

# Surface Water Drainage Calculations

For a site referred to as

Glendene,  
Wythenshawe

Undertaken on behalf of

Garden City Design & Build Ltd.

**Job No: 9003**

**Document No: 9003-WML-00-XX-CA-C-0001**

**Date: August 2022**

|                                |                              |                |                     |             |              |
|--------------------------------|------------------------------|----------------|---------------------|-------------|--------------|
| <b>Project No. &amp; Name:</b> | 9003 – Glendene, Wythenshawe | <b>Status:</b> | <b>Prepared by:</b> | <b>Rev:</b> | <b>Date:</b> |
| <b>Document Ref:</b>           | 9003-WML-00-XX-CA-C-0001     | Preliminary    | Daniel Baker        | P03         | August 2022  |

## General Notes

1. The calculations within this document have been undertaken using MicroDrainage Software version 2020.
2. This document is to be read in conjunction with the following documents;
  - a. 9003-WML-ZZ-XX-DR-C-1001 - 1005 – Proposed Drainage GAs
  - b. 9003-WML-ZZ-XX-RP-C-1001 – Drainage Strategy Document

## Summary of Results

3. The following summary demonstrates that the outgoing flow rates for the new development works are less than or equal to those of the pre-development site.
4. The existing site comprises a combination of Greenfield and Brownfield areas as shown within appendix 01 below.
5. Greenfield Areas have been calculated using MicoDrainage Software version 2020 whilst the existing Brownfield flow rate has been calculated using a 50mm/Hr rainfall intensity as noted within the drainage strategy.

| Existing                          |                                                 |                                               |
|-----------------------------------|-------------------------------------------------|-----------------------------------------------|
| Greenfield Runoff Rate<br>(l/s)   | Brownfield Runoff Rate<br>(l/s)                 | Proposed Site Runoff Rate -<br>Total<br>(l/s) |
| Q1: 4.3<br>Q30: 8.3<br>Q100: 10.2 | 72.9<br><br>36.4 - Allowable<br>(50% reduction) | 4.3 + 36.4 = 40.7                             |

| Proposed                                      |                                               |                                             |                                             |                                             |
|-----------------------------------------------|-----------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|
| Proposed Site<br>Runoff Rate - South<br>(l/s) | Proposed Site Runoff<br>Rate - North<br>(l/s) | Actual Site Runoff<br>Rate - South<br>(l/s) | Actual Site Runoff<br>Rate - North<br>(l/s) | Actual Site Runoff<br>Rate - Total<br>(l/s) |
| 7.5                                           | 32.5                                          | 7.6                                         | 32.4                                        | <u>40.0</u>                                 |

6. The following calculations are associated with the adoptable drainage only and don't take into account the extensive private drainage network which will provide an additional storage volume and further reduce the risk of flooding.

## **Existing Site Area Plan**



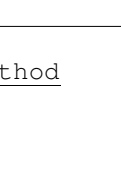
**LEGEND**

|                                                                                       |                                               |
|---------------------------------------------------------------------------------------|-----------------------------------------------|
|  | EXISTING BROWNFIELD AREA: 5,249m <sup>2</sup> |
|  | EXISTING GREENFIELD AREA: 8,909m <sup>2</sup> |

## **Greenfield Runoff Assessment**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                  |                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------|
| WML Consulting Ltd                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  | Page 1                                                                              |
| No. 8 Oak Green<br>Stanley Green Business Park<br>Earl Rd, Cheadle Hulme, SK8 6QL                                                                                                                                                                                                                                                                                                                                                                                    |                                  |  |
| Date 06/04/2022 16:27<br>File                                                                                                                                                                                                                                                                                                                                                                                                                                        | Designed by DBaker<br>Checked by |                                                                                     |
| Innovyze                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                  | Source Control 2020.1.3                                                             |
| <p style="text-align: center;"><u>ICP SUDS Mean Annual Flood</u></p> <p style="text-align: center;">Input</p> <p>Return Period (years) 100                      Soil 0.450<br/> Area (ha) 0.891                      Urban 0.000<br/> SAAR (mm) 849 Region Number Region 10</p> <p style="text-align: center;"><b>Results    l/s</b></p> <p>QBAR Rural 4.9<br/> QBAR Urban 4.9</p> <p>Q100 years 10.2</p> <p>Q1 year 4.3<br/> Q30 years 8.3<br/> Q100 years 10.2</p> |                                  |                                                                                     |
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**Proposed Surface Water Network  
(South)**

|                                                                                   |  |                                                                                     |
|-----------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|
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| Innovyze                                                                          |  | Network 2020.1.3                                                                    |

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)                | 100    | PIMP (%)                              | 100   |
| M5-60 (mm)                           | 18.000 | Add Flow / Climate Change (%)         | 0     |
| Ratio R                              | 0.360  | Minimum Backdrop Height (m)           | 0.200 |
| Maximum Rainfall (mm/hr)             | 50     | Maximum Backdrop Height (m)           | 1.500 |
| 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   |

Designed with Level Soffits

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) | Section Type | Auto<br>Design                                                                      |
|--------|---------------|-------------|----------------|----------------|----------------|--------------------|-----------|-------------|-------------|--------------|-------------------------------------------------------------------------------------|
| S1.000 | 25.500        | 0.085       | 300.0          | 0.041          | 5.00           | 0.0                | 0.600     | o           | 600         | Pipe/Conduit |  |
| S2.000 | 7.000         | 0.030       | 233.3          | 0.056          | 5.00           | 0.0                | 0.600     | o           | 600         | Pipe/Conduit |  |
| S1.001 | 42.000        | 0.140       | 300.0          | 0.034          | 0.00           | 0.0                | 0.600     | o           | 600         | Pipe/Conduit |  |
| S1.002 | 2.955         | 0.035       | 84.4           | 0.061          | 0.00           | 0.0                | 0.600     | o           | 300         | Pipe/Conduit |  |
| S1.003 | 3.081         | 0.030       | 102.7          | 0.000          | 0.00           | 0.0                | 0.600     | o           | 300         | Pipe/Conduit |  |

Network Results Table

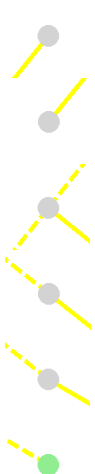
| PN     | Rain<br>(mm/hr) | T.C.<br>(mins) | US/IL<br>(m) | Σ I.Area<br>(ha) | Σ Base<br>Flow (l/s) | Foul<br>(l/s) | Add Flow<br>(l/s) | Vel<br>(m/s) | Cap<br>(l/s) | Flow<br>(l/s) |
|--------|-----------------|----------------|--------------|------------------|----------------------|---------------|-------------------|--------------|--------------|---------------|
| S1.000 | 50.00           | 5.30           | 48.560       | 0.041            | 0.0                  | 0.0           | 0.0               | 1.40         | 396.0        | 5.6           |
| S2.000 | 50.00           | 5.07           | 48.510       | 0.056            | 0.0                  | 0.0           | 0.0               | 1.59         | 449.5        | 7.6           |
| S1.001 | 50.00           | 5.80           | 48.475       | 0.131            | 0.0                  | 0.0           | 0.0               | 1.40         | 396.0        | 17.7          |
| S1.002 | 50.00           | 5.83           | 48.335       | 0.192            | 0.0                  | 0.0           | 0.0               | 1.71         | 121.0        | 26.0          |
| S1.003 | 50.00           | 5.87           | 48.300       | 0.192            | 0.0                  | 0.0           | 0.0               | 1.55         | 109.7        | 26.0          |

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|                                                                                   |                    |                                                                                     |
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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) |
|---------|-----------|--------------|---------------|--------------------|--------|---------------------------|---------------|--------|---------------------------|---------------|---------------|
| S1      | 50.760    | 2.200        | Open Manhole  | 2400               | S1.000 | 48.560                    | 600           |        |                           |               |               |
| S2      | 51.710    | 3.200        | Open Manhole  | 2400               | S2.000 | 48.510                    | 600           |        |                           |               |               |
| S3      | 51.510    | 3.035        | Open Manhole  | 2400               | S1.001 | 48.475                    | 600           | S1.000 | 48.475                    | 600           |               |
|         |           |              |               |                    |        |                           |               | S2.000 | 48.480                    | 600           | 5             |
| S4      | 52.230    | 3.895        | Open Manhole  | 2400               | S1.002 | 48.335                    | 300           | S1.001 | 48.335                    | 600           |               |
| S-C1    | 52.330    | 4.030        | Open Manhole  | 1350               | S1.003 | 48.300                    | 300           | S1.002 | 48.300                    | 300           |               |
| S       | 52.390    | 4.120        | Open Manhole  | 0                  |        | OUTFALL                   |               | S1.003 | 48.270                    | 300           |               |

| MH Name | Manhole Easting (m) | Manhole Northing (m) | Intersection Easting (m) | Intersection Northing (m) | Manhole Access | Layout (North)                                                                        |
|---------|---------------------|----------------------|--------------------------|---------------------------|----------------|---------------------------------------------------------------------------------------|
| S1      | 381041.161          | 387651.001           | 381041.161               | 387651.001                | Required       |  |
| S2      | 381020.730          | 387625.726           | 381020.730               | 387625.726                | Required       |                                                                                       |
| S3      | 381025.130          | 387631.170           | 381025.130               | 387631.170                | Required       |                                                                                       |
| S4      | 381058.049          | 387605.086           | 381058.049               | 387605.086                | Required       |                                                                                       |
| S-C1    | 381060.367          | 387603.253           | 381060.367               | 387603.253                | Required       |                                                                                       |
| S       | 381063.025          | 387601.696           |                          |                           | No Entry       |                                                                                       |

|                                                                                   |                    |                                                                                     |
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# PIPELINE SCHEDULES for Storm

## Upstream Manhole

| PN     | Hyd<br>Sect | Diam<br>(mm) | MH<br>Name | C.Level<br>(m) | I.Level<br>(m) | D.Depth<br>(m) | MH<br>Connection | MH DIAM., L*W<br>(mm) |
|--------|-------------|--------------|------------|----------------|----------------|----------------|------------------|-----------------------|
| S1.000 | o           | 600          | S1         | 50.760         | 48.560         | 1.600          | Open Manhole     | 2400                  |
| S2.000 | o           | 600          | S2         | 51.710         | 48.510         | 2.600          | Open Manhole     | 2400                  |
| S1.001 | o           | 600          | S3         | 51.510         | 48.475         | 2.435          | Open Manhole     | 2400                  |
| S1.002 | o           | 300          | S4         | 52.230         | 48.335         | 3.595          | Open Manhole     | 2400                  |
| S1.003 | o           | 300          | S-C1       | 52.330         | 48.300         | 3.730          | Open Manhole     | 1350                  |

