

|                                                 |                               |                                                                                     |
|-------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------|
| BV Consulting                                   |                               | Page 1                                                                              |
| 8 Westleigh House<br>Denby Dale<br>Huddersfield | Shepley Street                |  |
| Date May 2015<br>File 1126 SW Drainage A.mdx    | Designed by SJG<br>Checked by |                                                                                     |
| Micro Drainage                                  | Network 2014.1.1              |                                                                                     |

## STORM SEWER DESIGN by the Modified Rational Method

### Design Criteria for Storm

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - England and Wales

|                                      |        |                                       |       |
|--------------------------------------|--------|---------------------------------------|-------|
| Return Period (years)                | 2      | Add Flow / Climate Change (%)         | 0     |
| M5-60 (mm)                           | 22.000 | Minimum Backdrop Height (m)           | 0.200 |
| Ratio R                              | 0.250  | Maximum Backdrop Height (m)           | 1.500 |
| Maximum Rainfall (mm/hr)             | 50     | Min Design Depth for Optimisation (m) | 0.300 |
| Maximum Time of Concentration (mins) | 30     | Min Vel for Auto Design only (m/s)    | 1.00  |
| Foul Sewage (l/s/ha)                 | 0.000  | Min Slope for Optimisation (1:X)      | 500   |
| Volumetric Runoff Coeff.             | 0.750  |                                       |       |

Designed with Level Soffits

### Time Area Diagram for Storm

| Time<br>(mins) | Area<br>(ha) | Time<br>(mins) | Area<br>(ha) |
|----------------|--------------|----------------|--------------|
| 0-4            | 0.380        | 4-8            | 0.140        |

Total Area Contributing (ha) = 0.520

Total Pipe Volume (m³) = 72.237

### Network Design Table for Storm

| 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) | Auto<br>Design                                                                        |
|-------|---------------|-------------|----------------|----------------|----------------|--------------------|-----------|-------------|-------------|---------------------------------------------------------------------------------------|
| 1.000 | 27.800        | 3.870       | 7.2            | 0.043          | 5.00           | 0.0                | 0.600     | 0           | 225         |  |
| 1.001 | 49.000        | 0.325       | 150.8          | 0.043          | 0.00           | 0.0                | 0.600     | 0           | 900         |  |
| 2.000 | 6.000         | 0.020       | 300.0          | 0.072          | 5.00           | 0.0                | 0.600     | 0           | 900         |  |
| 2.001 | 16.000        | 0.060       | 266.7          | 0.000          | 0.00           | 0.0                | 0.600     | 0           | 900         |  |
| 2.002 | 7.000         | 0.030       | 233.3          | 0.132          | 0.00           | 0.0                | 0.600     | 0           | 900         |  |

### Network Results Table

| 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) |
|-------|-----------------|----------------|--------------|------------------|----------------------|---------------|-------------------|--------------|--------------|---------------|
| 1.000 | 50.00           | 5.09           | 172.150      | 0.043            | 0.0                  | 0.0           | 0.0               | 4.91         | 195.4        | 5.8           |
| 1.001 | 50.00           | 5.41           | 167.605      | 0.086            | 0.0                  | 0.0           | 0.0               | 2.55         | 1622.0       | 11.6          |
| 2.000 | 50.00           | 5.06           | 167.390      | 0.072            | 0.0                  | 0.0           | 0.0               | 1.80         | 1147.5       | 9.7           |
| 2.001 | 50.00           | 5.19           | 167.370      | 0.072            | 0.0                  | 0.0           | 0.0               | 1.91         | 1217.6       | 9.7           |
| 2.002 | 50.00           | 5.25           | 167.310      | 0.204            | 0.0                  | 0.0           | 0.0               | 2.05         | 1302.2       | 27.6          |

|                                                 |                               |                                                                                     |
|-------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------|
| BV Consulting                                   |                               | Page 2                                                                              |
| 8 Westleigh House<br>Denby Dale<br>Huddersfield | Shepley Street                |  |
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| Micro Drainage                                  | Network 2014.1.1              |                                                                                     |

#### Network Design Table for Storm

| 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) | Auto<br>Design                                                                      |
|-------|---------------|-------------|----------------|----------------|----------------|--------------------|-----------|-------------|-------------|-------------------------------------------------------------------------------------|
| 3.000 | 6.000         | 0.020       | 300.0          | 0.072          | 5.00           | 0.0                | 0.600     | o           | 900         |  |
| 3.001 | 16.000        | 0.060       | 266.7          | 0.000          | 0.00           | 0.0                | 0.600     | o           | 900         |  |
| 3.002 | 7.000         | 0.030       | 233.3          | 0.132          | 0.00           | 0.0                | 0.600     | o           | 900         |  |
| 1.002 | 43.300        | 0.185       | 234.1          | 0.026          | 0.00           | 0.0                | 0.600     | o           | 300         |  |

#### Network Results Table

| 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) |
|-------|-----------------|----------------|--------------|------------------|----------------------|---------------|-------------------|--------------|--------------|---------------|
| 3.000 | 50.00           | 5.06           | 167.390      | 0.072            | 0.0                  | 0.0           | 0.0               | 1.80         | 1147.5       | 9.7           |
| 3.001 | 50.00           | 5.19           | 167.370      | 0.072            | 0.0                  | 0.0           | 0.0               | 1.91         | 1217.6       | 9.7           |
| 3.002 | 50.00           | 5.25           | 167.310      | 0.204            | 0.0                  | 0.0           | 0.0               | 2.05         | 1302.2       | 27.6          |
| 1.002 | 50.00           | 6.12           | 167.280      | 0.520            | 0.0                  | 0.0           | 0.0               | 1.02         | 72.3         | 70.4          |

|                                                 |                               |                                                                                     |
|-------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------|
| BV Consulting                                   |                               | Page 3                                                                              |
| 8 Westleigh House<br>Denby Dale<br>Huddersfield | Shepley Street                |  |
| Date May 2015<br>File 1126 SW Drainage A.mdx    | Designed by SJG<br>Checked by |                                                                                     |
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Manhole Schedules for Storm

