.0</td><td>4</td><td>4.000</td><td>3.100</td><td>0.600</td><td>Open Manhole</td><td>600</td></tr><tr><td>2.002</td><td>7.000</td><td>140.0</td><td>5</td><td>4.000</td><td>3.050</td><td>0.650</td><td>Open Manhole</td><td>1200</td></tr><tr><td>1.002</td><td>6.000</td><td>120.0</td><td>ex</td><td>4.000</td><td>2.900</td><td>0.800</td><td>Open Manhole</td><td>1200</td></tr></tbody></table> <div>Free Flowing Outfall Details for Storm</div> <table><thead><tr><th>Outfall Pipe Number</th><th>Outfall Name</th><th>C. Level (m)</th><th>I. Level (m)</th><th>Min I. Level (m)</th><th>D,L (mm)</th><th>W (mm)</th></tr></thead><tbody><tr><td>1.002</td><td>ex</td><td>4.000</td><td>2.900</td><td>2.900</td><td>1200</td><td>0</td></tr></tbody></table> <div>Simulation Criteria for Storm</div> <table><tbody><tr><td>Volumetric Runoff Coeff</td><td>0.750</td><td>Additional Flow - % of Total Flow</td><td>0.000</td></tr><tr><td>Areal Reduction Factor</td><td>1.000</td><td>MADD Factor * 10m³/ha</td><td>Storage 2.000</td></tr><tr><td>Hot Start (mins)</td><td>0</td><td>Inlet Coefficient</td><td>0.800</td></tr><tr><td>Hot Start Level (mm)</td><td>0</td><td>Flow per Person per Day (l/per/day)</td><td>0.000</td></tr><tr><td>Manhole Headloss Coeff (Global)</td><td>0.500</td><td>Run Time (mins)</td><td>60</td></tr><tr><td>Foul Sewage per hectare (l/s)</td><td>0.000</td><td>Output Interval (mins)</td><td>1</td></tr></tbody></table> <div>Number of Input Hydrographs 0    Number of Storage Structures 1<br/>Number of Online Controls 1    Number of Time/Area Diagrams 0<br/>Number of Offline Controls 0    Number of Real Time Controls 0</div> <div>Synthetic Rainfall Details</div> |                                                    |                                                                                     | PN            | Hyd Sect         | Diam (mm)   | MH Name     | C.Level (m)   | I.Level (m)        | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) | 1.000 | o | 300 | 1 | 4.000 | 3.200 | 0.500 | Open Manhole | 600 | 1.001 | o | 300 | 2 | 4.000 | 3.050 | 0.650 | Open Manhole | 600 | 2.000 | o | 300 | re | 4.000 | 3.250 | 0.450 | Open Manhole | 600 | 2.001 | o | 300 | 3 | 4.000 | 3.150 | 0.550 | Open Manhole | 600 | 2.002 | o | 300 | 4 | 4.000 | 3.100 | 0.600 | Open Manhole | 600 | 1.002 | o | 300 | 5 | 4.000 | 2.950 | 0.750 | Open Manhole | 1200 | PN | Length (m) | Slope (1:X) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) | 1.000 | 31.000 | 206.7 | 2 | 4.000 | 3.050 | 0.650 | Open Manhole | 600 | 1.001 | 15.000 | 150.0 | 5 | 4.000 | 2.950 | 0.750 | Open Manhole | 1200 | 2.000 | 21.000 | 210.0 | 3 | 4.000 | 3.150 | 0.550 | Open Manhole | 600 | 2.001 | 11.000 | 220.0 | 4 | 4.000 | 3.100 | 0.600 | Open Manhole | 600 | 2.002 | 7.000 | 140.0 | 5 | 4.000 | 3.050 | 0.650 | Open Manhole | 1200 | 1.002 | 6.000 | 120.0 | ex | 4.000 | 2.900 | 0.800 | Open Manhole | 1200 | Outfall Pipe Number | Outfall Name | C. Level (m) | I. Level (m) | Min I. Level (m) | D,L (mm) | W (mm) | 1.002 | ex | 4.000 | 2.900 | 2.900 | 1200 | 0 | Volumetric Runoff Coeff | 0.750 | Additional Flow - % of Total Flow | 0.000 | Areal Reduction Factor | 1.000 | MADD Factor * 10m³/ha | Storage 2.000 | Hot Start (mins) | 0 | Inlet Coefficient | 0.800 | Hot Start Level (mm) | 0 | Flow per Person per Day (l/per/day) | 0.000 | Manhole Headloss Coeff (Global) | 0.500 | Run Time (mins) | 60 | Foul Sewage per hectare (l/s) | 0.000 | Output Interval (mins) | 1 |
| PN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Hyd Sect                                           | Diam (mm)                                                                           | MH Name       | C.Level (m)      | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| 1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | o                                                  | 300                                                                                 | 1             | 4.000            | 3.200       | 0.500       | Open Manhole  | 600                |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| 1.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | o                                                  | 300                                                                                 | 2             | 4.000            | 3.050       | 0.650       | Open Manhole  | 600                |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               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| 2.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | o                                                  | 300                                                                                 | re            | 4.000            | 3.250       | 0.450       | Open Manhole  | 600                |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               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| 2.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | o                                                  | 300                                                                                 | 3             | 4.000            | 3.150       | 0.550       | Open Manhole  | 600                |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| 2.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | o                                                  | 300                                                                                 | 4             | 4.000            | 3.100       | 0.600       | Open Manhole  | 600                |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| 1.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | o                                                  | 300                                                                                 | 5             | 4.000            | 2.950       | 0.750       | Open Manhole  | 1200               |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |     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| PN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Length (m)                                         | Slope (1:X)                                                                         | MH Name       | C.Level (m)      | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |     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|                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| 1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 31.000                                             | 206.7                                                                               | 2             | 4.000            | 3.050       | 0.650       | Open Manhole  | 600                |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |     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|                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| 1.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 15.000                                             | 150.0                                                                               | 5             | 4.000            | 2.950       | 0.750       | Open Manhole  | 1200               |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |     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|                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| 2.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 21.000                                             | 210.0                                                                               | 3             | 4.000            | 3.150       | 0.550       | Open Manhole  | 600                |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| 2.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 11.000                                             | 220.0                                                                               | 4             | 4.000            | 3.100       | 0.600       | Open Manhole  | 600                |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| 2.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 7.000                                              | 140.0                                                                               | 5             | 4.000            | 3.050       | 0.650       | Open Manhole  | 1200               |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |     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|                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| 1.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 6.000                                              | 120.0                                                                               | ex            | 4.000            | 2.900       | 0.800       | Open Manhole  | 1200               |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| Outfall Pipe Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Outfall Name                                       | C. Level (m)                                                                        | I. Level (m)  | Min I. Level (m) | D,L (mm)    | W (mm)      |               |                    |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| 1.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ex                                                 | 4.000                                                                               | 2.900         | 2.900            | 1200        | 0           |               |                    |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| Volumetric Runoff Coeff                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.750                                              | Additional Flow - % of Total Flow                                                   | 0.000         |                  |             |             |               |                    |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| Areal Reduction Factor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1.000                                              | MADD Factor * 10m³/ha                                                               | Storage 2.000 |                  |             |             |               |                    |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| Hot Start (mins)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0                                                  | Inlet Coefficient                                                                   | 0.800         |                  |             |             |               |                    |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| Hot Start Level (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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  |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| Manhole Headloss Coeff (Global)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.500                                              | Run Time (mins)                                                                     | 60            |                  |             |             |               |                    |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