## Downstream Manhole

| PN     | Length<br>(m) | Slope<br>(1:X) | MH<br>Name | C.Level<br>(m) | I.Level<br>(m) | D.Depth<br>(m) | MH<br>Connection | MH DIAM., L*W<br>(mm) |
|--------|---------------|----------------|------------|----------------|----------------|----------------|------------------|-----------------------|
| S1.000 | 25.500        | 300.0          | S3         | 51.510         | 48.475         | 2.435          | Open Manhole     | 2400                  |
| S2.000 | 7.000         | 233.3          | S3         | 51.510         | 48.480         | 2.430          | Open Manhole     | 2400                  |
| S1.001 | 42.000        | 300.0          | S4         | 52.230         | 48.335         | 3.295          | Open Manhole     | 2400                  |
| S1.002 | 2.955         | 84.4           | S-C1       | 52.330         | 48.300         | 3.730          | Open Manhole     | 1350                  |
| S1.003 | 3.081         | 102.7          | S          | 52.390         | 48.270         | 3.820          | Open Manhole     | 0                     |

|                                                                                   |  |                                                                                     |
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Area Summary for Storm

| Pipe Number | PIMP Type | PIMP Name | PIMP (%) | Gross Area (ha) | Imp. Area (ha) | Pipe Total (ha) |
|-------------|-----------|-----------|----------|-----------------|----------------|-----------------|
| 1.000       | -         | -         | 100      | 0.041           | 0.041          | 0.041           |
| 2.000       | -         | -         | 100      | 0.056           | 0.056          | 0.056           |
| 1.001       | -         | -         | 100      | 0.034           | 0.034          | 0.034           |
| 1.002       | -         | -         | 100      | 0.061           | 0.061          | 0.061           |
| 1.003       | -         | -         | 100      | 0.000           | 0.000          | 0.000           |
|             |           |           |          | Total           | Total          | Total           |
|             |           |           |          | 0.192           | 0.192          | 0.192           |

Free Flowing Outfall Details for Storm

| Outfall Pipe Number | Outfall Name | C. Level (m) | I. Level (m) | Min I. Level (m) | D, L (mm) | W (mm) |
|---------------------|--------------|--------------|--------------|------------------|-----------|--------|
| S1.003              | S            | 52.390       | 48.270       | 0.000            | 0         | 0      |

Simulation Criteria for Storm

|                                 |       |                                            |       |
|---------------------------------|-------|--------------------------------------------|-------|
| Volumetric Runoff Coeff         | 0.750 | 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)                            | 60    |
| Foul Sewage per hectare (l/s)   | 0.000 | Output Interval (mins)                     | 1     |

|                             |   |                              |   |
|-----------------------------|---|------------------------------|---|
| 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  | 0 | Number of Real Time Controls | 0 |

Synthetic Rainfall Details

|                       |                   |                       |        |
|-----------------------|-------------------|-----------------------|--------|
| Rainfall Model        | FSR               | Profile Type          | Summer |
| Return Period (years) | 100               | Cv (Summer)           | 0.750  |
| Region                | England and Wales | Cv (Winter)           | 0.840  |
| M5-60 (mm)            | 18.000            | Storm Duration (mins) | 30     |
| Ratio R               | 0.360             |                       |        |

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|                                                                                   |  |                                                                                     |
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Online Controls for Storm

Hydro-Brake® Optimum Manhole: S4, DS/PN: S1.002, Volume (m³): 28.8

|                                   |                            |
|-----------------------------------|----------------------------|
| Unit Reference                    | MD-SHE-0110-7500-2200-7500 |
| Design Head (m)                   | 2.200                      |
| Design Flow (l/s)                 | 7.5                        |
| Flush-Flo™                        | Calculated                 |
| Objective                         | Minimise upstream storage  |
| Application                       | Surface                    |
| Sump Available                    | Yes                        |
| Diameter (mm)                     | 110                        |
| Invert Level (m)                  | 48.335                     |
| Minimum Outlet Pipe Diameter (mm) | 150                        |
| Suggested Manhole Diameter (mm)   | 1200                       |

| Control Points            | Head (m) | Flow (l/s) |
|---------------------------|----------|------------|
| Design Point (Calculated) | 2.200    | 7.5        |
| Flush-Flo™                | 0.486    | 6.5        |
| Kick-Flo®                 | 0.988    | 5.2        |
| Mean Flow over Head Range | -        | 6.0        |

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     | 3.8        | 1.200     | 5.6        | 3.000     | 8.7        | 7.000     | 13.0       |
| 0.200     | 5.7        | 1.400     | 6.1        | 3.500     | 9.3        | 7.500     | 13.4       |
| 0.300     | 6.2        | 1.600     | 6.5        | 4.000     | 9.9        | 8.000     | 13.8       |
| 0.400     | 6.4        | 1.800     | 6.8        | 4.500     | 10.5       | 8.500     | 14.2       |
| 0.500     | 6.5        | 2.000     | 7.2        | 5.000     | 11.1       | 9.000     | 14.6       |
| 0.600     | 6.4        | 2.200     | 7.5        | 5.500     | 11.6       | 9.500     | 15.0       |
| 0.800     | 6.1        | 2.400     | 7.8        | 6.000     | 12.1       |           |            |
| 1.000     | 5.2        | 2.600     | 8.1        | 6.500     | 12.5       |           |            |

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Micro Drainage

2 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 0

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 0.360

Region England and Wales Cv (Summer) 0.750

M5-60 (mm) 18.000

Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0

Analysis Timestep 2.5

Second Increment (Extended)

DTS Status OFF

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

Return Period(s) (years) 2, 30, 100

Climate Change (%) 0, 0, 40

PN

US/MH Name

Storm

Return Period

Climate Change

First (X) Surge

First (Y) Flood

First (Z) Overflow

Overflow Act.

Water Level (m)

S1.000

S1

30 Winter

2

+0%

100/15

Summer

48.689

S2.000

S2

30 Winter

2

+0%

100/15

Summer

48.689

S1.001

S3

30 Winter

2

+0%

100/15

Summer

48.689

S1.002

S4

30 Winter

2

+0%

2/15

Summer

48.688

S1.003

S-C1

30 Winter

2

+0%

48.364

PN

US/MH Name

Depth (m)

Volume (m³)

Flow / Cap.

Overflow (l/s)

Half Drain Time (mins)

Pipe Flow (l/s)

Status

Level Exceeded

S1.000

S1

-0.471

0.000

0.01

4.6

OK

S2.000

S2

-0.421

0.000

0.02

5.8

OK

S1.001

S3

-0.386

0.000

0.03

10.3

OK

S1.002

S4

0.053

0.000

0.10

6.3

SURCHARGED

S1.003

S-C1

-0.236

0.000

0.10

6.3

OK

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Micro  
Drainage

30 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 0

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 0.360

Region England and Wales Cv (Summer) 0.750

M5-60 (mm) 18.000

Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0

Analysis Timestep 2.5

Second Increment (Extended)

DTS Status OFF

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

Return Period(s) (years) 2, 30, 100

Climate Change (%) 0, 0, 40

| PN     | US/MH Name | Storm     | Return Period | Climate Change | First (X) Surge | First (Y) Flood | First (Z) Overflow | Overflow Act. | Water Level (m) |
|--------|------------|-----------|---------------|----------------|-----------------|-----------------|--------------------|---------------|-----------------|
| S1.000 | S1         | 60 Winter | 30            | +0%            | 100/15          | Summer          |                    |               | 48.985          |
| S2.000 | S2         | 60 Winter | 30            | +0%            | 100/15          | Summer          |                    |               | 48.985          |
| S1.001 | S3         | 60 Winter | 30            | +0%            | 100/15          | Summer          |                    |               | 48.985          |
| S1.002 | S4         | 60 Winter | 30            | +0%            | 2/15            | Summer          |                    |               | 48.981          |
| S1.003 | S-C1       | 30 Winter | 30            | +0%            |                 |                 |                    |               | 48.365          |

| PN     | US/MH Name | Depth (m) | Volume (m³) | Flow / Cap. | Overflow (l/s) | Half Drain Time (mins) | Pipe Flow (l/s) | Status     | Level Exceeded |
|--------|------------|-----------|-------------|-------------|----------------|------------------------|-----------------|------------|----------------|
| S1.000 | S1         | -0.175    | 0.000       | 0.01        |                |                        | 4.4             | OK         |                |
| S2.000 | S2         | -0.125    | 0.000       | 0.03        |                |                        | 6.8             | OK         |                |
| S1.001 | S3         | -0.090    | 0.000       | 0.02        |                |                        | 8.2             | OK         |                |
| S1.002 | S4         | 0.346     | 0.000       | 0.11        |                |                        | 6.5             | SURCHARGED |                |
| S1.003 | S-C1       | -0.235    | 0.000       | 0.11        |                |                        | 6.5             | OK         |                |

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| WML Consulting Ltd                                                                                                  |                                                          |                                     |               |                |                 |                        | Page 8             |               |                 |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------|---------------|----------------|-----------------|------------------------|--------------------|---------------|-----------------|
| No. 8 Oak Green<br>Stanley Green Business Park<br>Earl Rd, Cheadle Hulme, SK8 6QL                                   |                                                          |                                     |               |                |                 |                        |                    |               |                 |
| Date 07/07/2022 03:25                                                                                               |                                                          |                                     |               |                |                 | Designed by DBaker     |                    |               |                 |
| File 9003 - SURFACE WATER - ...                                                                                     |                                                          |                                     |               |                |                 | Checked by             |                    |               |                 |
| Innovyze                                                                                                            |                                                          |                                     |               |                |                 | Network 2020.1.3       |                    |               |                 |
| <p align="center"><u>100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm</u></p> |                                                          |                                     |               |                |                 |                        |                    |               |                 |
| 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        | 0             |                |                 |                        |                    |               |                 |
| 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                             | 0.360         |                |                 |                        |                    |               |                 |
| Region England and Wales Cv (Summer)                                                                                | 0.750                                                    |                                     |               |                |                 |                        |                    |               |                 |
| M5-60 (mm)                                                                                                          | 18.000                                                   | Cv (Winter)                         | 0.840         |                |                 |                        |                    |               |                 |
|                                                                                                                     |                                                          |                                     |               |                |                 |                        |                    |               |                 |
| Margin for Flood Risk Warning (mm)                                                                                  | 300.0                                                    |                                     |               |                |                 |                        |                    |               |                 |
| Analysis Timestep                                                                                                   | 2.5 Second Increment (Extended)                          |                                     |               |                |                 |                        |                    |               |                 |
| DTS Status                                                                                                          | OFF                                                      |                                     |               |                |                 |                        |                    |               |                 |
| 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 |                                     |               |                |                 |                        |                    |               |                 |
| Return Period(s) (years)                                                                                            | 2, 30, 100                                               |                                     |               |                |                 |                        |                    |               |                 |
| Climate Change (%)                                                                                                  | 0, 0, 40                                                 |                                     |               |                |                 |                        |                    |               |                 |
|                                                                                                                     |                                                          |                                     |               |                |                 |                        |                    |               |                 |
| PN                                                                                                                  | US/MH Name                                               | Storm                               | Return Period | Climate Change | First (X) Surge | First (Y) Flood        | First (Z) Overflow | Overflow Act. | Water Level (m) |
| S1.000                                                                                                              | S1                                                       | 120 Winter                          | 100           | +40%           | 100/15 Summer   |                        |                    |               | 50.628          |
| S2.000                                                                                                              | S2                                                       | 120 Winter                          | 100           | +40%           | 100/15 Summer   |                        |                    |               | 50.628          |
| S1.001                                                                                                              | S3                                                       | 120 Winter                          | 100           | +40%           | 100/15 Summer   |                        |                    |               | 50.628          |
| S1.002                                                                                                              | S4                                                       | 120 Winter                          | 100           | +40%           | 2/15 Summer     |                        |                    |               | 50.626          |
| S1.003                                                                                                              | S-C1                                                     | 120 Winter                          | 100           | +40%           |                 |                        |                    |               | 48.370          |
|                                                                                                                     |                                                          |                                     |               |                |                 |                        |                    |               |                 |
| PN                                                                                                                  | US/MH Name                                               | Depth (m)                           | Volume (m³)   | Flow / Cap.    | Overflow (l/s)  | Half Drain Time (mins) | Pipe Flow (l/s)    | Status        | Level Exceeded  |
| S1.000                                                                                                              | S1                                                       | 1.468                               | 0.000         | 0.01           |                 |                        | 4.4 FLOOD RISK     |               |                 |
| S2.000                                                                                                              | S2                                                       | 1.518                               | 0.000         | 0.03           |                 |                        | 6.9 SURCHARGED     |               |                 |
| S1.001                                                                                                              | S3                                                       | 1.553                               | 0.000         | 0.02           |                 |                        | 7.6 SURCHARGED     |               |                 |
| S1.002                                                                                                              | S4                                                       | 1.991                               | 0.000         | 0.12           |                 |                        | 7.6 SURCHARGED     |               |                 |
| S1.003                                                                                                              | S-C1                                                     | -0.230                              | 0.000         | 0.12           |                 |                        | 7.6 OK             |               |                 |
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**Proposed Surface Water Network  
(North)**