| MH Name | MH CL (m) | MH Depth (m) | MH Connection | MH Diam., L*W (mm) | PN    | Pipe Out Invert Level (m) | Diameter (mm) | PN    | Pipes In Invert Level (m) | Diameter (mm) | Backdrop (mm) |
|---------|-----------|--------------|---------------|--------------------|-------|---------------------------|---------------|-------|---------------------------|---------------|---------------|
| HD1     | 173.650   | 1.500        | Open Manhole  | 1200               | 1.000 | 172.150                   | 225           |       |                           |               |               |
| HD2     | 172.250   | 4.645        | Open Manhole  | 2100               | 1.001 | 167.605                   | 900           | 1.000 | 168.280                   | 225           |               |
| S2      | 169.900   | 2.510        | Open Manhole  | 2100               | 2.000 | 167.390                   | 900           |       |                           |               |               |
| S3      | 169.900   | 2.530        | Open Manhole  | 2100               | 2.001 | 167.370                   | 900           | 2.000 | 167.370                   | 900           |               |
| S4      | 169.900   | 2.590        | Open Manhole  | 2100               | 2.002 | 167.310                   | 900           | 2.001 | 167.310                   | 900           |               |
| S5      | 169.900   | 2.510        | Open Manhole  | 2100               | 3.000 | 167.390                   | 900           |       |                           |               |               |
| S6      | 169.900   | 2.530        | Open Manhole  | 2100               | 3.001 | 167.370                   | 900           | 3.000 | 167.370                   | 900           |               |
| S7      | 169.900   | 2.590        | Open Manhole  | 2100               | 3.002 | 167.310                   | 900           | 3.001 | 167.310                   | 900           |               |
| S1      | 169.900   | 2.620        | Open Manhole  | 2100               | 1.002 | 167.280                   | 300           | 1.001 | 167.280                   | 900           |               |
|         |           |              |               |                    |       |                           |               | 2.002 | 167.280                   | 900           |               |
|         |           |              |               |                    |       |                           |               | 3.002 | 167.280                   | 900           |               |
|         | 167.500   | 0.405        | Open Manhole  | 0                  |       | OUTFALL                   |               | 1.002 | 167.095                   | 300           |               |

|                                                 |                               |
|-------------------------------------------------|-------------------------------|
| BV Consulting                                   | Page 4                        |
| 8 Westleigh House<br>Denby Dale<br>Huddersfield | Shepley Street                |
| Date May 2015<br>File 1126 SW Drainage A.mdx    | Designed by SJG<br>Checked by |
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### PIPELINE SCHEDULES for Storm

#### Upstream Manhole

| 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        | 225       | HD1     | 173.650     | 172.150     | 1.275       | Open Manhole  | 1200               |
| 1.001 | o        | 900       | HD2     | 172.250     | 167.605     | 3.745       | Open Manhole  | 2100               |
| 2.000 | o        | 900       | S2      | 169.900     | 167.390     | 1.610       | Open Manhole  | 2100               |
| 2.001 | o        | 900       | S3      | 169.900     | 167.370     | 1.630       | Open Manhole  | 2100               |
| 2.002 | o        | 900       | S4      | 169.900     | 167.310     | 1.690       | Open Manhole  | 2100               |
| 3.000 | o        | 900       | S5      | 169.900     | 167.390     | 1.610       | Open Manhole  | 2100               |
| 3.001 | o        | 900       | S6      | 169.900     | 167.370     | 1.630       | Open Manhole  | 2100               |
| 3.002 | o        | 900       | S7      | 169.900     | 167.310     | 1.690       | Open Manhole  | 2100               |
| 1.002 | o        | 300       | S1      | 169.900     | 167.280     | 2.320       | Open Manhole  | 2100               |

#### Downstream Manhole

| 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 | 27.800     | 7.2         | HD2     | 172.250     | 168.280     | 3.745       | Open Manhole  | 2100               |
| 1.001 | 49.000     | 150.8       | S1      | 169.900     | 167.280     | 1.720       | Open Manhole  | 2100               |
| 2.000 | 6.000      | 300.0       | S3      | 169.900     | 167.370     | 1.630       | Open Manhole  | 2100               |
| 2.001 | 16.000     | 266.7       | S4      | 169.900     | 167.310     | 1.690       | Open Manhole  | 2100               |
| 2.002 | 7.000      | 233.3       | S1      | 169.900     | 167.280     | 1.720       | Open Manhole  | 2100               |
| 3.000 | 6.000      | 300.0       | S6      | 169.900     | 167.370     | 1.630       | Open Manhole  | 2100               |
| 3.001 | 16.000     | 266.7       | S7      | 169.900     | 167.310     | 1.690       | Open Manhole  | 2100               |
| 3.002 | 7.000      | 233.3       | S1      | 169.900     | 167.280     | 1.720       | Open Manhole  | 2100               |
| 1.002 | 43.300     | 234.1       |         | 167.500     | 167.095     | 0.105       | Open Manhole  | 0                  |

### Surcharged Outfall Details for Storm

| Outfall Pipe Number | Outfall Name | C. Level (m) | I. Level (m) | Min I. Level (m) | D, L (mm) | W (mm) |
|---------------------|--------------|--------------|--------------|------------------|-----------|--------|
|---------------------|--------------|--------------|--------------|------------------|-----------|--------|