| Foul Sewage per hectare (l/s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.000                                              | Output Interval (mins)                                                              | 1             |                  |             |             |               |                    |             |               |                    |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |    |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |     |       |   |     |   |       |       |       |              |      |    |            |             |         |             |             |             |               |                    |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |      |       |        |       |   |       |       |       |              |     |       |        |       |   |       |       |       |              |     |       |       |       |   |       |       |       |              |      |       |       |       |    |       |       |       |              |      |                     |              |              |              |                  |          |        |       |    |       |       |       |      |   |                         |       |                                   |       |                        |       |                       |               |                  |   |                   |       |                      |   |                                     |       |                                 |       |                 |    |                               |       |                        |   |
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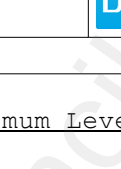
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                    |                                                                                     |                |     |              |        |                       |   |             |       |        |                   |             |       |            |        |                       |    |         |       |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------|----------------|-----|--------------|--------|-----------------------|---|-------------|-------|--------|-------------------|-------------|-------|------------|--------|-----------------------|----|---------|-------|--|--|
| RCD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                    | Page 5                                                                              |                |     |              |        |                       |   |             |       |        |                   |             |       |            |        |                       |    |         |       |  |  |
| 9 Birchtree Way<br>Maidstone<br>Kent ME15 7RP                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | THE BUILDERS YARD<br>LOWER RANGE ROAD<br>GRAVESEND |  |                |     |              |        |                       |   |             |       |        |                   |             |       |            |        |                       |    |         |       |  |  |
| Date 23/08/2022 12:36<br>File 1190-2202-B.MDX                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Designed by RAC<br>Checked by                      |                                                                                     |                |     |              |        |                       |   |             |       |        |                   |             |       |            |        |                       |    |         |       |  |  |
| Micro Drainage Network 2020.1.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                    |                                                                                     |                |     |              |        |                       |   |             |       |        |                   |             |       |            |        |                       |    |         |       |  |  |
| <p style="text-align: center;"><u>Synthetic Rainfall Details</u></p> <table> <tr> <td>Rainfall Model</td> <td>FSR</td> <td>Profile Type</td> <td>Summer</td> </tr> <tr> <td>Return Period (years)</td> <td>1</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>26.250</td> <td>Storm Duration (mins)</td> <td>30</td> </tr> <tr> <td>Ratio R</td> <td>0.350</td> <td></td> <td></td> </tr> </table> |                                                    |                                                                                     | Rainfall Model | FSR | Profile Type | Summer | Return Period (years) | 1 | Cv (Summer) | 0.750 | Region | England and Wales | Cv (Winter) | 0.840 | M5-60 (mm) | 26.250 | Storm Duration (mins) | 30 | Ratio R | 0.350 |  |  |
| Rainfall Model                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | FSR                                                | Profile Type                                                                        | Summer         |     |              |        |                       |   |             |       |        |                   |             |       |            |        |                       |    |         |       |  |  |
| Return Period (years)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1                                                  | Cv (Summer)                                                                         | 0.750          |     |              |        |                       |   |             |       |        |                   |             |       |            |        |                       |    |         |       |  |  |
| Region                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | England and Wales                                  | Cv (Winter)                                                                         | 0.840          |     |              |        |                       |   |             |       |        |                   |             |       |            |        |                       |    |         |       |  |  |
| M5-60 (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 26.250                                             | Storm Duration (mins)                                                               | 30             |     |              |        |                       |   |             |       |        |                   |             |       |            |        |                       |    |         |       |  |  |
| Ratio R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.350                                              |                                                                                     |                |     |              |        |                       |   |             |       |        |                   |             |       |            |        |                       |    |         |       |  |  |
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|                                                                                                                                                                                                                                    |                                                    |                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------|
| RCD                                                                                                                                                                                                                                |                                                    | Page 6                                                                              |
| 9 Birchtree Way<br>Maidstone<br>Kent ME15 7RP                                                                                                                                                                                      | THE BUILDERS YARD<br>LOWER RANGE ROAD<br>GRAVESEND |  |
| Date 23/08/2022 12:36<br>File 1190-2202-B.MDX                                                                                                                                                                                      | Designed by RAC<br>Checked by                      |                                                                                     |
| Micro Drainage Network 2020.1.3                                                                                                                                                                                                    |                                                    |                                                                                     |
| <p align="center"><u>Online Controls for Storm</u></p> <p align="center"><u>Orifice Manhole: 5, DS/PN: 1.002, Volume (m³): 2.6</u></p> <p align="center">Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 2.950</p> |                                                    |                                                                                     |
| <p align="center">©1982-2020 Innovyze</p>                                                                                                                                                                                          |                                                    |                                                                                     |