| WML Consulting Ltd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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| No. 8 Oak Green<br>Stanley Green Business Park<br>Earl Rd, Cheadle Hulme, SK8 6QL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| Date 23/08/2022 13:44                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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| File 9003 - SURFACE WATER - ...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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| Innovyze                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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| <p style="text-align: center;"><u>STORM SEWER DESIGN by the Modified Rational Method</u></p> <p style="text-align: center;"><u>Design Criteria for Storm</u></p> <p style="text-align: center;">Pipe Sizes STANDARD Manhole Sizes STANDARD</p> <p style="text-align: center;">FSR Rainfall Model - England and Wales</p> <table><tr><td>Return Period (years)</td><td>1</td><td>PIMP (%)</td><td>100</td></tr><tr><td>M5-60 (mm)</td><td>18.000</td><td>Add Flow / Climate Change (%)</td><td>0</td></tr><tr><td>Ratio R</td><td>0.360</td><td>Minimum Backdrop Height (m)</td><td>0.200</td></tr><tr><td>Maximum Rainfall (mm/hr)</td><td>50</td><td>Maximum Backdrop Height (m)</td><td>1.500</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> <p style="text-align: center;">Designed with Level Soffits</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |                                       |                |                  |                      |                    |                   |              |              |                                                                                     |                                                                                       | Return Period (years) | 1               | PIMP (%)       | 100            | M5-60 (mm)       | 18.000               | Add Flow / Climate Change (%) | 0                 | Ratio R      | 0.360        | Minimum Backdrop Height (m) | 0.200          | Maximum Rainfall (mm/hr) | 50     | Maximum Backdrop Height (m) | 1.500 | 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   |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |  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| Return Period (years)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1               | PIMP (%)                              | 100            |                  |                      |                    |                   |              |              |                                                                                     |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |            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| M5-60 (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 18.000          | Add Flow / Climate Change (%)         | 0              |                  |                      |                    |                   |              |              |                                                                                     |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |            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| Ratio R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.360           | Minimum Backdrop Height (m)           | 0.200          |                  |                      |                    |                   |              |              |                                                                                     |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |            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| Maximum Rainfall (mm/hr)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 50              | Maximum Backdrop Height (m)           | 1.500          |                  |                      |                    |                   |              |              |                                                                                     |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |            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                                                                                  |        |        |       |       |        |       |      |        |       |     |              |                                                                                       |        |       |       |        |       |      |        |       |     |     |              |                                                                                       |        |        |        |       |       |        |       |       |     |     |              |                                                                                       |        |        |       |       |        |       |     |       |     |      |              |                                                                                       |        |       |       |       |       |      |     |       |   |     |              |                                                                                       |
| Maximum Time of Concentration (mins)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 30              | Min Design Depth for Optimisation (m) | 1.200          |                  |                      |                    |                   |              |              |                                                                                     |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |     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| Foul Sewage (l/s/ha)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.000           | Min Vel for Auto Design only (m/s)    | 1.00           |                  |                      |                    |                   |              |              |                                                                                     |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |            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| Volumetric Runoff Coeff.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.750           | Min Slope for Optimisation (1:X)      | 500            |                  |                      |                    |                   |              |              |                                                                                     |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |            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| <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>S1.000</td><td>10.000</td><td>0.100</td><td>100.0</td><td>0.132</td><td>5.00</td><td>0.0</td><td>0.600</td><td>o</td><td>225</td><td>Pipe/Conduit</td><td></td></tr><tr><td>S1.001</td><td>9.000</td><td>0.025</td><td>360.0</td><td>0.042</td><td>0.00</td><td>0.0</td><td>0.600</td><td>o</td><td>900</td><td>Pipe/Conduit</td><td></td></tr><tr><td>S1.002</td><td>9.000</td><td>0.025</td><td>360.0</td><td>0.000</td><td>0.00</td><td>0.0</td><td>0.600</td><td>o</td><td>900</td><td>Pipe/Conduit</td><td></td></tr><tr><td>S1.003</td><td>36.000</td><td>0.080</td><td>450.0</td><td>0.039</td><td>0.00</td><td>0.0</td><td>0.600</td><td>o</td><td>900</td><td>Pipe/Conduit</td><td></td></tr><tr><td>S1.004</td><td>11.601</td><td>0.030</td><td>386.7</td><td>0.142</td><td>0.00</td><td>0.0</td><td>0.600</td><td>o</td><td>900</td><td>Pipe/Conduit</td><td></td></tr><tr><td>S1.005</td><td>10.396</td><td>0.020</td><td>519.8</td><td>0.000</td><td>0.00</td><td>0.0</td><td>0.600</td><td>o</td><td>900</td><td>Pipe/Conduit</td><td></td></tr><tr><td>S2.000</td><td>46.080</td><td>0.225</td><td>204.8</td><td>0.050</td><td>5.00</td><td>0.0</td><td>0.600</td><td>o</td><td>600</td><td>Pipe/Conduit</td><td></td></tr><tr><td>S2.001</td><td>8.217</td><td>0.040</td><td>205.4</td><td>0.059</td><td>0.00</td><td>0.0</td><td>0.600</td><td>o</td><td>750</td><td>Pipe/Conduit</td><td></td></tr><tr><td>S2.002</td><td>22.568</td><td>0.075</td><td>300.9</td><td>0.011</td><td>0.00</td><td>0.0</td><td>0.600</td><td>o</td><td>750</td><td>Pipe/Conduit</td><td></td></tr><tr><td>S2.003</td><td>5.013</td><td>0.020</td><td>250.7</td><td>0.039</td><td>0.00</td><td>0.0</td><td>0.600</td><td>o</td><td>600</td><td>Pipe/Conduit</td><td></td></tr><tr><td>S1.006</td><td>8.991</td><td>0.020</td><td>449.6</td><td>0.028</td><td>0.00</td><td>0.0</td><td>0.600</td><td>o</td><td>900</td><td>Pipe/Conduit</td><td></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 | S1.000                   | 10.000 | 0.100                       | 100.0 | 0.132                                | 5.00 | 0.0                                   | 0.600 | o                    | 225   | Pipe/Conduit                       |  | S1.001                   | 9.000  | 0.025                            | 360.0 | 0.042 | 0.00 | 0.0  | 0.600  | o    | 900    | Pipe/Conduit |  | S1.002 | 9.000 | 0.025 | 360.0 | 0.000 | 0.00 | 0.0    | 0.600 | o      | 900   | Pipe/Conduit |  | S1.003 | 36.000 | 0.080 | 450.0 | 0.039 | 0.00  | 0.0  | 0.600  | o     | 900  | Pipe/Conduit |  | S1.004 | 11.601 | 0.030 | 386.7 | 0.142  | 0.00 | 0.0    | 0.600 | o    | 900    | Pipe/Conduit |  | S1.005 | 10.396 | 0.020 | 519.8 | 0.000 | 0.00   | 0.0   | 0.600 | o      | 900   | Pipe/Conduit |  | S2.000 | 46.080 | 0.225 | 204.8 | 0.050  | 5.00  | 0.0  | 0.600  | o     | 600 | Pipe/Conduit |  | S2.001 | 8.217 | 0.040 | 205.4  | 0.059 | 0.00 | 0.0    | 0.600 | o   | 750 | Pipe/Conduit |  | S2.002 | 22.568 | 0.075  | 300.9 | 0.011 | 0.00   | 0.0   | 0.600 | o   | 750 | Pipe/Conduit |  | S2.003 | 5.013  | 0.020 | 250.7 | 0.039  | 0.00  | 0.0 | 0.600 | o   | 600  | Pipe/Conduit |  | S1.006 | 8.991 | 0.020 | 449.6 | 0.028 | 0.00 | 0.0 | 0.600 | o | 900 | Pipe/Conduit |  |
| 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                                                                        |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |     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| S1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10.000          | 0.100                                 | 100.0          | 0.132            | 5.00                 | 0.0                | 0.600             | o            | 225          | Pipe/Conduit                                                                        |  |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |                                                                                       |  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| S1.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 9.000           | 0.025                                 | 360.0          | 0.042            | 0.00                 | 0.0                | 0.600             | o            | 900          | Pipe/Conduit                                                                        |  |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                            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| S1.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 9.000           | 0.025                                 | 360.0          | 0.000            | 0.00                 | 0.0                | 0.600             | o            | 900          | Pipe/Conduit                                                                        |  |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                            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| S1.003                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 36.000          | 0.080                                 | 450.0          | 0.039            | 0.00                 | 0.0                | 0.600             | o            | 900          | Pipe/Conduit                                                                        |  |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                            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| S1.004                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 11.601          | 0.030                                 | 386.7          | 0.142            | 0.00                 | 0.0                | 0.600             | o            | 900          | Pipe/Conduit                                                                        |  |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |                                                                                       |  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| S1.005                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10.396          | 0.020                                 | 519.8          | 0.000            | 0.00                 | 0.0                | 0.600             | o            | 900          | Pipe/Conduit                                                                        |  |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |                                                                                       |  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| S2.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 46.080          | 0.225                                 | 204.8          | 0.050            | 5.00                 | 0.0                | 0.600             | o            | 600          | Pipe/Conduit                                                                        |  |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |                                                                                       |        |        |       |       |        |       |      |        |       |     |              |                                                                                       |        |       |       |        |       |      |        |       |     |     |              |                                                                                       |        |        |        |       |       |        |       |       |     |     |              |                                                                                       |        |        |       |       |        |       |     |       |     |      |              |                                                                                       |        |       |       |       |       |      |     |       |   |     |              |                                                                                       |
| S2.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 8.217           | 0.040                                 | 205.4          | 0.059            | 0.00                 | 0.0                | 0.600             | o            | 750          | Pipe/Conduit                                                                        |  |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |                                                                                       |        |        |       |       |        |       |      |        |       |     |              |                                                                                       |        |       |       |        |       |      |        |       |     |     |              |                                                                                       |        |        |        |       |       |        |       |       |     |     |              |                                                                                       |        |        |       |       |        |       |     |       |     |      |              |                                                                                       |        |       |       |       |       |      |     |       |   |     |              |                                                                                       |
| S2.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 22.568          | 0.075                                 | 300.9          | 0.011            | 0.00                 | 0.0                | 0.600             | o            | 750          | Pipe/Conduit                                                                        |  |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |                                                                                       |        |        |       |       |        |       |      |        |       |     |              |                                                                                       |        |       |       |        |       |      |        |       |     |     |              |                                                                                       |        |        |        |       |       |        |       |       |     |     |              |                                                                                       |        |        |       |       |        |       |     |       |     |      |              |                                                                                       |        |       |       |       |       |      |     |       |   |     |              |                                                                                       |
| S2.003                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5.013           | 0.020                                 | 250.7          | 0.039            | 0.00                 | 0.0                | 0.600             | o            | 600          | Pipe/Conduit                                                                        |  |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |                                                                                       |        |        |       |       |        |       |      |        |       |     |              |                                                                                       |        |       |       |        |       |      |        |       |     |     |              |                                                                                       |        |        |        |       |       |        |       |       |     |     |              |                                                                                       |        |        |       |       |        |       |     |       |     |      |              |                                                                                       |        |       |       |       |       |      |     |       |   |     |              |                                                                                       |
| S1.006                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 8.991           | 0.020                                 | 449.6          | 0.028            | 0.00                 | 0.0                | 0.600             | o            | 900          | Pipe/Conduit                                                                        |  |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |                                                                                       |        |        |       |       |        |       |      |        |       |     |              |                                                                                       |        |       |       |        |       |      |        |       |     |     |              |                                                                                       |        |        |        |       |       |        |       |       |     |     |              |                                                                                       |        |        |       |       |        |       |     |       |     |      |              |                                                                                       |        |       |       |       |       |      |     |       |   |     |              |                                                                                       |
| <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>S1.000</td><td>46.31</td><td>5.13</td><td>47.400</td><td>0.132</td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.31</td><td>52.0</td><td>16.6</td></tr><tr><td>S1.001</td><td>45.96</td><td>5.22</td><td>45.800</td><td>0.174</td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.65</td><td>1046.8</td><td>21.7</td></tr><tr><td>S1.002</td><td>45.62</td><td>5.31</td><td>45.775</td><td>0.174</td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.65</td><td>1046.8</td><td>21.7</td></tr><tr><td>S1.003</td><td>44.17</td><td>5.72</td><td>45.750</td><td>0.213</td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.47</td><td>935.5</td><td>25.5</td></tr><tr><td>S1.004</td><td>43.76</td><td>5.84</td><td>45.670</td><td>0.355</td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.59</td><td>1009.8</td><td>42.1</td></tr><tr><td>S1.005</td><td>43.34</td><td>5.97</td><td>45.640</td><td>0.355</td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.37</td><td>869.9</td><td>42.1</td></tr><tr><td>S2.000</td><td>45.10</td><td>5.45</td><td>47.280</td><td>0.050</td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.70</td><td>480.1</td><td>6.1</td></tr><tr><td>S2.001</td><td>44.85</td><td>5.52</td><td>46.055</td><td>0.109</td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.95</td><td>861.0</td><td>13.2</td></tr><tr><td>S2.002</td><td>44.04</td><td>5.76</td><td>46.015</td><td>0.120</td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.61</td><td>710.4</td><td>14.3</td></tr><tr><td>S2.003</td><td>43.85</td><td>5.81</td><td>45.940</td><td>0.159</td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.53</td><td>433.6</td><td>18.9</td></tr><tr><td>S1.006</td><td>43.01</td><td>6.07</td><td>45.620</td><td>0.542</td><td>0.0</td><td>0.0</td><td>0.0</td><td>1.47</td><td>935.9</td><td>63.1</td></tr></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)               | S1.000         | 46.31                    | 5.13   | 47.400                      | 0.132 | 0.0                                  | 0.0  | 0.0                                   | 1.31  | 52.0                 | 16.6  | S1.001                             | 45.96                                                                                 | 5.22                     | 45.800 | 0.174                            | 0.0   | 0.0   | 0.0  | 1.65 | 1046.8 | 21.7 | S1.002 | 45.62        | 5.31                                                                                  | 45.775 | 0.174 | 0.0   | 0.0   | 0.0   | 1.65 | 1046.8 | 21.7  | S1.003 | 44.17 | 5.72         | 45.750                                                                                | 0.213  | 0.0    | 0.0   | 0.0   | 1.47  | 935.5 | 25.5 | S1.004 | 43.76 | 5.84 | 45.670       | 0.355                                                                                 | 0.0    | 0.0    | 0.0   | 1.59  | 1009.8 | 42.1 | S1.005 | 43.34 | 5.97 | 45.640 | 0.355        | 0.0                                                                                   | 0.0    | 0.0    | 1.37  | 869.9 | 42.1  | S2.000 | 45.10 | 5.45  | 47.280 | 0.050 | 0.0          | 0.0                                                                                   | 0.0    | 1.70   | 480.1 | 6.1   | S2.001 | 44.85 | 5.52 | 46.055 | 0.109 | 0.0 | 0.0          | 0.0                                                                                   | 1.95   | 861.0 | 13.2  | S2.002 | 44.04 | 5.76 | 46.015 | 0.120 | 0.0 | 0.0 | 0.0          | 1.61                                                                                  | 710.4  | 14.3   | S2.003 | 43.85 | 5.81  | 45.940 | 0.159 | 0.0   | 0.0 | 0.0 | 1.53         | 433.6                                                                                 | 18.9   | S1.006 | 43.01 | 6.07  | 45.620 | 0.542 | 0.0 | 0.0   | 0.0 | 1.47 | 935.9        | 63.1                                                                                  |        |       |       |       |       |      |     |       |   |     |              |                                                                                       |
| 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)                                                                       |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |     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| S1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 46.31           | 5.13                                  | 47.400         | 0.132            | 0.0                  | 0.0                | 0.0               | 1.31         | 52.0         | 16.6                                                                                |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |     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| S1.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 45.96           | 5.22                                  | 45.800         | 0.174            | 0.0                  | 0.0                | 0.0               | 1.65         | 1046.8       | 21.7                                                                                |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |     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| S1.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 45.62           | 5.31                                  | 45.775         | 0.174            | 0.0                  | 0.0                | 0.0               | 1.65         | 1046.8       | 21.7                                                                                |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |     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| S1.003                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 44.17           | 5.72                                  | 45.750         | 0.213            | 0.0                  | 0.0                | 0.0               | 1.47         | 935.5        | 25.5                                                                                |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |     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| S1.004                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 43.76           | 5.84                                  | 45.670         | 0.355            | 0.0                  | 0.0                | 0.0               | 1.59         | 1009.8       | 42.1                                                                                |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |     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| S1.005                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 43.34           | 5.97                                  | 45.640         | 0.355            | 0.0                  | 0.0                | 0.0               | 1.37         | 869.9        | 42.1                                                                                |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |            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| S2.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 45.10           | 5.45                                  | 47.280         | 0.050            | 0.0                  | 0.0                | 0.0               | 1.70         | 480.1        | 6.1                                                                                 |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |            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| S2.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 44.85           | 5.52                                  | 46.055         | 0.109            | 0.0                  | 0.0                | 0.0               | 1.95         | 861.0        | 13.2                                                                                |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |     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| S2.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 44.04           | 5.76                                  | 46.015         | 0.120            | 0.0                  | 0.0                | 0.0               | 1.61         | 710.4        | 14.3                                                                                |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |            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| S2.003                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 43.85           | 5.81                                  | 45.940         | 0.159            | 0.0                  | 0.0                | 0.0               | 1.53         | 433.6        | 18.9                                                                                |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |     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| S1.006                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 43.01           | 6.07                                  | 45.620         | 0.542            | 0.0                  | 0.0                | 0.0               | 1.47         | 935.9        | 63.1                                                                                |                                                                                       |                       |                 |                |                |                  |                      |                               |                   |              |              |                             |                |                          |        |                             |       |                                      |      |                                       |       |                      |       |                                    |                                                                                       |                          |        |                                  |       |       |      |      |        |      |        |              |                                                                                       |        |       |       |       |       |      |        |       |        |       |              |                                                                                       |        |        |       |       |       |       |      |        |       |      |              |                                                                                       |        |        |       |       |        |      |        |       |      |        |              |                                                                                       |        |        |       |       |       |        |       |       |        |       |              |     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| ©1982-2020 Innovyze                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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|                                                                                   |                 |                |                |                  |                      |                                  |                   |              |              |               |                                                                                     |  |
|-----------------------------------------------------------------------------------|-----------------|----------------|----------------|------------------|----------------------|----------------------------------|-------------------|--------------|--------------|---------------|-------------------------------------------------------------------------------------|--|
| WML Consulting Ltd                                                                |                 |                |                |                  |                      |                                  |                   |              |              |               | Page 2                                                                              |  |
| No. 8 Oak Green<br>Stanley Green Business Park<br>Earl Rd, Cheadle Hulme, SK8 6QL |                 |                |                |                  |                      |                                  |                   |              |              |               |  |  |
| Date 23/08/2022 13:44<br>File 9003 - SURFACE WATER - ...                          |                 |                |                |                  |                      | Designed by DBaker<br>Checked by |                   |              |              |               |                                                                                     |  |
| Innovyze                                                                          |                 |                |                |                  |                      | Network 2020.1.3                 |                   |              |              |               |                                                                                     |  |
| <u>Network Design Table for Storm</u>                                             |                 |                |                |                  |                      |                                  |                   |              |              |               |                                                                                     |  |
| 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                                                                      |  |
| S1.007                                                                            | 3.417           | 0.100          | 34.2           | 0.009            | 0.00                 | 0.0                              | 0.600             | o            | 300          | Pipe/Conduit  |  |  |
| <u>Network Results Table</u>                                                      |                 |                |                |                  |                      |                                  |                   |              |              |               |                                                                                     |  |
| 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) |                                                                                     |  |
| S1.007                                                                            | 42.94           | 6.09           | 45.600         | 0.551            | 0.0                  | 0.0                              | 0.0               | 2.70         | 190.8        | 64.1          |                                                                                     |  |
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| WML Consulting Ltd                                                                |                                  | Page 3                                                                              |
| No. 8 Oak Green<br>Stanley Green Business Park<br>Earl Rd, Cheadle Hulme, SK8 6QL |                                  |  |
| Date 23/08/2022 13:44<br>File 9003 - SURFACE WATER - ...                          | Designed by DBaker<br>Checked by |                                                                                     |
| Innovyze                                                                          |                                  | Network 2020.1.3                                                                    |