1.002                      167.500    167.095            0.000        0        0

Datum (m) 167.500 Offset (mins) 0

| Time (mins) | Depth (m) | Time (mins) | Depth (m) | Time (mins) | Depth (m) | Time (mins) | Depth (m) | Time (mins) | Depth (m) | Time (mins) | Depth (m) |
|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
| 10          | 1.000     | 30          | 1.000     | 50          | 1.000     | 70          | 1.000     | 90          | 1.000     | 110         | 1.000     |
| 20          | 1.000     | 40          | 1.000     | 60          | 1.000     | 80          | 1.000     | 100         | 1.000     | 120         | 1.000     |

|                                                 |                               |                                                                                     |
|-------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------|
| BV Consulting                                   |                               | Page 5                                                                              |
| 8 Westleigh House<br>Denby Dale<br>Huddersfield | Shepley Street                |  |
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### Surcharged Outfall Details for Storm

| Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) |
|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|
| 130            | 1.000        | 630            | 1.000        | 1130           | 1.000        | 1630           | 1.000        | 2130           | 1.000        | 2630           | 1.000        |
| 140            | 1.000        | 640            | 1.000        | 1140           | 1.000        | 1640           | 1.000        | 2140           | 1.000        | 2640           | 1.000        |
| 150            | 1.000        | 650            | 1.000        | 1150           | 1.000        | 1650           | 1.000        | 2150           | 1.000        | 2650           | 1.000        |
| 160            | 1.000        | 660            | 1.000        | 1160           | 1.000        | 1660           | 1.000        | 2160           | 1.000        | 2660           | 1.000        |
| 170            | 1.000        | 670            | 1.000        | 1170           | 1.000        | 1670           | 1.000        | 2170           | 1.000        | 2670           | 1.000        |
| 180            | 1.000        | 680            | 1.000        | 1180           | 1.000        | 1680           | 1.000        | 2180           | 1.000        | 2680           | 1.000        |
| 190            | 1.000        | 690            | 1.000        | 1190           | 1.000        | 1690           | 1.000        | 2190           | 1.000        | 2690           | 1.000        |
| 200            | 1.000        | 700            | 1.000        | 1200           | 1.000        | 1700           | 1.000        | 2200           | 1.000        | 2700           | 1.000        |
| 210            | 1.000        | 710            | 1.000        | 1210           | 1.000        | 1710           | 1.000        | 2210           | 1.000        | 2710           | 1.000        |
| 220            | 1.000        | 720            | 1.000        | 1220           | 1.000        | 1720           | 1.000        | 2220           | 1.000        | 2720           | 1.000        |
| 230            | 1.000        | 730            | 1.000        | 1230           | 1.000        | 1730           | 1.000        | 2230           | 1.000        | 2730           | 1.000        |
| 240            | 1.000        | 740            | 1.000        | 1240           | 1.000        | 1740           | 1.000        | 2240           | 1.000        | 2740           | 1.000        |
| 250            | 1.000        | 750            | 1.000        | 1250           | 1.000        | 1750           | 1.000        | 2250           | 1.000        | 2750           | 1.000        |
| 260            | 1.000        | 760            | 1.000        | 1260           | 1.000        | 1760           | 1.000        | 2260           | 1.000        | 2760           | 1.000        |
| 270            | 1.000        | 770            | 1.000        | 1270           | 1.000        | 1770           | 1.000        | 2270           | 1.000        | 2770           | 1.000        |
| 280            | 1.000        | 780            | 1.000        | 1280           | 1.000        | 1780           | 1.000        | 2280           | 1.000        | 2780           | 1.000        |
| 290            | 1.000        | 790            | 1.000        | 1290           | 1.000        | 1790           | 1.000        | 2290           | 1.000        | 2790           | 1.000        |
| 300            | 1.000        | 800            | 1.000        | 1300           | 1.000        | 1800           | 1.000        | 2300           | 1.000        | 2800           | 1.000        |
| 310            | 1.000        | 810            | 1.000        | 1310           | 1.000        | 1810           | 1.000        | 2310           | 1.000        | 2810           | 1.000        |
| 320            | 1.000        | 820            | 1.000        | 1320           | 1.000        | 1820           | 1.000        | 2320           | 1.000        | 2820           | 1.000        |
| 330            | 1.000        | 830            | 1.000        | 1330           | 1.000        | 1830           | 1.000        | 2330           | 1.000        | 2830           | 1.000        |
| 340            | 1.000        | 840            | 1.000        | 1340           | 1.000        | 1840           | 1.000        | 2340           | 1.000        | 2840           | 1.000        |
| 350            | 1.000        | 850            | 1.000        | 1350           | 1.000        | 1850           | 1.000        | 2350           | 1.000        | 2850           | 1.000        |
| 360            | 1.000        | 860            | 1.000        | 1360           | 1.000        | 1860           | 1.000        | 2360           | 1.000        | 2860           | 1.000        |
| 370            | 1.000        | 870            | 1.000        | 1370           | 1.000        | 1870           | 1.000        | 2370           | 1.000        | 2870           | 1.000        |
| 380            | 1.000        | 880            | 1.000        | 1380           | 1.000        | 1880           | 1.000        | 2380           | 1.000        | 2880           | 1.000        |
| 390            | 1.000        | 890            | 1.000        | 1390           | 1.000        | 1890           | 1.000        | 2390           | 1.000        | 2890           | 1.000        |
| 400            | 1.000        | 900            | 1.000        | 1400           | 1.000        | 1900           | 1.000        | 2400           | 1.000        | 2900           | 1.000        |
| 410            | 1.000        | 910            | 1.000        | 1410           | 1.000        | 1910           | 1.000        | 2410           | 1.000        | 2910           | 1.000        |
| 420            | 1.000        | 920            | 1.000        | 1420           | 1.000        | 1920           | 1.000        | 2420           | 1.000        | 2920           | 1.000        |
| 430            | 1.000        | 930            | 1.000        | 1430           | 1.000        | 1930           | 1.000        | 2430           | 1.000        | 2930           | 1.000        |
| 440            | 1.000        | 940            | 1.000        | 1440           | 1.000        | 1940           | 1.000        | 2440           | 1.000        | 2940           | 1.000        |
| 450            | 1.000        | 950            | 1.000        | 1450           | 1.000        | 1950           | 1.000        | 2450           | 1.000        | 2950           | 1.000        |
| 460            | 1.000        | 960            | 1.000        | 1460           | 1.000        | 1960           | 1.000        | 2460           | 1.000        | 2960           | 1.000        |
| 470            | 1.000        | 970            | 1.000        | 1470           | 1.000        | 1970           | 1.000        | 2470           | 1.000        | 2970           | 1.000        |
| 480            | 1.000        | 980            | 1.000        | 1480           | 1.000        | 1980           | 1.000        | 2480           | 1.000        | 2980           | 1.000        |
| 490            | 1.000        | 990            | 1.000        | 1490           | 1.000        | 1990           | 1.000        | 2490           | 1.000        | 2990           | 1.000        |
| 500            | 1.000        | 1000           | 1.000        | 1500           | 1.000        | 2000           | 1.000        | 2500           | 1.000        | 3000           | 1.000        |
| 510            | 1.000        | 1010           | 1.000        | 1510           | 1.000        | 2010           | 1.000        | 2510           | 1.000        | 3010           | 1.000        |
| 520            | 1.000        | 1020           | 1.000        | 1520           | 1.000        | 2020           | 1.000        | 2520           | 1.000        | 3020           | 1.000        |
| 530            | 1.000        | 1030           | 1.000        | 1530           | 1.000        | 2030           | 1.000        | 2530           | 1.000        | 3030           | 1.000        |
| 540            | 1.000        | 1040           | 1.000        | 1540           | 1.000        | 2040           | 1.000        | 2540           | 1.000        | 3040           | 1.000        |
| 550            | 1.000        | 1050           | 1.000        | 1550           | 1.000        | 2050           | 1.000        | 2550           | 1.000        | 3050           | 1.000        |
| 560            | 1.000        | 1060           | 1.000        | 1560           | 1.000        | 2060           | 1.000        | 2560           | 1.000        | 3060           | 1.000        |
| 570            | 1.000        | 1070           | 1.000        | 1570           | 1.000        | 2070           | 1.000        | 2570           | 1.000        | 3070           | 1.000        |
| 580            | 1.000        | 1080           | 1.000        | 1580           | 1.000        | 2080           | 1.000        | 2580           | 1.000        | 3080           | 1.000        |
| 590            | 1.000        | 1090           | 1.000        | 1590           | 1.000        | 2090           | 1.000        | 2590           | 1.000        | 3090           | 1.000        |
| 600            | 1.000        | 1100           | 1.000        | 1600           | 1.000        | 2100           | 1.000        | 2600           | 1.000        | 3100           | 1.000        |
| 610            | 1.000        | 1110           | 1.000        | 1610           | 1.000        | 2110           | 1.000        | 2610           | 1.000        | 3110           | 1.000        |
| 620            | 1.000        | 1120           | 1.000        | 1620           | 1.000        | 2120           | 1.000        | 2620           | 1.000        | 3120           | 1.000        |