| RCD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                    | Page 7                                                                              |                                      |                               |                   |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------|-------------------------------|-------------------|------|------------------------------|------|------------|------|-----------------------|-------|-------------|-----|---------------|-----|-------------------------|---|----------|------|----------------------|---|------------------|-------|---------------------|---|-------------|-----------|---------------------|------------------|-------------------------------|-------------------|-------|---|-------|-------|-------|-------|-------|---|-------|-------|-------|-------|-------|----|-------|-------|-------|-------|-------|---|-------|-------|-------|-------|-------|---|-------|-------|--------|--------|-------|---|-------|-------|-------|-------|-------|--|-------|-------|--------|--------|-------------|-----------|---------------------|------------------|-------------------------------|-------------------|-------|---|-------|-------|-------|-------|-------|---|-------|-------|-------|-------|-------|----|-------|-------|-------|-------|-------|---|-------|-------|-------|-------|-------|---|-------|-------|--------|--------|-------|---|-------|-------|-------|-------|-------|--|-------|-------|--------|--------|
| 9 Birchtree Way<br>Maidstone<br>Kent ME15 7RP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | THE BUILDERS YARD<br>LOWER RANGE ROAD<br>GRAVESEND |  |                                      |                               |                   |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| Date 23/08/2022 12:36<br>File 1190-2202-B.MDX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Designed by RAC<br>Checked by                      |                                                                                     |                                      |                               |                   |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| Micro Drainage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Network 2020.1.3                                   |                                                                                     |                                      |                               |                   |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| <p><u>Storage Structures for Storm</u></p> <p><u>Porous Car Park Manhole: 4, DS/PN: 2.002</u></p> <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.00000</td><td>Width (m)</td><td>10.0</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>44.0</td></tr><tr><td>Max Percolation (l/s)</td><td>122.2</td><td>Slope (1:X)</td><td>0.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>3.550</td><td>Membrane Depth (mm)</td><td>0</td></tr></table> <p><u>Volume Summary (Static)</u></p> <p>Length Calculations based on Centre-Centre</p> <table><thead><tr><th>Pipe Number</th><th>USMH Name</th><th>Manhole Volume (m³)</th><th>Pipe Volume (m³)</th><th>Storage Structure Volume (m³)</th><th>Total Volume (m³)</th></tr></thead><tbody><tr><td>1.000</td><td>1</td><td>0.226</td><td>2.191</td><td>0.000</td><td>2.417</td></tr><tr><td>1.001</td><td>2</td><td>0.269</td><td>1.060</td><td>0.000</td><td>1.329</td></tr><tr><td>2.000</td><td>re</td><td>0.212</td><td>1.484</td><td>0.000</td><td>1.696</td></tr><tr><td>2.001</td><td>3</td><td>0.240</td><td>0.778</td><td>0.000</td><td>1.018</td></tr><tr><td>2.002</td><td>4</td><td>0.254</td><td>0.495</td><td>59.400</td><td>60.149</td></tr><tr><td>1.002</td><td>5</td><td>1.188</td><td>0.424</td><td>0.000</td><td>1.612</td></tr><tr><td>Total</td><td></td><td>2.389</td><td>6.432</td><td>59.400</td><td>68.222</td></tr></tbody></table> <p><u>Volume Summary (Static)</u></p> <p>Length Calculations based on True Length</p> <table><thead><tr><th>Pipe Number</th><th>USMH Name</th><th>Manhole Volume (m³)</th><th>Pipe Volume (m³)</th><th>Storage Structure Volume (m³)</th><th>Total Volume (m³)</th></tr></thead><tbody><tr><td>1.000</td><td>1</td><td>0.226</td><td>2.149</td><td>0.000</td><td>2.375</td></tr><tr><td>1.001</td><td>2</td><td>0.269</td><td>0.997</td><td>0.000</td><td>1.265</td></tr><tr><td>2.000</td><td>re</td><td>0.212</td><td>1.442</td><td>0.000</td><td>1.654</td></tr><tr><td>2.001</td><td>3</td><td>0.240</td><td>0.735</td><td>0.000</td><td>0.975</td></tr><tr><td>2.002</td><td>4</td><td>0.254</td><td>0.431</td><td>59.400</td><td>60.086</td></tr><tr><td>1.002</td><td>5</td><td>1.188</td><td>0.339</td><td>0.000</td><td>1.527</td></tr><tr><td>Total</td><td></td><td>2.389</td><td>6.093</td><td>59.400</td><td>67.882</td></tr></tbody></table> |                                                    |                                                                                     | Infiltration Coefficient Base (m/hr) | 0.00000                       | Width (m)         | 10.0 | Membrane Percolation (mm/hr) | 1000 | Length (m) | 44.0 | Max Percolation (l/s) | 122.2 | Slope (1:X) | 0.0 | Safety Factor | 2.0 | Depression Storage (mm) | 5 | Porosity | 0.30 | Evaporation (mm/day) | 3 | Invert Level (m) | 3.550 | Membrane Depth (mm) | 0 | Pipe Number | USMH Name | Manhole Volume (m³) | Pipe Volume (m³) | Storage Structure Volume (m³) | Total Volume (m³) | 1.000 | 1 | 0.226 | 2.191 | 0.000 | 2.417 | 1.001 | 2 | 0.269 | 1.060 | 0.000 | 1.329 | 2.000 | re | 0.212 | 1.484 | 0.000 | 1.696 | 2.001 | 3 | 0.240 | 0.778 | 0.000 | 1.018 | 2.002 | 4 | 0.254 | 0.495 | 59.400 | 60.149 | 1.002 | 5 | 1.188 | 0.424 | 0.000 | 1.612 | Total |  | 2.389 | 6.432 | 59.400 | 68.222 | Pipe Number | USMH Name | Manhole Volume (m³) | Pipe Volume (m³) | Storage Structure Volume (m³) | Total Volume (m³) | 1.000 | 1 | 0.226 | 2.149 | 0.000 | 2.375 | 1.001 | 2 | 0.269 | 0.997 | 0.000 | 1.265 | 2.000 | re | 0.212 | 1.442 | 0.000 | 1.654 | 2.001 | 3 | 0.240 | 0.735 | 0.000 | 0.975 | 2.002 | 4 | 0.254 | 0.431 | 59.400 | 60.086 | 1.002 | 5 | 1.188 | 0.339 | 0.000 | 1.527 | Total |  | 2.389 | 6.093 | 59.400 | 67.882 |
| Infiltration Coefficient Base (m/hr)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.00000                                            | Width (m)                                                                           | 10.0                                 |                               |                   |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| Membrane Percolation (mm/hr)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1000                                               | Length (m)                                                                          | 44.0                                 |                               |                   |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| Max Percolation (l/s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 122.2                                              | Slope (1:X)                                                                         | 0.0                                  |                               |                   |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| Safety Factor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2.0                                                | Depression Storage (mm)                                                             | 5                                    |                               |                   |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| Porosity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.30                                               | Evaporation (mm/day)                                                                | 3                                    |                               |                   |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| Invert Level (m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.550                                              | Membrane Depth (mm)                                                                 | 0                                    |                               |                   |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| Pipe Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | USMH Name                                          | Manhole Volume (m³)                                                                 | Pipe Volume (m³)                     | Storage Structure Volume (m³) | Total Volume (m³) |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| 1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1                                                  | 0.226                                                                               | 2.191                                | 0.000                         | 2.417             |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| 1.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2                                                  | 0.269                                                                               | 1.060                                | 0.000                         | 1.329             |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| 2.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | re                                                 | 0.212                                                                               | 1.484                                | 0.000                         | 1.696             |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| 2.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 3                                                  | 0.240                                                                               | 0.778                                | 0.000                         | 1.018             |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| 2.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 4                                                  | 0.254                                                                               | 0.495                                | 59.400                        | 60.149            |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| 1.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5                                                  | 1.188                                                                               | 0.424                                | 0.000                         | 1.612             |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| Total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                    | 2.389                                                                               | 6.432                                | 59.400                        | 68.222            |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| Pipe Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | USMH Name                                          | Manhole Volume (m³)                                                                 | Pipe Volume (m³)                     | Storage Structure Volume (m³) | Total Volume (m³) |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| 1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1                                                  | 0.226                                                                               | 2.149                                | 0.000                         | 2.375             |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| 1.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2                                                  | 0.269                                                                               | 0.997                                | 0.000                         | 1.265             |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| 2.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | re                                                 | 0.212                                                                               | 1.442                                | 0.000                         | 1.654             |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| 2.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 3                                                  | 0.240                                                                               | 0.735                                | 0.000                         | 0.975             |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| 2.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 4                                                  | 0.254                                                                               | 0.431                                | 59.400                        | 60.086            |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| 1.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5                                                  | 1.188                                                                               | 0.339                                | 0.000                         | 1.527             |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| Total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                    | 2.389                                                                               | 6.093                                | 59.400                        | 67.882            |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |
| ©1982-2020 Innovyze                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                    |                                                                                     |                                      |                               |                   |      |                              |      |            |      |                       |       |             |     |               |     |                         |   |          |      |                      |   |                  |       |                     |   |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |             |           |                     |                  |                               |                   |       |   |       |       |       |       |       |   |       |       |       |       |       |    |       |       |       |       |       |   |       |       |       |       |       |   |       |       |        |        |       |   |       |       |       |       |       |  |       |       |        |        |