### 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) |
|---------|-----------|--------------|---------------|--------------------|--------|---------------------------|---------------|--------|---------------------------|---------------|---------------|
| S5      | 50.235    | 2.835        | Open Manhole  | 1200               | S1.000 | 47.400                    | 225           |        |                           |               |               |
| S6      | 50.060    | 4.260        | Open Manhole  | 2400               | S1.001 | 45.800                    | 900           | S1.000 | 47.300                    | 225           | 825           |
| S7      | 49.905    | 4.130        | Open Manhole  | 2400               | S1.002 | 45.775                    | 900           | S1.001 | 45.775                    | 900           |               |
| S8      | 49.750    | 4.000        | Open Manhole  | 2400               | S1.003 | 45.750                    | 900           | S1.002 | 45.750                    | 900           |               |
| S9      | 48.970    | 3.300        | Open Manhole  | 2400               | S1.004 | 45.670                    | 900           | S1.003 | 45.670                    | 900           |               |
| S10     | 48.620    | 2.980        | Open Manhole  | 2400               | S1.005 | 45.640                    | 900           | S1.004 | 45.640                    | 900           |               |
| S11.7   | 50.200    | 2.920        | Open Manhole  | 1500               | S2.000 | 47.280                    | 600           |        |                           |               |               |
| S11.17  | 49.210    | 3.155        | Open Manhole  | 1800               | S2.001 | 46.055                    | 750           | S2.000 | 47.055                    | 600           | 850           |
| S11.21  | 47.860    | 1.845        | Open Manhole  | 1800               | S2.002 | 46.015                    | 750           | S2.001 | 46.015                    | 750           |               |
| S11.29  | 47.860    | 1.920        | Open Manhole  | 1800               | S2.003 | 45.940                    | 600           | S2.002 | 45.940                    | 750           |               |
| S11     | 48.200    | 2.580        | Open Manhole  | 2400               | S1.006 | 45.620                    | 900           | S1.005 | 45.620                    | 900           |               |
|         |           |              |               |                    |        |                           |               | S2.003 | 45.920                    | 600           |               |
| S12     | 47.800    | 2.200        | Open Manhole  | 2400               | S1.007 | 45.600                    | 300           | S1.006 | 45.600                    | 900           |               |
| S       | 47.580    | 2.080        | Open Manhole  | 0                  |        | OUTFALL                   |               | S1.007 | 45.500                    | 300           |               |