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|-------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------|
| BV Consulting                                   |                               | Page 6                                                                              |
| 8 Westleigh House<br>Denby Dale<br>Huddersfield | Shepley Street                |  |
| Date May 2015<br>File 1126 SW Drainage A.mdx    | Designed by SJG<br>Checked by |                                                                                     |
| Micro Drainage                                  | Network 2014.1.1              |                                                                                     |

### Surcharged Outfall Details for Storm

| Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) |
|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|
| 3130           | 1.000        | 3630           | 1.000        | 4130           | 1.000        | 4630           | 1.000        | 5130           | 1.000        | 5630           | 1.000        |
| 3140           | 1.000        | 3640           | 1.000        | 4140           | 1.000        | 4640           | 1.000        | 5140           | 1.000        | 5640           | 1.000        |
| 3150           | 1.000        | 3650           | 1.000        | 4150           | 1.000        | 4650           | 1.000        | 5150           | 1.000        | 5650           | 1.000        |
| 3160           | 1.000        | 3660           | 1.000        | 4160           | 1.000        | 4660           | 1.000        | 5160           | 1.000        | 5660           | 1.000        |
| 3170           | 1.000        | 3670           | 1.000        | 4170           | 1.000        | 4670           | 1.000        | 5170           | 1.000        | 5670           | 1.000        |
| 3180           | 1.000        | 3680           | 1.000        | 4180           | 1.000        | 4680           | 1.000        | 5180           | 1.000        | 5680           | 1.000        |
| 3190           | 1.000        | 3690           | 1.000        | 4190           | 1.000        | 4690           | 1.000        | 5190           | 1.000        | 5690           | 1.000        |
| 3200           | 1.000        | 3700           | 1.000        | 4200           | 1.000        | 4700           | 1.000        | 5200           | 1.000        | 5700           | 1.000        |
| 3210           | 1.000        | 3710           | 1.000        | 4210           | 1.000        | 4710           | 1.000        | 5210           | 1.000        | 5710           | 1.000        |
| 3220           | 1.000        | 3720           | 1.000        | 4220           | 1.000        | 4720           | 1.000        | 5220           | 1.000        | 5720           | 1.000        |
| 3230           | 1.000        | 3730           | 1.000        | 4230           | 1.000        | 4730           | 1.000        | 5230           | 1.000        | 5730           | 1.000        |
| 3240           | 1.000        | 3740           | 1.000        | 4240           | 1.000        | 4740           | 1.000        | 5240           | 1.000        | 5740           | 1.000        |
| 3250           | 1.000        | 3750           | 1.000        | 4250           | 1.000        | 4750           | 1.000        | 5250           | 1.000        | 5750           | 1.000        |
| 3260           | 1.000        | 3760           | 1.000        | 4260           | 1.000        | 4760           | 1.000        | 5260           | 1.000        | 5760           | 1.000        |
| 3270           | 1.000        | 3770           | 1.000        | 4270           | 1.000        | 4770           | 1.000        | 5270           | 1.000        | 5770           | 1.000        |
| 3280           | 1.000        | 3780           | 1.000        | 4280           | 1.000        | 4780           | 1.000        | 5280           | 1.000        | 5780           | 1.000        |
| 3290           | 1.000        | 3790           | 1.000        | 4290           | 1.000        | 4790           | 1.000        | 5290           | 1.000        | 5790           | 1.000        |
| 3300           | 1.000        | 3800           | 1.000        | 4300           | 1.000        | 4800           | 1.000        | 5300           | 1.000        | 5800           | 1.000        |
| 3310           | 1.000        | 3810           | 1.000        | 4310           | 1.000        | 4810           | 1.000        | 5310           | 1.000        | 5810           | 1.000        |
| 3320           | 1.000        | 3820           | 1.000        | 4320           | 1.000        | 4820           | 1.000        | 5320           | 1.000        | 5820           | 1.000        |
| 3330           | 1.000        | 3830           | 1.000        | 4330           | 1.000        | 4830           | 1.000        | 5330           | 1.000        | 5830           | 1.000        |
| 3340           | 1.000        | 3840           | 1.000        | 4340           | 1.000        | 4840           | 1.000        | 5340           | 1.000        | 5840           | 1.000        |
| 3350           | 1.000        | 3850           | 1.000        | 4350           | 1.000        | 4850           | 1.000        | 5350           | 1.000        | 5850           | 1.000        |
| 3360           | 1.000        | 3860           | 1.000        | 4360           | 1.000        | 4860           | 1.000        | 5360           | 1.000        | 5860           | 1.000        |
| 3370           | 1.000        | 3870           | 1.000        | 4370           | 1.000        | 4870           | 1.000        | 5370           | 1.000        | 5870           | 1.000        |