| RCD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                    | Page 8                                                                              |               |                |                 |                        |                    |                 |                        |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------|---------------|----------------|-----------------|------------------------|--------------------|-----------------|------------------------|--------------------|---------------|-----------------|-------|---|------------|-------|------|-------------|--|-----|------------|-------|-------|---|------------|-------|------|-------------|--|-----|------------|-------|-------|----|------------|-------|------|--------------|--|-----|------------|-------|-------|---|------------|-------|------|-------------|--|-----|------------|-------|-------|---|------------|---|-----|-------------|--|--|--|-------|-------|---|------------|---|-----|-------------|--|--|--|-------|
| 9 Birchtree Way<br>Maidstone<br>Kent ME15 7RP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | THE BUILDERS YARD<br>LOWER RANGE ROAD<br>GRAVESEND |  |               |                |                 |                        |                    |                 |                        |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| Date 23/08/2022 12:36<br>File 1190-2202-B.MDX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Designed by RAC<br>Checked by                      |                                                                                     |               |                |                 |                        |                    |                 |                        |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| Micro Drainage Network 2020.1.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                    |                                                                                     |               |                |                 |                        |                    |                 |                        |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| <u>1 year Return Period Summary of Critical Results by Maximum Level (Rank 1)</u><br><u>for Storm</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                    |                                                                                     |               |                |                 |                        |                    |                 |                        |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| <u>Simulation Criteria</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                    |                                                                                     |               |                |                 |                        |                    |                 |                        |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000<br>Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 2.000<br>Hot Start Level (mm) 0 Inlet Coeffiecient 0.800<br>Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (l/per/day) 0.000<br>Foul Sewage per hectare (l/s) 0.000<br><br>Number of Input Hydrographs 0 Number of Storage Structures 1<br>Number of Online Controls 1 Number of Time/Area Diagrams 0<br>Number of Offline Controls 0 Number of Real Time Controls 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                    |                                                                                     |               |                |                 |                        |                    |                 |                        |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| <u>Synthetic Rainfall Details</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                    |                                                                                     |               |                |                 |                        |                    |                 |                        |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| Rainfall Model FSR Ratio R 0.350<br>Region England and Wales Cv (Summer) 0.750<br>M5-60 (mm) 26.250 Cv (Winter) 0.840<br><br>Margin for Flood Risk Warning (mm) 300.0<br>Analysis Timestep 2.5 Second Increment (Extended)<br>DTS Status ON<br>DVD Status ON<br>Inertia Status ON<br><br>Profile(s) Summer and Winter<br>Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080<br>Return Period(s) (years) 1, 30, 100<br>Climate Change (%) 0, 0, 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                    |                                                                                     |               |                |                 |                        |                    |                 |                        |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| <table><tr><th>PN</th><th>US/MH Name</th><th>Storm</th><th>Return Period</th><th>Climate Change</th><th>First (X) Surge</th><th>First (Y) Flood</th><th>First (Z) Overflow</th><th>Overflow Act.</th><th>Water Level (m)</th></tr><tr><td>1.000</td><td>1</td><td>240 Winter</td><td>1</td><td>+0%</td><td>1/60 Winter</td><td></td><td></td><td></td><td>3.562</td></tr><tr><td>1.001</td><td>2</td><td>240 Winter</td><td>1</td><td>+0%</td><td>1/30 Winter</td><td></td><td></td><td></td><td>3.562</td></tr><tr><td>2.000</td><td>re</td><td>240 Winter</td><td>1</td><td>+0%</td><td>1/120 Winter</td><td></td><td></td><td></td><td>3.560</td></tr><tr><td>2.001</td><td>3</td><td>240 Winter</td><td>1</td><td>+0%</td><td>1/60 Winter</td><td></td><td></td><td></td><td>3.560</td></tr><tr><td>2.002</td><td>4</td><td>240 Winter</td><td>1</td><td>+0%</td><td>1/60 Summer</td><td></td><td></td><td></td><td>3.560</td></tr><tr><td>1.002</td><td>5</td><td>240 Winter</td><td>1</td><td>+0%</td><td>1/15 Summer</td><td></td><td></td><td></td><td>3.562</td></tr></table> |                                                    |                                                                                     | PN            | US/MH Name     | Storm           | Return Period          | Climate Change     | First (X) Surge | First (Y) Flood        | First (Z) Overflow | Overflow Act. | Water Level (m) | 1.000 | 1 | 240 Winter | 1     | +0%  | 1/60 Winter |  |     |            | 3.562 | 1.001 | 2 | 240 Winter | 1     | +0%  | 1/30 Winter |  |     |            | 3.562 | 2.000 | re | 240 Winter | 1     | +0%  | 1/120 Winter |  |     |            | 3.560 | 2.001 | 3 | 240 Winter | 1     | +0%  | 1/60 Winter |  |     |            | 3.560 | 2.002 | 4 | 240 Winter | 1 | +0% | 1/60 Summer |  |  |  | 3.560 | 1.002 | 5 | 240 Winter | 1 | +0% | 1/15 Summer |  |  |  | 3.562 |