| MH Name | Manhole Easting (m) | Manhole Northing (m) | Intersection Easting (m) | Intersection Northing (m) | Manhole Access | Layout (North)                                                                        |
|---------|---------------------|----------------------|--------------------------|---------------------------|----------------|---------------------------------------------------------------------------------------|
| S5      | 381049.420          | 387684.928           | 381049.420               | 387684.928                | Required       |  |
| S6      | 381057.203          | 387678.650           | 381057.203               | 387678.650                | Required       |  |
| S7      | 381065.859          | 387676.184           | 381065.859               | 387676.184                | Required       |  |
| S8      | 381073.723          | 387680.560           | 381073.723               | 387680.560                | Required       |  |
| S9      | 381096.322          | 387708.583           | 381096.322               | 387708.583                | Required       |  |
| S10     | 381102.579          | 387718.352           | 381102.579               | 387718.352                | Required       |  |
| S11.7   | 381104.901          | 387665.919           | 381104.901               | 387665.919                | Required       |  |



| WML Consulting Ltd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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-------|--------|-------|--------------|------|----|------------|-------------|---------|-------------|-------------|-------------|---------------|--------------------|--------|--------|-------|----|--------|--------|-------|--------------|------|--------|-------|-------|----|--------|--------|-------|--------------|------|--------|-------|-------|----|--------|--------|-------|--------------|------|--------|--------|-------|----|--------|--------|-------|--------------|------|--------|--------|-------|-----|--------|--------|-------|--------------|------|--------|--------|-------|-----|--------|--------|-------|--------------|------|--------|--------|-------|--------|--------|--------|-------|--------------|------|--------|-------|-------|--------|--------|--------|-------|--------------|------|--------|--------|-------|--------|--------|--------|-------|--------------|------|--------|-------|-------|-----|--------|--------|-------|--------------|------|--------|-------|-------|-----|--------|--------|-------|--------------|------|--------|-------|------|---|--------|--------|-------|--------------|---|
| No. 8 Oak Green<br>Stanley Green Business Park<br>Earl Rd, Cheadle Hulme, SK8 6QL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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| Date 23/08/2022 13:44<br>File 9003 - SURFACE WATER - ...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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                    |         |             |             |             |               |                    |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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  |        |       |              |      |        |       |      |   |        |        |       |              |   |
| Innovyze                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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                    |         |             |             |             |               |                    |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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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>S1.000</td><td>o</td><td>225</td><td>S5</td><td>50.235</td><td>47.400</td><td>2.610</td><td>Open Manhole</td><td>1200</td></tr><tr><td>S1.001</td><td>o</td><td>900</td><td>S6</td><td>50.060</td><td>45.800</td><td>3.360</td><td>Open Manhole</td><td>2400</td></tr><tr><td>S1.002</td><td>o</td><td>900</td><td>S7</td><td>49.905</td><td>45.775</td><td>3.230</td><td>Open Manhole</td><td>2400</td></tr><tr><td>S1.003</td><td>o</td><td>900</td><td>S8</td><td>49.750</td><td>45.750</td><td>3.100</td><td>Open Manhole</td><td>2400</td></tr><tr><td>S1.004</td><td>o</td><td>900</td><td>S9</td><td>48.970</td><td>45.670</td><td>2.400</td><td>Open Manhole</td><td>2400</td></tr><tr><td>S1.005</td><td>o</td><td>900</td><td>S10</td><td>48.620</td><td>45.640</td><td>2.080</td><td>Open Manhole</td><td>2400</td></tr><tr><td>S2.000</td><td>o</td><td>600</td><td>S11.7</td><td>50.200</td><td>47.280</td><td>2.320</td><td>Open Manhole</td><td>1500</td></tr><tr><td>S2.001</td><td>o</td><td>750</td><td>S11.17</td><td>49.210</td><td>46.055</td><td>2.405</td><td>Open Manhole</td><td>1800</td></tr><tr><td>S2.002</td><td>o</td><td>750</td><td>S11.21</td><td>47.860</td><td>46.015</td><td>1.095</td><td>Open Manhole</td><td>1800</td></tr><tr><td>S2.003</td><td>o</td><td>600</td><td>S11.29</td><td>47.860</td><td>45.940</td><td>1.320</td><td>Open Manhole</td><td>1800</td></tr><tr><td>S1.006</td><td>o</td><td>900</td><td>S11</td><td>48.200</td><td>45.620</td><td>1.680</td><td>Open Manhole</td><td>2400</td></tr><tr><td>S1.007</td><td>o</td><td>300</td><td>S12</td><td>47.800</td><td>45.600</td><td>1.900</td><td>Open Manhole</td><td>2400</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>S1.000</td><td>10.000</td><td>100.0</td><td>S6</td><td>50.060</td><td>47.300</td><td>2.535</td><td>Open Manhole</td><td>2400</td></tr><tr><td>S1.001</td><td>9.000</td><td>360.0</td><td>S7</td><td>49.905</td><td>45.775</td><td>3.230</td><td>Open Manhole</td><td>2400</td></tr><tr><td>S1.002</td><td>9.000</td><td>360.0</td><td>S8</td><td>49.750</td><td>45.750</td><td>3.100</td><td>Open Manhole</td><td>2400</td></tr><tr><td>S1.003</td><td>36.000</td><td>450.0</td><td>S9</td><td>48.970</td><td>45.670</td><td>2.400</td><td>Open Manhole</td><td>2400</td></tr><tr><td>S1.004</td><td>11.601</td><td>386.7</td><td>S10</td><td>48.620</td><td>45.640</td><td>2.080</td><td>Open Manhole</td><td>2400</td></tr><tr><td>S1.005</td><td>10.396</td><td>519.8</td><td>S11</td><td>48.200</td><td>45.620</td><td>1.680</td><td>Open Manhole</td><td>2400</td></tr><tr><td>S2.000</td><td>46.080</td><td>204.8</td><td>S11.17</td><td>49.210</td><td>47.055</td><td>1.555</td><td>Open Manhole</td><td>1800</td></tr><tr><td>S2.001</td><td>8.217</td><td>205.4</td><td>S11.21</td><td>47.860</td><td>46.015</td><td>1.095</td><td>Open Manhole</td><td>1800</td></tr><tr><td>S2.002</td><td>22.568</td><td>300.9</td><td>S11.29</td><td>47.860</td><td>45.940</td><td>1.170</td><td>Open Manhole</td><td>1800</td></tr><tr><td>S2.003</td><td>5.013</td><td>250.7</td><td>S11</td><td>48.200</td><td>45.920</td><td>1.680</td><td>Open Manhole</td><td>2400</td></tr><tr><td>S1.006</td><td>8.991</td><td>449.6</td><td>S12</td><td>47.800</td><td>45.600</td><td>1.300</td><td>Open Manhole</td><td>2400</td></tr><tr><td>S1.007</td><td>3.417</td><td>34.2</td><td>S</td><td>47.580</td><td>45.500</td><td>1.780</td><td>Open Manhole</td><td>0</td></tr></tbody></table> |                                  |                                                                                     | PN      | Hyd Sect    | Diam (mm)   | MH Name     | C.Level (m)   | I.Level (m)        | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) | S1.000 | o | 225 | S5 | 50.235 | 47.400 | 2.610 | Open Manhole | 1200 | S1.001 | o | 900 | S6 | 50.060 | 45.800 | 3.360 | Open Manhole | 2400 | S1.002 | o | 900 | S7 | 49.905 | 45.775 | 3.230 | Open Manhole | 2400 | S1.003 | o | 900 | S8 | 49.750 | 45.750 | 3.100 | Open Manhole | 2400 | S1.004 | o | 900 | S9 | 48.970 | 45.670 | 2.400 | Open Manhole | 2400 | S1.005 | o | 900 | S10 | 48.620 | 45.640 | 2.080 | Open Manhole | 2400 | S2.000 | o | 600 | S11.7 | 50.200 | 47.280 | 2.320 | Open Manhole | 1500 | S2.001 | o | 750 | S11.17 | 49.210 | 46.055 | 2.405 | Open Manhole | 1800 | S2.002 | o | 750 | S11.21 | 47.860 | 46.015 | 1.095 | Open Manhole | 1800 | S2.003 | o | 600 | S11.29 | 47.860 | 45.940 | 1.320 | Open Manhole | 1800 | S1.006 | o | 900 | S11 | 48.200 | 45.620 | 1.680 | Open Manhole | 2400 | S1.007 | o | 300 | S12 | 47.800 | 45.600 | 1.900 | Open Manhole | 2400 | PN | Length (m) | Slope (1:X) | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) | S1.000 | 10.000 | 100.0 | S6 | 50.060 | 47.300 | 2.535 | Open Manhole | 2400 | S1.001 | 9.000 | 360.0 | S7 | 49.905 | 45.775 | 3.230 | Open Manhole | 2400 | S1.002 | 9.000 | 360.0 | S8 | 49.750 | 45.750 | 3.100 | Open Manhole | 2400 | S1.003 | 36.000 | 450.0 | S9 | 48.970 | 45.670 | 2.400 | Open Manhole | 2400 | S1.004 | 11.601 | 386.7 | S10 | 48.620 | 45.640 | 2.080 | Open Manhole | 2400 | S1.005 | 10.396 | 519.8 | S11 | 48.200 | 45.620 | 1.680 | Open Manhole | 2400 | S2.000 | 46.080 | 204.8 | S11.17 | 49.210 | 47.055 | 1.555 | Open Manhole | 1800 | S2.001 | 8.217 | 205.4 | S11.21 | 47.860 | 46.015 | 1.095 | Open Manhole | 1800 | S2.002 | 22.568 | 300.9 | S11.29 | 47.860 | 45.940 | 1.170 | Open Manhole | 1800 | S2.003 | 5.013 | 250.7 | S11 | 48.200 | 45.920 | 1.680 | Open Manhole | 2400 | S1.006 | 8.991 | 449.6 | S12 | 47.800 | 45.600 | 1.300 | Open Manhole | 2400 | S1.007 | 3.417 | 34.2 | S | 47.580 | 45.500 | 1.780 | Open Manhole | 0 |
| PN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Hyd Sect                         | Diam (mm)                                                                           | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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  |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S5      | 50.235      | 47.400      | 2.610       | Open Manhole  | 1200               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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  |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S1.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S6      | 50.060      | 45.800      | 3.360       | Open Manhole  | 2400               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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  |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S1.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S7      | 49.905      | 45.775      | 3.230       | Open Manhole  | 2400               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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  |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S1.003                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S8      | 49.750      | 45.750      | 3.100       | Open Manhole  | 2400               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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  |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S1.004                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S9      | 48.970      | 45.670      | 2.400       | Open Manhole  | 2400               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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  |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S1.005                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S10     | 48.620      | 45.640      | 2.080       | Open Manhole  | 2400               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |        |        |       |              |      |    |            |             |         |             |             |             |               |                    |        |        |       |    |        |        |       |              |      |        |       |       |    |        |        |       |              |      |        |       |       |    |        |        |       |              |      |        |        |       |    |        |        |       |              |      |        |        |       |     |        |        |       |              |      |        |        |       |     |        |        |       |              |      |        |        |       |        |        |        |       |              |      |        |       |       |        |        |        |       |              |      |        |        |       |        |        |        |       |              |      |        |       |       |     |        |        |       |              |      |        |       |       |     |        |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S2.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S11.7   | 50.200      | 47.280      | 2.320       | Open Manhole  | 1500               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |        |        |       |              |      |    |            |             |         |             |             |             |               |                    |        |        |       |    |        |        |       |              |      |        |       |       |    |        |        |       |              |      |        |       |       |    |        |        |       |              |      |        |        |       |    |        |        |       |              |      |        |        |       |     |        |        |       |              |      |        |        |       |     |        |        |       |              |      |        |        |       |        |        |        |       |              |      |        |       |       |        |        |        |       |              |      |        |        |       |        |        |        |       |              |      |        |       |       |     |        |        |       |              |      |        |       |       |     |        |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S2.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S11.17  | 49.210      | 46.055      | 2.405       | Open Manhole  | 1800               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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  |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S2.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S11.21  | 47.860      | 46.015      | 1.095       | Open Manhole  | 1800               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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  |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S2.003                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S11.29  | 47.860      | 45.940      | 1.320       | Open Manhole  | 1800               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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  |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S1.006                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S11     | 48.200      | 45.620      | 1.680       | Open Manhole  | 2400               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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| S1.007                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S12     | 47.800      | 45.600      | 1.900       | Open Manhole  | 2400               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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| PN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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                    | MH Name | C.Level (m) | I.Level (m) | D.Depth (m) | MH Connection | MH DIAM., L*W (mm) |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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  |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S6      | 50.060      | 47.300      | 2.535       | Open Manhole  | 2400               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |        |        |       |              |      |    |            |             |         |             |             |             |               |                    |        |        |       |    |        |        |       |              |      |        |       |       |    |        |        |       |              |      |        |       |       |    |        |        |       |              |      |        |        |       |    |        |        |       |              |      |        |        |       |     |        |        |       |              |      |        |        |       |     |        |        |       |              |      |        |        |       |        |        |        |       |              |      |        |       |       |        |        |        |       |              |      |        |        |       |        |        |        |       |              |      |        |       |       |     |        |        |       |              |      |        |       |       |     |        |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S1.