| 3380           | 1.000        | 3880           | 1.000        | 4380           | 1.000        | 4880           | 1.000        | 5380           | 1.000        | 5880           | 1.000        |
| 3390           | 1.000        | 3890           | 1.000        | 4390           | 1.000        | 4890           | 1.000        | 5390           | 1.000        | 5890           | 1.000        |
| 3400           | 1.000        | 3900           | 1.000        | 4400           | 1.000        | 4900           | 1.000        | 5400           | 1.000        | 5900           | 1.000        |
| 3410           | 1.000        | 3910           | 1.000        | 4410           | 1.000        | 4910           | 1.000        | 5410           | 1.000        | 5910           | 1.000        |
| 3420           | 1.000        | 3920           | 1.000        | 4420           | 1.000        | 4920           | 1.000        | 5420           | 1.000        | 5920           | 1.000        |
| 3430           | 1.000        | 3930           | 1.000        | 4430           | 1.000        | 4930           | 1.000        | 5430           | 1.000        | 5930           | 1.000        |
| 3440           | 1.000        | 3940           | 1.000        | 4440           | 1.000        | 4940           | 1.000        | 5440           | 1.000        | 5940           | 1.000        |
| 3450           | 1.000        | 3950           | 1.000        | 4450           | 1.000        | 4950           | 1.000        | 5450           | 1.000        | 5950           | 1.000        |
| 3460           | 1.000        | 3960           | 1.000        | 4460           | 1.000        | 4960           | 1.000        | 5460           | 1.000        | 5960           | 1.000        |
| 3470           | 1.000        | 3970           | 1.000        | 4470           | 1.000        | 4970           | 1.000        | 5470           | 1.000        | 5970           | 1.000        |
| 3480           | 1.000        | 3980           | 1.000        | 4480           | 1.000        | 4980           | 1.000        | 5480           | 1.000        | 5980           | 1.000        |
| 3490           | 1.000        | 3990           | 1.000        | 4490           | 1.000        | 4990           | 1.000        | 5490           | 1.000        | 5990           | 1.000        |
| 3500           | 1.000        | 4000           | 1.000        | 4500           | 1.000        | 5000           | 1.000        | 5500           | 1.000        | 6000           | 1.000        |
| 3510           | 1.000        | 4010           | 1.000        | 4510           | 1.000        | 5010           | 1.000        | 5510           | 1.000        | 6010           | 1.000        |
| 3520           | 1.000        | 4020           | 1.000        | 4520           | 1.000        | 5020           | 1.000        | 5520           | 1.000        | 6020           | 1.000        |
| 3530           | 1.000        | 4030           | 1.000        | 4530           | 1.000        | 5030           | 1.000        | 5530           | 1.000        | 6030           | 1.000        |
| 3540           | 1.000        | 4040           | 1.000        | 4540           | 1.000        | 5040           | 1.000        | 5540           | 1.000        | 6040           | 1.000        |
| 3550           | 1.000        | 4050           | 1.000        | 4550           | 1.000        | 5050           | 1.000        | 5550           | 1.000        | 6050           | 1.000        |
| 3560           | 1.000        | 4060           | 1.000        | 4560           | 1.000        | 5060           | 1.000        | 5560           | 1.000        | 6060           | 1.000        |
| 3570           | 1.000        | 4070           | 1.000        | 4570           | 1.000        | 5070           | 1.000        | 5570           | 1.000        | 6070           | 1.000        |
| 3580           | 1.000        | 4080           | 1.000        | 4580           | 1.000        | 5080           | 1.000        | 5580           | 1.000        | 6080           | 1.000        |
| 3590           | 1.000        | 4090           | 1.000        | 4590           | 1.000        | 5090           | 1.000        | 5590           | 1.000        | 6090           | 1.000        |
| 3600           | 1.000        | 4100           | 1.000        | 4600           | 1.000        | 5100           | 1.000        | 5600           | 1.000        | 6100           | 1.000        |
| 3610           | 1.000        | 4110           | 1.000        | 4610           | 1.000        | 5110           | 1.000        | 5610           | 1.000        | 6110           | 1.000        |
| 3620           | 1.000        | 4120           | 1.000        | 4620           | 1.000        | 5120           | 1.000        | 5620           | 1.000        | 6120           | 1.000        |

|                                                 |                  |                                                                                     |
|-------------------------------------------------|------------------|-------------------------------------------------------------------------------------|
| BV Consulting                                   |                  | Page 7                                                                              |
| 8 Westleigh House<br>Denby Dale<br>Huddersfield | Shepley Street   |  |
| Date May 2015                                   | Designed by SJG  |                                                                                     |
| File 1126 SW Drainage A.mdx                     | Checked by       |                                                                                     |
| Micro Drainage                                  | Network 2014.1.1 |                                                                                     |