| PN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | US/MH Name                                         | Storm                                                                               | Return Period | Climate Change | First (X) Surge | First (Y) Flood        | First (Z) Overflow | Overflow Act.   | Water Level (m)        |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| 1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1                                                  | 240 Winter                                                                          | 1             | +0%            | 1/60 Winter     |                        |                    |                 | 3.562                  |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| 1.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2                                                  | 240 Winter                                                                          | 1             | +0%            | 1/30 Winter     |                        |                    |                 | 3.562                  |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| 2.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | re                                                 | 240 Winter                                                                          | 1             | +0%            | 1/120 Winter    |                        |                    |                 | 3.560                  |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| 2.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 3                                                  | 240 Winter                                                                          | 1             | +0%            | 1/60 Winter     |                        |                    |                 | 3.560                  |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| 2.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 4                                                  | 240 Winter                                                                          | 1             | +0%            | 1/60 Summer     |                        |                    |                 | 3.560                  |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| 1.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 5                                                  | 240 Winter                                                                          | 1             | +0%            | 1/15 Summer     |                        |                    |                 | 3.562                  |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| <table><tr><th>PN</th><th>US/MH Name</th><th>Depth (m)</th><th>Volume (m³)</th><th>Flow / Cap.</th><th>Overflow (l/s)</th><th>Half Drain Time (mins)</th><th>Pipe Flow (l/s)</th><th>Status</th><th>Level Exceeded</th></tr><tr><td>1.000</td><td>1</td><td>0.062</td><td>0.000</td><td>0.01</td><td></td><td></td><td>0.7</td><td>SURCHARGED</td><td></td></tr><tr><td>1.001</td><td>2</td><td>0.212</td><td>0.000</td><td>0.01</td><td></td><td></td><td>0.6</td><td>SURCHARGED</td><td></td></tr><tr><td>2.000</td><td>re</td><td>0.010</td><td>0.000</td><td>0.01</td><td></td><td></td><td>0.3</td><td>SURCHARGED</td><td></td></tr><tr><td>2.001</td><td>3</td><td>0.110</td><td>0.000</td><td>0.01</td><td></td><td></td><td>0.4</td><td>SURCHARGED</td><td></td></tr></table>                                                                                                                                                                                                                                                                                                  |                                                    |                                                                                     | PN            | US/MH Name     | Depth (m)       | Volume (m³)            | Flow / Cap.        | Overflow (l/s)  | Half Drain Time (mins) | Pipe Flow (l/s)    | Status        | Level Exceeded  | 1.000 | 1 | 0.062      | 0.000 | 0.01 |             |  | 0.7 | SURCHARGED |       | 1.001 | 2 | 0.212      | 0.000 | 0.01 |             |  | 0.6 | SURCHARGED |       | 2.000 | re | 0.010      | 0.000 | 0.01 |              |  | 0.3 | SURCHARGED |       | 2.001 | 3 | 0.110      | 0.000 | 0.01 |             |  | 0.4 | SURCHARGED |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| PN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | US/MH Name                                         | Depth (m)                                                                           | Volume (m³)   | Flow / Cap.    | Overflow (l/s)  | Half Drain Time (mins) | Pipe Flow (l/s)    | Status          | Level Exceeded         |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| 1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1                                                  | 0.062                                                                               | 0.000         | 0.01           |                 |                        | 0.7                | SURCHARGED      |                        |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| 1.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2                                                  | 0.212                                                                               | 0.000         | 0.01           |                 |                        | 0.6                | SURCHARGED      |                        |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| 2.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | re                                                 | 0.010                                                                               | 0.000         | 0.01           |                 |                        | 0.3                | SURCHARGED      |                        |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| 2.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 3                                                  | 0.110                                                                               | 0.000         | 0.01           |                 |                        | 0.4                | SURCHARGED      |                        |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |
| ©1982-2020 Innovyze                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                    |                                                                                     |               |                |                 |                        |                    |                 |                        |                    |               |                 |       |   |            |       |      |             |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |    |            |       |      |              |  |     |            |       |       |   |            |       |      |             |  |     |            |       |       |   |            |   |     |             |  |  |  |       |       |   |            |   |     |             |  |  |  |       |