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S7      | 49.905      | 45.775      | 3.230       | Open Manhole  | 2400               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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  |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S1.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S8      | 49.750      | 45.750      | 3.100       | Open Manhole  | 2400               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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  |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S1.003                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S9      | 48.970      | 45.670      | 2.400       | Open Manhole  | 2400               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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  |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S1.004                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S10     | 48.620      | 45.640      | 2.080       | Open Manhole  | 2400               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |        |        |       |              |      |    |            |             |         |             |             |             |               |                    |        |        |       |    |        |        |       |              |      |        |       |       |    |        |        |       |              |      |        |       |       |    |        |        |       |              |      |        |        |       |    |        |        |       |              |      |        |        |       |     |        |        |       |              |      |        |        |       |     |        |        |       |              |      |        |        |       |        |        |        |       |              |      |        |       |       |        |        |        |       |              |      |        |        |       |        |        |        |       |              |      |        |       |       |     |        |        |       |              |      |        |       |       |     |      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| S1.005                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S11     | 48.200      | 45.620      | 1.680       | Open Manhole  | 2400               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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| S2.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S11.17  | 49.210      | 47.055      | 1.555       | Open Manhole  | 1800               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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| S2.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S11.21  | 47.860      | 46.015      | 1.095       | Open Manhole  | 1800               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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  |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S2.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S11.29  | 47.860      | 45.940      | 1.170       | Open Manhole  | 1800               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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| S2.003                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S11     | 48.200      | 45.920      | 1.680       | Open Manhole  | 2400               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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| S1.006                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S12     | 47.800      | 45.600      | 1.300       | Open Manhole  | 2400               |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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  |        |       |              |      |        |       |      |   |        |        |       |              |   |
| S1.007                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                    | S       | 47.580      | 45.500      | 1.780       | Open Manhole  | 0                  |             |               |                    |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |    |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |       |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |        |        |        |       |              |      |        |   |     |     |        |        |       |              |      |        |   |     |     |      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| ©1982-2020 Innovyze                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|------------|-----------|------------|-------|-----|-------|-----|-------|------|-------|------|-------|-----|-------|-----|-------|------|-------|------|-------|-----|-------|-----|-------|------|-------|------|-------|-----|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|-----|-------|------|-------|------|-------|------|-------|-----|-------|------|-------|------|--|--|-------|-----|-------|------|-------|------|--|--|
| WML Consulting Ltd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                  | Page 7                                                                              |            |            |            |            |            |            |           |            |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |     |       |      |       |      |  |  |       |     |       |      |       |      |  |  |
| No. 8 Oak Green<br>Stanley Green Business Park<br>Earl Rd, Cheadle Hulme, SK8 6QL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                  |  |            |            |            |            |            |            |           |            |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |     |       |      |       |      |  |  |       |     |       |      |       |      |  |  |
| Date 23/08/2022 13:44<br>File 9003 - SURFACE WATER - ...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Designed by DBaker<br>Checked by |                                                                                     |            |            |            |            |            |            |           |            |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |     |       |      |       |      |  |  |       |     |       |      |       |      |  |  |
| Innovyze                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Network 2020.1.3                 |                                                                                     |            |            |            |            |            |            |           |            |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |     |       |      |       |      |  |  |       |     |       |      |       |      |  |  |
| <div>Online Controls for Storm</div> <div>Hydro-Brake® Optimum Manhole: S11.29, DS/PN: S2.003, Volume (m³): 14.1</div> <div><div>Unit Reference MD-SHE-0134-1000-1800-1000</div><div>Design Head (m)1.800</div><div>Design Flow (l/s)10.0</div><div>Flush-Flo™Calculated</div><div>ObjectiveMinimise upstream storage</div><div>ApplicationSurface</div><div>Sump AvailableYes</div><div>Diameter (mm)134</div><div>Invert Level (m)45.940</div><div>Minimum Outlet Pipe Diameter (mm)150</div><div>Suggested Manhole Diameter (mm)1500</div></div> <div><div>Control PointsHead (m)Flow (l/s)</div><div>Design Point (Calculated)1.80010.0</div><div>Flush-Flo™0.52510.0</div><div>Kick-Flo®1.0897.9</div><div>Mean Flow over Head Range-8.7</div></div> <div>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</div> <table><tr><td>Depth (m)</td><td>Flow (l/s)</td><td>Depth (m)</td><td>Flow (l/s)</td><td>Depth (m)</td><td>Flow (l/s)</td><td>Depth (m)</td><td>Flow (l/s)</td></tr><tr><td>0.100</td><td>4.8</td><td>1.200</td><td>8.3</td><td>3.000</td><td>12.7</td><td>7.000</td><td>19.1</td></tr><tr><td>0.200</td><td>8.6</td><td>1.400</td><td>8.9</td><td>3.500</td><td>13.7</td><td>7.500</td><td>19.7</td></tr><tr><td>0.300</td><td>9.5</td><td>1.600</td><td>9.5</td><td>4.000</td><td>14.6</td><td>8.000</td><td>20.3</td></tr><tr><td>0.400</td><td>9.8</td><td>1.800</td><td>10.0</td><td>4.500</td><td>15.4</td><td>8.500</td><td>20.9</td></tr><tr><td>0.500</td><td>10.0</td><td>2.000</td><td>10.5</td><td>5.000</td><td>16.2</td><td>9.000</td><td>21.5</td></tr><tr><td>0.600</td><td>9.9</td><td>2.200</td><td>11.0</td><td>5.500</td><td>17.0</td><td>9.500</td><td>22.1</td></tr><tr><td>0.800</td><td>9.6</td><td>2.400</td><td>11.5</td><td>6.000</td><td>17.7</td><td></td><td></td></tr><tr><td>1.000</td><td>8.7</td><td>2.600</td><td>11.9</td><td>6.500</td><td>18.4</td><td></td><td></td></tr></table> <div>Hydro-Brake® Optimum Manhole: S12, DS/PN: S1.007, Volume (m³): 14.1</div> <div><div>Unit Reference MD-SHE-0231-3250-2000-3250</div><div>Design Head (m)2.000</div><div>Design Flow (l/s)32.5</div><div>Flush-Flo™Calculated</div><div>ObjectiveMinimise upstream storage</div><div>ApplicationSurface</div><div>Sump AvailableYes</div><div>Diameter (mm)231</div><div>Invert Level (m)45.600</div><div>Minimum Outlet Pipe Diameter (mm)300</div><div>Suggested Manhole Diameter (mm)1800</div></div> |                                  |                                                                                     | Depth (m)  | Flow (l/s) | Depth (m)  | Flow (l/s) | Depth (m)  | Flow (l/s) | Depth (m) | Flow (l/s) | 0.100 | 4.8 | 1.200 | 8.3 | 3.000 | 12.7 | 7.000 | 19.1 | 0.200 | 8.6 | 1.400 | 8.9 | 3.500 | 13.7 | 7.500 | 19.7 | 0.300 | 9.5 | 1.600 | 9.5 | 4.000 | 14.6 | 8.000 | 20.3 | 0.400 | 9.8 | 1.800 | 10.0 | 4.500 | 15.4 | 8.500 | 20.9 | 0.500 | 10.0 | 2.000 | 10.5 | 5.000 | 16.2 | 9.000 | 21.5 | 0.600 | 9.9 | 2.200 | 11.0 | 5.500 | 17.0 | 9.500 | 22.1 | 0.800 | 9.6 | 2.400 | 11.5 | 6.000 | 17.7 |  |  | 1.000 | 8.7 | 2.600 | 11.9 | 6.500 | 18.4 |  |  |
| Depth (m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Flow (l/s)                       | Depth (m)                                                                           | Flow (l/s) | Depth (m)  | Flow (l/s) | Depth (m)  | Flow (l/s) |            |           |            |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |     |       |      |       |      |  |  |       |     |       |      |       |      |  |  |
| 0.100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 4.8                              | 1.200                                                                               | 8.3        | 3.000      | 12.7       | 7.000      | 19.1       |            |           |            |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |     |       |      |       |      |  |  |       |     |       |      |       |      |  |  |
| 0.200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 8.6                              | 1.400                                                                               | 8.9        | 3.500      | 13.7       | 7.500      | 19.7       |            |           |            |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |     |       |      |       |      |  |  |       |     |       |      |       |      |  |  |
| 0.300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 9.5                              | 1.600                                                                               | 9.5        | 4.000      | 14.6       | 8.000      | 20.3       |            |           |            |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |     |       |      |       |      |  |  |       |     |       |      |       |      |  |  |
| 0.400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 9.8                              | 1.800                                                                               | 10.0       | 4.500      | 15.4       | 8.500      | 20.9       |            |           |            |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |     |       |      |       |      |  |  |       |     |       |      |       |      |  |  |
| 0.500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 10.0                             | 2.000                                                                               | 10.5       | 5.000      | 16.2       | 9.000      | 21.5       |            |           |            |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |     |       |      |       |      |  |  |       |     |       |      |       |      |  |  |
| 0.600                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 9.9                              | 2.200                                                                               | 11.0       | 5.500      | 17.0       | 9.500      | 22.1       |            |           |            |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |     |       |      |       |      |  |  |       |     |       |      |       |      |  |  |
| 0.800                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 9.6                              | 2.400                                                                               | 11.5       | 6.000      | 17.7       |            |            |            |           |            |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |     |       |      |       |      |  |  |       |     |       |      |       |      |  |  |
| 1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 8.7                              | 2.600                                                                               | 11.9       | 6.500      | 18.4       |            |            |            |           |            |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |     |       |      |       |      |  |  |       |     |       |      |       |      |  |  |
| ©1982-2020 Innovyze                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |                                                                                     |            |            |            |            |            |            |           |            |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |     |       |      |       |      |       |     |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |     |       |      |       |      |       |      |       |     |       |      |       |      |  |  |       |     |       |      |       |      |  |  |