### Surcharged Outfall Details for Storm

| Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) |
|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|
| 6130           | 1.000        | 6630           | 1.000        | 7130           | 1.000        | 7630           | 1.000        | 8130           | 1.000        | 8630           | 1.000        |
| 6140           | 1.000        | 6640           | 1.000        | 7140           | 1.000        | 7640           | 1.000        | 8140           | 1.000        | 8640           | 1.000        |
| 6150           | 1.000        | 6650           | 1.000        | 7150           | 1.000        | 7650           | 1.000        | 8150           | 1.000        | 8650           | 1.000        |
| 6160           | 1.000        | 6660           | 1.000        | 7160           | 1.000        | 7660           | 1.000        | 8160           | 1.000        | 8660           | 1.000        |
| 6170           | 1.000        | 6670           | 1.000        | 7170           | 1.000        | 7670           | 1.000        | 8170           | 1.000        | 8670           | 1.000        |
| 6180           | 1.000        | 6680           | 1.000        | 7180           | 1.000        | 7680           | 1.000        | 8180           | 1.000        | 8680           | 1.000        |
| 6190           | 1.000        | 6690           | 1.000        | 7190           | 1.000        | 7690           | 1.000        | 8190           | 1.000        | 8690           | 1.000        |
| 6200           | 1.000        | 6700           | 1.000        | 7200           | 1.000        | 7700           | 1.000        | 8200           | 1.000        | 8700           | 1.000        |
| 6210           | 1.000        | 6710           | 1.000        | 7210           | 1.000        | 7710           | 1.000        | 8210           | 1.000        | 8710           | 1.000        |
| 6220           | 1.000        | 6720           | 1.000        | 7220           | 1.000        | 7720           | 1.000        | 8220           | 1.000        | 8720           | 1.000        |
| 6230           | 1.000        | 6730           | 1.000        | 7230           | 1.000        | 7730           | 1.000        | 8230           | 1.000        | 8730           | 1.000        |
| 6240           | 1.000        | 6740           | 1.000        | 7240           | 1.000        | 7740           | 1.000        | 8240           | 1.000        | 8740           | 1.000        |
| 6250           | 1.000        | 6750           | 1.000        | 7250           | 1.000        | 7750           | 1.000        | 8250           | 1.000        | 8750           | 1.000        |
| 6260           | 1.000        | 6760           | 1.000        | 7260           | 1.000        | 7760           | 1.000        | 8260           | 1.000        | 8760           | 1.000        |
| 6270           | 1.000        | 6770           | 1.000        | 7270           | 1.000        | 7770           | 1.000        | 8270           | 1.000        | 8770           | 1.000        |
| 6280           | 1.000        | 6780           | 1.000        | 7280           | 1.000        | 7780           | 1.000        | 8280           | 1.000        | 8780           | 1.000        |
| 6290           | 1.000        | 6790           | 1.000        | 7290           | 1.000        | 7790           | 1.000        | 8290           | 1.000        | 8790           | 1.000        |
| 6300           | 1.000        | 6800           | 1.000        | 7300           | 1.000        | 7800           | 1.000        | 8300           | 1.000        | 8800           | 1.000        |
| 6310           | 1.000        | 6810           | 1.000        | 7310           | 1.000        | 7810           | 1.000        | 8310           | 1.000        | 8810           | 1.000        |
| 6320           | 1.000        | 6820           | 1.000        | 7320           | 1.000        | 7820           | 1.000        | 8320           | 1.000        | 8820           | 1.000        |
| 6330           | 1.000        | 6830           | 1.000        | 7330           | 1.000        | 7830           | 1.000        | 8330           | 1.000        | 8830           | 1.000        |
| 6340           | 1.000        | 6840           | 1.000        | 7340           | 1.000        | 7840           | 1.000        | 8340           | 1.000        | 8840           | 1.000        |
| 6350           | 1.000        | 6850           | 1.000        | 7350           | 1.000        | 7850           | 1.000        | 8350           | 1.000        | 8850           | 1.000        |
| 6360           | 1.000        | 6860           | 1.000        | 7360           | 1.000        | 7860           | 1.000        | 8360           | 1.000        | 8860           | 1.000        |
| 6370           | 1.000        | 6870           | 1.000        | 7370           | 1.000        | 7870           | 1.000        | 8370           | 1.000        | 8870           | 1.000        |
| 6380           | 1.000        | 6880           | 1.000        | 7380           | 1.000        | 7880           | 1.000        | 8380           | 1.000        | 8880           | 1.000        |
| 6390           | 1.000        | 6890           | 1.000        | 7390           | 1.000        | 7890           | 1.000        | 8390           | 1.000        | 8890           | 1.000        |
| 6400           | 1.000        | 6900           | 1.000        | 7400           | 1.000        | 7900           | 1.000        | 8400           | 1.000        | 8900           | 1.000        |
| 6410           | 1.000        | 6910           | 1.000        | 7410           | 1.000        | 7910           | 1.000        | 8410           | 1.000        | 8910           | 1.000        |
| 6420           | 1.000        | 6920           | 1.000        | 7420           | 1.000        | 7920           | 1.000        | 8420           | 1.000        | 8920           | 1.000        |
| 6430           | 1.000        | 6930           | 1.000        | 7430           | 1.000        | 7930           | 1.000        | 8430           | 1.000        | 8930           | 1.000        |
| 6440           | 1.000        | 6940           | 1.000        | 7440           | 1.000        | 7940           | 1.000        | 8440           | 1.000        | 8940           | 1.000        |
| 6450           | 1.000        | 6950           | 1.000        | 7450           | 1.000        | 7950           | 1.000        | 8450           | 1.000        | 8950           | 1.000        |
| 6460           | 1.000        | 6960           | 1.000        | 7460           | 1.000        | 7960           | 1.000        | 8460           | 1.000        | 8960           | 1.000        |
| 6470           | 1.000        | 6970           | 1.000        | 7470           | 1.000        | 7970           | 1.000        | 8470           | 1.000        | 8970           | 1.000        |
| 6480           | 1.000        | 6980           | 1.000        | 7480           | 1.000        | 7980           | 1.000        | 8480           | 1.000        | 8980           | 1.000        |
| 6490           | 1.000        | 6990           | 1.000        | 7490           | 1.000        | 7990           | 1.000        | 8490           | 1.000        | 8990           | 1.000        |
| 6500           | 1.000        | 7000           | 1.000        | 7500           | 1.000        | 8000           | 1.000        | 8500           | 1.000        | 9000           | 1.000        |
| 6510           | 1.000        | 7010           | 1.000        | 7510           | 1.000        | 8010           | 1.000        | 8510           | 1.000        | 9010           | 1.000        |
| 6520           | 1.000        | 7020           | 1.000        | 7520           | 1.000        | 8020           | 1.000        | 8520           | 1.000        | 9020           | 1.000        |
| 6530           | 1.000        | 7030           | 1.000        | 7530           | 1.000        | 8030           | 1.000        | 8530           | 1.000        | 9030           | 1.000        |
| 6540           | 1.000        | 7040           | 1.000        | 7540           | 1.000        | 8040           | 1.000        | 8540           | 1.000        | 9040           | 1.000        |
| 6550           | 1.000        | 7050           | 1.000        | 7550           | 1.000        | 8050           | 1.000        | 8550           | 1.000        | 9050           | 1.000        |
| 6560           | 1.000        | 7060           | 1.000        | 7560           | 1.000        | 8060           | 1.000        | 8560           | 1.000        | 9060           | 1.000        |
| 6570           | 1.000        | 7070           | 1.000        | 7570           | 1.000        | 8070           | 1.000        | 8570           | 1.000        | 9070           | 1.000        |
| 6580           | 1.000        | 7080           | 1.000        | 7580           | 1.000        | 8080           | 1.000        | 8580           | 1.000        | 9080           | 1.000        |
| 6590           | 1.000        | 7090           | 1.000        | 7590           | 1.000        | 8090           | 1.000        | 8590           | 1.000        | 9090           | 1.000        |
| 6600           | 1.000        | 7100           | 1.000        | 7600           | 1.000        | 8100           | 1.000        | 8600           | 1.000        | 9100           | 1.000        |
| 6610           | 1.000        | 7110           | 1.000        | 7610           | 1.000        | 8110           | 1.000        | 8610           | 1.000        | 9110           | 1.000        |
| 6620           | 1.000        | 7120           | 1.000        | 7620           | 1.000        | 8120           | 1.000        | 8620           | 1.000        | 9120           | 1.000        |