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|-------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------|
| RCD                                                                                                   |                                                    | Page 9                                                                              |
| 9 Birchtree Way<br>Maidstone<br>Kent ME15 7RP                                                         | THE BUILDERS YARD<br>LOWER RANGE ROAD<br>GRAVESEND |  |
| Date 23/08/2022 12:36<br>File 1190-2202-B.MDX                                                         | Designed by RAC<br>Checked by                      |                                                                                     |
| Micro Drainage                                                                                        | Network 2020.1.3                                   |                                                                                     |
| <u>1 year Return Period Summary of Critical Results by Maximum Level (Rank 1)</u><br><u>for Storm</u> |                                                    |                                                                                     |
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| RCD                                                                                          |                                                                                                     |                                     |                   |                                                    |                        |                 |                    |                | Page 10                                                                             |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------|-------------------|----------------------------------------------------|------------------------|-----------------|--------------------|----------------|-------------------------------------------------------------------------------------|
| 9 Birchtree Way<br>Maidstone<br>Kent ME15 7RP                                                |                                                                                                     |                                     |                   | THE BUILDERS YARD<br>LOWER RANGE ROAD<br>GRAVESEND |                        |                 |                    |                |  |
| Date 23/08/2022 12:36<br>File 1190-2202-B.MDX                                                |                                                                                                     |                                     |                   | Designed by RAC<br>Checked by                      |                        |                 |                    |                |                                                                                     |
| Micro Drainage                                                                               |                                                                                                     |                                     |                   | Network 2020.1.3                                   |                        |                 |                    |                |                                                                                     |
| <b>30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm</b> |                                                                                                     |                                     |                   |                                                    |                        |                 |                    |                |                                                                                     |
| <u>Simulation Criteria</u>                                                                   |                                                                                                     |                                     |                   |                                                    |                        |                 |                    |                |                                                                                     |
| Areal Reduction Factor                                                                       | 1.000                                                                                               | Additional Flow - % of Total Flow   | 0.000             |                                                    |                        |                 |                    |                |                                                                                     |
| Hot Start (mins)                                                                             | 0                                                                                                   | MADD Factor * 10m³/ha Storage       | 2.000             |                                                    |                        |                 |                    |                |                                                                                     |
| Hot Start Level (mm)                                                                         | 0                                                                                                   | Inlet Coefficient                   | 0.800             |                                                    |                        |                 |                    |                |                                                                                     |
| Manhole Headloss Coeff (Global)                                                              | 0.500                                                                                               | Flow per Person per Day (l/per/day) | 0.000             |                                                    |                        |                 |                    |                |                                                                                     |
| Foul Sewage per hectare (l/s)                                                                | 0.000                                                                                               |                                     |                   |                                                    |                        |                 |                    |                |                                                                                     |
| Number of Input Hydrographs                                                                  | 0                                                                                                   | Number of Storage Structures        | 1                 |                                                    |                        |                 |                    |                |                                                                                     |
| Number of Online Controls                                                                    | 1                                                                                                   | Number of Time/Area Diagrams        | 0                 |                                                    |                        |                 |                    |                |                                                                                     |
| Number of Offline Controls                                                                   | 0                                                                                                   | Number of Real Time Controls        | 0                 |                                                    |                        |                 |                    |                |                                                                                     |
| <u>Synthetic Rainfall Details</u>                                                            |                                                                                                     |                                     |                   |                                                    |                        |                 |                    |                |                                                                                     |
| Rainfall Model                                                                               | FSR                                                                                                 | Ratio R                             | 0.350             |                                                    |                        |                 |                    |                |                                                                                     |
| Region England and Wales Cv                                                                  | (Summer)                                                                                            | 0.750                               |                   |                                                    |                        |                 |                    |                |                                                                                     |
| M5-60 (mm)                                                                                   | 26.250 Cv                                                                                           | (Winter)                            | 0.840             |                                                    |                        |                 |                    |                |                                                                                     |
| Margin for Flood Risk Warning (mm)                                                           |                                                                                                     |                                     | 300.0             |                                                    |                        |                 |                    |                |                                                                                     |
| Analysis Timestep                                                                            | 2.5 Second Increment                                                                                | (Extended)                          |                   |                                                    |                        |                 |                    |                |                                                                                     |
| DTS Status                                                                                   |                                                                                                     |                                     | ON                |                                                    |                        |                 |                    |                |                                                                                     |
| DVD Status                                                                                   |                                                                                                     |                                     | ON                |                                                    |                        |                 |                    |                |                                                                                     |
| Inertia Status                                                                               |                                                                                                     |                                     | ON                |                                                    |                        |                 |                    |                |                                                                                     |
| Profile(s)                                                                                   |                                                                                                     |                                     | Summer and Winter |                                                    |                        |                 |                    |                |                                                                                     |
| Duration(s) (mins)                                                                           | 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080 |                                     |                   |                                                    |                        |                 |                    |                |                                                                                     |
| Return Period(s) (years)                                                                     | 1, 30, 100                                                                                          |                                     |                   |                                                    |                        |                 |                    |                |                                                                                     |
| Climate Change (%)                                                                           | 0, 0, 0                                                                                             |                                     |                   |                                                    |                        |                 |                    |                |                                                                                     |
| PN                                                                                           | US/MH Name                                                                                          | Storm                               | Return Period     | Climate Change                                     | First (X) Surge        | First (Y) Flood | First (Z) Overflow | Overflow Act.  | Water Level (m)                                                                     |
| 1.000                                                                                        | 1                                                                                                   | 240 Winter                          | 30                | +0%                                                | 1/60 Winter            |                 |                    |                | 3.697                                                                               |
| 1.001                                                                                        | 2                                                                                                   | 240 Winter                          | 30                | +0%                                                | 1/30 Winter            |                 |                    |                | 3.696                                                                               |
| 2.000                                                                                        | re                                                                                                  | 240 Winter                          | 30                | +0%                                                | 1/120 Winter           |                 |                    |                | 3.693                                                                               |
| 2.001                                                                                        | 3                                                                                                   | 240 Winter                          | 30                | +0%                                                | 1/60 Winter            |                 |                    |                | 3.693                                                                               |
| 2.002                                                                                        | 4                                                                                                   | 240 Winter                          | 30                | +0%                                                | 1/60 Summer            |                 |                    |                | 3.693                                                                               |
| 1.002                                                                                        | 5                                                                                                   | 240 Winter                          | 30                | +0%                                                | 1/15 Summer            |                 |                    |                | 3.696                                                                               |
| PN                                                                                           | US/MH Name                                                                                          | Depth (m)                           | Volume (m³)       | Flow / Cap.                                        | Half Drain Time (mins) | Pipe Flow (l/s) | Status             | Level Exceeded |                                                                                     |
| 1.000                                                                                        | 1                                                                                                   | 0.197                               | 0.000             | 0.02                                               |                        | 1.7 SURCHARGED  |                    |                |                                                                                     |
| 1.001                                                                                        | 2                                                                                                   | 0.346                               | 0.000             | 0.02                                               |                        | 1.7 SURCHARGED  |                    |                |                                                                                     |
| 2.000                                                                                        | re                                                                                                  | 0.143                               | 0.000             | 0.01                                               |                        | 0.8 SURCHARGED  |                    |                |                                                                                     |
| 2.001                                                                                        | 3                                                                                                   | 0.243                               | 0.000             | 0.02                                               |                        | 1.2 SURCHARGED  |                    |                |                                                                                     |