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------|-----------------------|-------------------|-------------------|---------------------------|-------------------|-------------------|------------------|-------------------|-------|-----------|-------|------|---------------------------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|--|--|-------|------|-------|------|-------|------|--|--|
| WML Consulting Ltd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    | Page 8                                                                              |                       |                   |                   |                           |                   |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| No. 8 Oak Green<br>Stanley Green Business Park<br>Earl Rd, Cheadle Hulme, SK8 6QL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |  |                       |                   |                   |                           |                   |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| Date 23/08/2022 13:44                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Designed by DBaker |                                                                                     |                       |                   |                   |                           |                   |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| File 9003 - SURFACE WATER - ...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Checked by         |                                                                                     |                       |                   |                   |                           |                   |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| Innovyze                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Network 2020.1.3   |                                                                                     |                       |                   |                   |                           |                   |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| <u>Hydro-Brake® Optimum Manhole: S12, DS/PN: S1.007, Volume (m³): 14.1</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |                                                                                     |                       |                   |                   |                           |                   |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| <table><tr><td><b>Control Points</b></td><td><b>Head (m)</b></td><td><b>Flow (l/s)</b></td></tr><tr><td>Design Point (Calculated)</td><td>2.000</td><td>32.5</td></tr><tr><td>Flush-Flo™</td><td>0.589</td><td>32.4</td></tr><tr><td>Kick-Flo®</td><td>1.275</td><td>26.2</td></tr><tr><td>Mean Flow over Head Range</td><td>-</td><td>28.1</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |                                                                                     | <b>Control Points</b> | <b>Head (m)</b>   | <b>Flow (l/s)</b> | Design Point (Calculated) | 2.000             | 32.5              | Flush-Flo™       | 0.589             | 32.4  | Kick-Flo® | 1.275 | 26.2 | Mean Flow over Head Range | -    | 28.1  |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| <b>Control Points</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Head (m)</b>    | <b>Flow (l/s)</b>                                                                   |                       |                   |                   |                           |                   |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| Design Point (Calculated)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2.000              | 32.5                                                                                |                       |                   |                   |                           |                   |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| Flush-Flo™                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.589              | 32.4                                                                                |                       |                   |                   |                           |                   |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| Kick-Flo®                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1.275              | 26.2                                                                                |                       |                   |                   |                           |                   |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| Mean Flow over Head Range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -                  | 28.1                                                                                |                       |                   |                   |                           |                   |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |                                                                                     |                       |                   |                   |                           |                   |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| <table><tr><td><b>Depth (m)</b></td><td><b>Flow (l/s)</b></td><td><b>Depth (m)</b></td><td><b>Flow (l/s)</b></td><td><b>Depth (m)</b></td><td><b>Flow (l/s)</b></td><td><b>Depth (m)</b></td><td><b>Flow (l/s)</b></td></tr><tr><td>0.100</td><td>7.7</td><td>1.200</td><td>28.0</td><td>3.000</td><td>39.5</td><td>7.000</td><td>59.5</td></tr><tr><td>0.200</td><td>23.2</td><td>1.400</td><td>27.4</td><td>3.500</td><td>42.5</td><td>7.500</td><td>61.5</td></tr><tr><td>0.300</td><td>30.1</td><td>1.600</td><td>29.2</td><td>4.000</td><td>45.4</td><td>8.000</td><td>63.5</td></tr><tr><td>0.400</td><td>31.6</td><td>1.800</td><td>30.9</td><td>4.500</td><td>48.0</td><td>8.500</td><td>65.4</td></tr><tr><td>0.500</td><td>32.3</td><td>2.000</td><td>32.5</td><td>5.000</td><td>50.5</td><td>9.000</td><td>67.2</td></tr><tr><td>0.600</td><td>32.4</td><td>2.200</td><td>34.0</td><td>5.500</td><td>52.9</td><td>9.500</td><td>69.0</td></tr><tr><td>0.800</td><td>31.9</td><td>2.400</td><td>35.5</td><td>6.000</td><td>55.2</td><td></td><td></td></tr><tr><td>1.000</td><td>30.8</td><td>2.600</td><td>36.9</td><td>6.500</td><td>57.4</td><td></td><td></td></tr></table> |                    |                                                                                     | <b>Depth (m)</b>      | <b>Flow (l/s)</b> | <b>Depth (m)</b>  | <b>Flow (l/s)</b>         | <b>Depth (m)</b>  | <b>Flow (l/s)</b> | <b>Depth (m)</b> | <b>Flow (l/s)</b> | 0.100 | 7.7       | 1.200 | 28.0 | 3.000                     | 39.5 | 7.000 | 59.5 | 0.200 | 23.2 | 1.400 | 27.4 | 3.500 | 42.5 | 7.500 | 61.5 | 0.300 | 30.1 | 1.600 | 29.2 | 4.000 | 45.4 | 8.000 | 63.5 | 0.400 | 31.6 | 1.800 | 30.9 | 4.500 | 48.0 | 8.500 | 65.4 | 0.500 | 32.3 | 2.000 | 32.5 | 5.000 | 50.5 | 9.000 | 67.2 | 0.600 | 32.4 | 2.200 | 34.0 | 5.500 | 52.9 | 9.500 | 69.0 | 0.800 | 31.9 | 2.400 | 35.5 | 6.000 | 55.2 |  |  | 1.000 | 30.8 | 2.600 | 36.9 | 6.500 | 57.4 |  |  |
| <b>Depth (m)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Flow (l/s)</b>  | <b>Depth (m)</b>                                                                    | <b>Flow (l/s)</b>     | <b>Depth (m)</b>  | <b>Flow (l/s)</b> | <b>Depth (m)</b>          | <b>Flow (l/s)</b> |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| 0.100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 7.7                | 1.200                                                                               | 28.0                  | 3.000             | 39.5              | 7.000                     | 59.5              |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| 0.200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 23.2               | 1.400                                                                               | 27.4                  | 3.500             | 42.5              | 7.500                     | 61.5              |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| 0.300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 30.1               | 1.600                                                                               | 29.2                  | 4.000             | 45.4              | 8.000                     | 63.5              |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| 0.400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 31.6               | 1.800                                                                               | 30.9                  | 4.500             | 48.0              | 8.500                     | 65.4              |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| 0.500                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 32.3               | 2.000                                                                               | 32.5                  | 5.000             | 50.5              | 9.000                     | 67.2              |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| 0.600                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 32.4               | 2.200                                                                               | 34.0                  | 5.500             | 52.9              | 9.500                     | 69.0              |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| 0.800                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 31.9               | 2.400                                                                               | 35.5                  | 6.000             | 55.2              |                           |                   |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
| 1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 30.8               | 2.600                                                                               | 36.9                  | 6.500             | 57.4              |                           |                   |                   |                  |                   |       |           |       |      |                           |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |  |  |       |      |       |      |       |      |  |  |
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No. 8 Oak Green  
Stanley Green Business Park  
Earl Rd, Cheadle Hulme, SK8 6QL

Date 23/08/2022 13:44  
File 9003 - SURFACE WATER - ...