|                                                 |                               |                                                                                     |
|-------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------|
| BV Consulting                                   |                               | Page 8                                                                              |
| 8 Westleigh House<br>Denby Dale<br>Huddersfield | Shepley Street                |  |
| Date May 2015<br>File 1126 SW Drainage A.mdx    | Designed by SJG<br>Checked by |                                                                                     |
| Micro Drainage                                  | Network 2014.1.1              |                                                                                     |

#### Surcharged Outfall Details for Storm

| Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) | Time<br>(mins) | Depth<br>(m) |
|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|
| 9130           | 1.000        | 9290           | 1.000        | 9450           | 1.000        | 9610           | 1.000        | 9770           | 1.000        | 9930           | 1.000        |
| 9140           | 1.000        | 9300           | 1.000        | 9460           | 1.000        | 9620           | 1.000        | 9780           | 1.000        | 9940           | 1.000        |
| 9150           | 1.000        | 9310           | 1.000        | 9470           | 1.000        | 9630           | 1.000        | 9790           | 1.000        | 9950           | 1.000        |
| 9160           | 1.000        | 9320           | 1.000        | 9480           | 1.000        | 9640           | 1.000        | 9800           | 1.000        | 9960           | 1.000        |
| 9170           | 1.000        | 9330           | 1.000        | 9490           | 1.000        | 9650           | 1.000        | 9810           | 1.000        | 9970           | 1.000        |
| 9180           | 1.000        | 9340           | 1.000        | 9500           | 1.000        | 9660           | 1.000        | 9820           | 1.000        | 9980           | 1.000        |
| 9190           | 1.000        | 9350           | 1.000        | 9510           | 1.000        | 9670           | 1.000        | 9830           | 1.000        | 9990           | 1.000        |
| 9200           | 1.000        | 9360           | 1.000        | 9520           | 1.000        | 9680           | 1.000        | 9840           | 1.000        | 10000          | 1.000        |
| 9210           | 1.000        | 9370           | 1.000        | 9530           | 1.000        | 9690           | 1.000        | 9850           | 1.000        | 10010          | 1.000        |
| 9220           | 1.000        | 9380           | 1.000        | 9540           | 1.000        | 9700           | 1.000        | 9860           | 1.000        | 10020          | 1.000        |
| 9230           | 1.000        | 9390           | 1.000        | 9550           | 1.000        | 9710           | 1.000        | 9870           | 1.000        | 10030          | 1.000        |
| 9240           | 1.000        | 9400           | 1.000        | 9560           | 1.000        | 9720           | 1.000        | 9880           | 1.000        | 10040          | 1.000        |
| 9250           | 1.000        | 9410           | 1.000        | 9570           | 1.000        | 9730           | 1.000        | 9890           | 1.000        | 10050          | 1.000        |
| 9260           | 1.000        | 9420           | 1.000        | 9580           | 1.000        | 9740           | 1.000        | 9900           | 1.000        | 10060          | 1.000        |
| 9270           | 1.000        | 9430           | 1.000        | 9590           | 1.000        | 9750           | 1.000        | 9910           | 1.000        | 10070          | 1.000        |
| 9280           | 1.000        | 9440           | 1.000        | 9600           | 1.000        | 9760           | 1.000        | 9920           | 1.000        | 10080          | 1.000        |

#### Simulation Criteria for Storm

|                                 |       |                                            |       |
|---------------------------------|-------|--------------------------------------------|-------|
| Volumetric Runoff Coeff         | 0.840 | Additional Flow - % of Total Flow          | 0.000 |
| Areal Reduction Factor          | 1.000 | MADD Factor * 10m <sup>3</sup> /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)                            | 240   |
| Foul Sewage per hectare (l/s)   | 0.000 | Output Interval (mins)                     | 4     |
| Number of Input Hydrographs     | 0     | Number of Storage Structures               | 0     |
| Number of Online Controls       | 1     | Number of Time/Area Diagrams               | 0     |
| Number of Offline Controls      | 1     | Number of Real Time Controls               | 0     |