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| RCD                                                                                          |  | Page 11                                            |                                                                                     |  |  |  |  |  |  |
| 9 Birchtree Way<br>Maidstone<br>Kent ME15 7RP                                                |  | THE BUILDERS YARD<br>LOWER RANGE ROAD<br>GRAVESEND |  |  |  |  |  |  |  |
| Date 23/08/2022 12:36<br>File 1190-2202-B.MDX                                                |  | Designed by RAC<br>Checked by                      |                                                                                     |  |  |  |  |  |  |
| Micro Drainage                                                                               |  | Network 2020.1.3                                   |                                                                                     |  |  |  |  |  |  |
| <u>30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm</u> |  |                                                    |                                                                                     |  |  |  |  |  |  |
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RCD

9 Birchtree Way  
Maidstone  
Kent ME15 7RP

THE BUILDERS YARD  
LOWER RANGE ROAD  
GRAVESEND

Date 23/08/2022 12:36  
File 1190-2202-B.MDX

Designed by RAC  
Checked by

Micro Drainage

Network 2020.1.3

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor 1.000

Additional Flow - % of Total Flow 0.000

Hot Start (mins) 0

MADD Factor \* 10m³/ha Storage 2.000

Hot Start Level (mm) 0

Inlet Coefficient 0.800

Manhole Headloss Coeff (Global) 0.500

Flow per Person per Day (l/per/day) 0.000

Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0

Number of Storage Structures 1

Number of Online Controls 1

Number of Time/Area Diagrams 0

Number of Offline Controls 0

Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model

FSR

Ratio R 0.350

Region England and Wales

Cv (Summer) 0.750

M5-60 (mm)

26.250 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm)

300.0

Analysis Timestep

2.5 Second Increment (Extended)

DTS Status

ON

DVD Status

ON

Inertia Status

ON

Profile(s)

Summer and Winter

Duration(s) (mins)

15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080

Return Period(s) (years)

1, 30, 100

Climate Change (%)

0, 0, 0

| PN    | US/MH Name | Storm      | Return Period | Climate Change | First (X) Surge | First (Y) Flood | First (Z) Overflow | Overflow Act. | Water Level (m) |
|-------|------------|------------|---------------|----------------|-----------------|-----------------|--------------------|---------------|-----------------|
| 1.000 | 1          | 240 Winter | 100           | +0%            | 1/60 Winter     |                 |                    |               | 3.775           |
| 1.001 | 2          | 240 Winter | 100           | +0%            | 1/30 Winter     |                 |                    |               | 3.774           |
| 2.000 | re         | 240 Winter | 100           | +0%            | 1/120 Winter    |                 |                    |               | 3.771           |
| 2.001 | 3          | 240 Winter | 100           | +0%            | 1/60 Winter     |                 |                    |               | 3.771           |
| 2.002 | 4          | 240 Winter | 100           | +0%            | 1/60 Summer     |                 |                    |               | 3.771           |
| 1.002 | 5          | 240 Winter | 100           | +0%            | 1/15 Summer     |                 |                    |               | 3.774           |

| PN    | US/MH Name | Depth (m) | Volume (m³) | Flow / Cap. | Overflow (l/s) | Half Drain Time (mins) | Pipe Flow (l/s) | Status     | Level Exceeded |
|-------|------------|-----------|-------------|-------------|----------------|------------------------|-----------------|------------|----------------|
| 1.000 | 1          | 0.275     | 0.000       | 0.03        |                |                        | 2.2             | FLOOD RISK |                |
| 1.001 | 2          | 0.424     | 0.000       | 0.03        |                |                        | 2.1             | FLOOD RISK |                |
| 2.000 | re         | 0.221     | 0.000       | 0.02        |                |                        | 1.1             | FLOOD RISK |                |
| 2.001 | 3          | 0.321     | 0.000       | 0.03        |                |                        | 1.6             | FLOOD RISK |                |

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|                                               |                                                    |                                                                                     |
|-----------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------|
| RCD                                           |                                                    | Page 13                                                                             |
| 9 Birchtree Way<br>Maidstone<br>Kent ME15 7RP | THE BUILDERS YARD<br>LOWER RANGE ROAD<br>GRAVESEND |  |
| Date 23/08/2022 12:36<br>File 1190-2202-B.MDX | Designed by RAC<br>Checked by                      |                                                                                     |
| Micro Drainage                                |                                                    | Network 2020.1.3                                                                    |

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

| PN    | US/MH<br>Name | Surcharged   | Flooded        | Flow /<br>Cap. | Overflow<br>(l/s) | Half Drain     | Pipe          | Status     | Level<br>Exceeded |
|-------|---------------|--------------|----------------|----------------|-------------------|----------------|---------------|------------|-------------------|
|       |               | Depth<br>(m) | Volume<br>(m³) |                |                   | Time<br>(mins) | Flow<br>(l/s) |            |                   |
| 2.002 | 4             | 0.371        | 0.000          | 0.03           |                   | 238            | 1.8           | FLOOD RISK |                   |
| 1.002 | 5             | 0.524        | 0.000          | 0.02           |                   |                | 1.2           | FLOOD RISK |                   |

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