#### Synthetic Rainfall Details

|                       |                   |                       |        |
|-----------------------|-------------------|-----------------------|--------|
| Rainfall Model        | FSR               | Profile Type          | Winter |
| Return Period (years) | 100               | Cv (Summer)           | 0.750  |
| Region                | England and Wales | Cv (Winter)           | 0.840  |
| M5-60 (mm)            | 22.000            | Storm Duration (mins) | 120    |
| Ratio R               | 0.250             |                       |        |

|                                                 |                               |                                                                                     |
|-------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------|
| BV Consulting                                   |                               | Page 9                                                                              |
| 8 Westleigh House<br>Denby Dale<br>Huddersfield | Shepley Street                |  |
| Date May 2015<br>File 1126 SW Drainage A.mdx    | Designed by SJG<br>Checked by |                                                                                     |
| Micro Drainage                                  | Network 2014.1.1              |                                                                                     |

### Online Controls for Storm

Hydro-Brake Optimum® Manhole: S1, DS/PN: 1.002, Volume (m³): 45.1

|                                   |                            |
|-----------------------------------|----------------------------|
| Unit Reference                    | MD-SHE-0290-5000-1250-5000 |
| Design Head (m)                   | 1.250                      |
| Design Flow (l/s)                 | 50.0                       |
| Flush-Flo™                        | Calculated                 |
| Objective                         | Minimise upstream storage  |
| Diameter (mm)                     | 290                        |
| Invert Level (m)                  | 167.280                    |
| Minimum Outlet Pipe Diameter (mm) | 375                        |
| Suggested Manhole Diameter (mm)   | 1800                       |

| Control Points            | Head (m) | Flow (l/s) |
|---------------------------|----------|------------|
| Design Point (Calculated) | 1.250    | 49.5       |
| Flush-Flo™                | 0.468    | 49.4       |
| Kick-Flo®                 | 0.924    | 42.8       |
| Mean Flow over Head Range | -        | 41.0       |

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake Optimum® as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

| Depth (m) | Flow (l/s) | Depth (m) | Flow (l/s) | Depth (m) | Flow (l/s) | Depth (m) | Flow (l/s) |
|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| 0.100     | 9.0        | 1.200     | 48.5       | 3.000     | 75.6       | 7.000     | 114.2      |
| 0.200     | 29.9       | 1.400     | 52.3       | 3.500     | 81.5       | 7.500     | 118.1      |
| 0.300     | 47.7       | 1.600     | 55.8       | 4.000     | 86.9       | 8.000     | 121.9      |
| 0.400     | 49.2       | 1.800     | 59.0       | 4.500     | 92.1       | 8.500     | 125.6      |
| 0.500     | 49.4       | 2.000     | 62.1       | 5.000     | 96.9       | 9.000     | 129.1      |
| 0.600     | 48.9       | 2.200     | 65.0       | 5.500     | 101.5      | 9.500     | 132.6      |
| 0.800     | 46.5       | 2.400     | 67.8       | 6.000     | 105.9      |           |            |
| 1.000     | 44.5       | 2.600     | 70.5       | 6.500     | 110.1      |           |            |

|                                                 |                               |                                                                                     |
|-------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------|
| BV Consulting                                   |                               | Page 10                                                                             |
| 8 Westleigh House<br>Denby Dale<br>Huddersfield | Shepley Street                |  |
| Date May 2015<br>File 1126 SW Drainage A.mdx    | Designed by SJG<br>Checked by |                                                                                     |
| Micro Drainage                                  | Network 2014.1.1              |                                                                                     |

### Offline Controls for Storm

Pipe Manhole: S1, DS/PN: 1.002, Loop to PN: None

|              |              |                            |         |
|--------------|--------------|----------------------------|---------|
| Diameter (m) | 0.100        | Roughness k (mm)           | 0.600   |
| Section Type | Pipe/Conduit | Entry Loss Coefficient     | 0.500   |
| Slope (1:X)  | 1.0          | Coefficient of Contraction | 0.600   |
| Length (m)   | 2.000        | Upstream Invert Level (m)  | 168.600 |



|                                                 |                               |                                                                                     |
|-------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------|
| BV Consulting                                   |                               | Page 12                                                                             |
| 8 Westleigh House<br>Denby Dale<br>Huddersfield | Shepley Street                |  |
| Date May 2015<br>File 1126 SW Drainage A.mdx    | Designed by SJG<br>Checked by |                                                                                     |
| Micro Drainage                                  | Network 2014.1.1              |                                                                                     |

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

| PN    | US/MH<br>Name | Water<br>Level<br>(m) | Surch'd<br>Depth (m) | Flooded<br>Volume<br>(m <sup>3</sup> ) | Flow /<br>Cap. | O'flow<br>(l/s) | Pipe<br>Flow<br>(l/s) | Status     |
|-------|---------------|-----------------------|----------------------|----------------------------------------|----------------|-----------------|-----------------------|------------|
| 3.002 | S7            | 169.014               | 0.804                | 0.000                                  | 0.04           | 0.0             | 21.6                  | SURCHARGED |
| 1.002 | S1            | 168.738               | 1.158                | 0.000                                  | 0.40           | 36.9            | 27.0                  | SURCHARGED |



|                                                 |                               |                                                                                     |
|-------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------|
| BV Consulting                                   |                               | Page 14                                                                             |
| 8 Westleigh House<br>Denby Dale<br>Huddersfield | Shepley Street                |  |
| Date May 2015<br>File 1126 SW Drainage A.mdx    | Designed by SJG<br>Checked by |                                                                                     |
| Micro Drainage                                  | Network 2014.1.1              |                                                                                     |

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

| PN    | US/MH<br>Name | Water<br>Level<br>(m) | Surch'd<br>Depth (m) | Flooded<br>Volume<br>(m <sup>3</sup> ) | Flow /<br>Cap. | O'flow<br>(l/s) | Pipe<br>Flow<br>(l/s) | Status     |
|-------|---------------|-----------------------|----------------------|----------------------------------------|----------------|-----------------|-----------------------|------------|
| 3.002 | S7            | 169.814               | 1.604                | 0.000                                  | 0.06           | 0.0             | 38.7                  | FLOOD RISK |
| 1.002 | S1            | 169.812               | 2.232                | 0.000                                  | 0.74           | 49.0            | 49.9                  | FLOOD RISK |