Innovyze

Designed by DBaker  
Checked by

Network 2020.1.3



1 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 0

Number of Online Controls 2

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 0.360

Region England and Wales Cv (Summer) 0.750

M5-60 (mm) 18.000

Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0

Analysis Timestep 2.5

Second Increment (Extended)

DTS Status OFF

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

Return Period(s) (years) 1, 30, 100

Climate Change (%) 0, 0, 40

| PN     | US/MH Name | Storm     | Return Period | Climate Change | First (X) Surge | First (Y) Flood | First (Z) Overflow | Overflow Act. | Water Level (m) |
|--------|------------|-----------|---------------|----------------|-----------------|-----------------|--------------------|---------------|-----------------|
| S1.000 | S5         | 15 Winter | 1             | +0%            | 100/15          | Summer          |                    |               | 47.495          |
| S1.001 | S6         | 15 Winter | 1             | +0%            | 100/15          | Winter          |                    |               | 45.927          |
| S1.002 | S7         | 15 Winter | 1             | +0%            | 100/15          | Winter          |                    |               | 45.912          |
| S1.003 | S8         | 15 Winter | 1             | +0%            | 100/15          | Winter          |                    |               | 45.908          |
| S1.004 | S9         | 15 Winter | 1             | +0%            | 100/15          | Winter          |                    |               | 45.903          |
| S1.005 | S10        | 15 Winter | 1             | +0%            | 100/15          | Winter          |                    |               | 45.901          |
| S2.000 | S11.7      | 15 Winter | 1             | +0%            |                 |                 |                    |               | 47.322          |
| S2.001 | S11.17     | 15 Winter | 1             | +0%            | 100/15          | Summer          |                    |               | 46.194          |
| S2.002 | S11.21     | 15 Winter | 1             | +0%            | 100/15          | Summer          |                    |               | 46.193          |
| S2.003 | S11.29     | 15 Winter | 1             | +0%            | 30/15           | Winter          |                    |               | 46.193          |
| S1.006 | S11        | 15 Winter | 1             | +0%            | 100/15          | Winter          |                    |               | 45.898          |
| S1.007 | S12        | 15 Winter | 1             | +0%            | 30/15           | Summer          |                    |               | 45.894          |

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|                                                                                   |                    |                                                                                     |
|-----------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------|
| WML Consulting Ltd                                                                |                    | Page 10                                                                             |
| No. 8 Oak Green<br>Stanley Green Business Park<br>Earl Rd, Cheadle Hulme, SK8 6QL |                    |  |
| Date 23/08/2022 13:44                                                             | Designed by DBaker |                                                                                     |
| File 9003 - SURFACE WATER - ...                                                   | Checked by         |                                                                                     |
| Innovyze                                                                          | Network 2020.1.3   |                                                                                     |

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

| PN     | US/MH<br>Name | Surcharged Flooded |                             | Flow / Overflow |       | Half Drain     | Pipe          | Status | Level<br>Exceeded |
|--------|---------------|--------------------|-----------------------------|-----------------|-------|----------------|---------------|--------|-------------------|
|        |               | Depth<br>(m)       | Volume<br>(m <sup>3</sup> ) | Cap.            | (l/s) | Time<br>(mins) | Flow<br>(l/s) |        |                   |
| S1.000 | S5            | -0.130             | 0.000                       | 0.37            |       |                | 15.9          | OK     |                   |
| S1.001 | S6            | -0.773             | 0.000                       | 0.04            |       |                | 19.6          | OK     |                   |
| S1.002 | S7            | -0.763             | 0.000                       | 0.04            |       |                | 18.8          | OK     |                   |
| S1.003 | S8            | -0.742             | 0.000                       | 0.03            |       |                | 20.9          | OK     |                   |
| S1.004 | S9            | -0.667             | 0.000                       | 0.06            |       |                | 27.8          | OK     |                   |
| S1.005 | S10           | -0.639             | 0.000                       | 0.07            |       |                | 24.4          | OK     |                   |
| S2.000 | S11.7         | -0.558             | 0.000                       | 0.01            |       |                | 6.0           | OK     |                   |
| S2.001 | S11.17        | -0.611             | 0.000                       | 0.02            |       |                | 11.2          | OK     |                   |
| S2.002 | S11.21        | -0.572             | 0.000                       | 0.02            |       |                | 10.4          | OK     |                   |
| S2.003 | S11.29        | -0.347             | 0.000                       | 0.04            |       |                | 9.1           | OK     |                   |
| S1.006 | S11           | -0.622             | 0.000                       | 0.08            |       |                | 31.8          | OK     |                   |
| S1.007 | S12           | -0.006             | 0.000                       | 0.38            |       |                | 30.0          | OK     |                   |

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No. 8 Oak Green  
Stanley Green Business Park  
Earl Rd, Cheadle Hulme, SK8 6QL

Date 23/08/2022 13:44  
File 9003 - SURFACE WATER - ...

Innovyze

Designed by DBaker  
Checked by

Network 2020.1.3

Micro  
Drainage

30 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 0

Number of Online Controls 2

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 0.360

Region England and Wales Cv (Summer) 0.750

M5-60 (mm) 18.000

Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0

Analysis Timestep 2.5 Second Increment (Extended)

DTS Status OFF

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

Return Period(s) (years) 1, 30, 100

Climate Change (%) 0, 0, 40

| PN     | US/MH Name | Storm     | Return Period | Climate Change | First (X) Surge | First (Y) Flood | First (Z) Overflow | Overflow Act. | Water Level (m) |
|--------|------------|-----------|---------------|----------------|-----------------|-----------------|--------------------|---------------|-----------------|
| S1.000 | S5         | 15 Winter | 30            | +0%            | 100/15          | Summer          |                    |               | 47.568          |
| S1.001 | S6         | 30 Winter | 30            | +0%            | 100/15          | Winter          |                    |               | 46.257          |
| S1.002 | S7         | 30 Winter | 30            | +0%            | 100/15          | Winter          |                    |               | 46.256          |
| S1.003 | S8         | 30 Winter | 30            | +0%            | 100/15          | Winter          |                    |               | 46.255          |
| S1.004 | S9         | 30 Winter | 30            | +0%            | 100/15          | Winter          |                    |               | 46.249          |
| S1.005 | S10        | 30 Winter | 30            | +0%            | 100/15          | Winter          |                    |               | 46.242          |
| S2.000 | S11.7      | 15 Winter | 30            | +0%            |                 |                 |                    |               | 47.353          |
| S2.001 | S11.17     | 30 Winter | 30            | +0%            | 100/15          | Summer          |                    |               | 46.645          |
| S2.002 | S11.21     | 30 Winter | 30            | +0%            | 100/15          | Summer          |                    |               | 46.644          |
| S2.003 | S11.29     | 30 Winter | 30            | +0%            | 30/15           | Winter          |                    |               | 46.640          |
| S1.006 | S11        | 30 Winter | 30            | +0%            | 100/15          | Winter          |                    |               | 46.239          |
| S1.007 | S12        | 30 Winter | 30            | +0%            | 30/15           | Summer          |                    |               | 46.235          |

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------|----------------|-------------------------------------------------------------------------------------|----------------|--------|-------------------|---------------|----|---------------|--------------------|--|--|-----------------|--|--------|-------------------|--------------|----------------|----------------|-------------------|----------------|---------------|--------|----|--------|-------|------|--|--|------|----|--------|----|--------|-------|------|--|--|------|----|--------|----|--------|-------|------|--|--|------|----|--------|----|--------|-------|------|--|--|------|----|--------|----|--------|-------|------|--|--|------|----|--------|-----|--------|-------|------|--|--|------|----|--------|-------|--------|-------|------|--|--|------|----|--------|--------|--------|-------|------|--|--|------|----|--------|--------|--------|-------|------|--|--|------|----|--------|--------|-------|-------|------|--|--|-----|------------|--------|-----|--------|-------|------|--|--|------|----|--------|-----|-------|-------|------|--|--|------|------------|
| No. 8 Oak Green<br>Stanley Green Business Park<br>Earl Rd, Cheadle Hulme, SK8 6QL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |               |                    |                |                |  |                |        |                   |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
| Date 23/08/2022 13:44<br>File 9003 - SURFACE WATER - ...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |                    |                |                |                                                                                     |                |        |                   |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
| Innovyze                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |                    |                |                | Designed by DBaker<br>Checked by<br>Network 2020.1.3                                |                |        |                   |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
| 30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)<br>for Storm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |                    |                |                |                                                                                     |                |        |                   |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
| <table><thead><tr><th rowspan="2">PN</th><th rowspan="2">US/MH<br/>Name</th><th colspan="3">Surcharged Flooded</th><th colspan="2">Half Drain Pipe</th><th rowspan="2">Status</th><th rowspan="2">Level<br/>Exceeded</th></tr><tr><th>Depth<br/>(m)</th><th>Volume<br/>(m³)</th><th>Flow /<br/>Cap.</th><th>Overflow<br/>(l/s)</th><th>Time<br/>(mins)</th><th>Flow<br/>(l/s)</th></tr></thead><tbody><tr><td>S1.000</td><td>S5</td><td>-0.057</td><td>0.000</td><td>0.90</td><td></td><td></td><td>38.8</td><td>OK</td></tr><tr><td>S1.001</td><td>S6</td><td>-0.443</td><td>0.000</td><td>0.08</td><td></td><td></td><td>37.2</td><td>OK</td></tr><tr><td>S1.002</td><td>S7</td><td>-0.419</td><td>0.000</td><td>0.06</td><td></td><td></td><td>29.8</td><td>OK</td></tr><tr><td>S1.003</td><td>S8</td><td>-0.395</td><td>0.000</td><td>0.04</td><td></td><td></td><td>31.2</td><td>OK</td></tr><tr><td>S1.004</td><td>S9</td><td>-0.321</td><td>0.000</td><td>0.08</td><td></td><td></td><td>40.3</td><td>OK</td></tr><tr><td>S1.005</td><td>S10</td><td>-0.298</td><td>0.000</td><td>0.09</td><td></td><td></td><td>30.9</td><td>OK</td></tr><tr><td>S2.000</td><td>S11.7</td><td>-0.527</td><td>0.000</td><td>0.04</td><td></td><td></td><td>14.6</td><td>OK</td></tr><tr><td>S2.001</td><td>S11.17</td><td>-0.160</td><td>0.000</td><td>0.05</td><td></td><td></td><td>22.6</td><td>OK</td></tr><tr><td>S2.002</td><td>S11.21</td><td>-0.121</td><td>0.000</td><td>0.04</td><td></td><td></td><td>18.1</td><td>OK</td></tr><tr><td>S2.003</td><td>S11.29</td><td>0.100</td><td>0.000</td><td>0.05</td><td></td><td></td><td>9.8</td><td>SURCHARGED</td></tr><tr><td>S1.006</td><td>S11</td><td>-0.281</td><td>0.000</td><td>0.10</td><td></td><td></td><td>37.5</td><td>OK</td></tr><tr><td>S1.007</td><td>S12</td><td>0.335</td><td>0.000</td><td>0.41</td><td></td><td></td><td>32.4</td><td>SURCHARGED</td></tr></tbody></table> |               |                    |                |                |                                                                                     |                |        |                   |               | PN | US/MH<br>Name | Surcharged Flooded |  |  | Half Drain Pipe |  | Status | Level<br>Exceeded | Depth<br>(m) | Volume<br>(m³) | Flow /<br>Cap. | Overflow<br>(l/s) | Time<br>(mins) | Flow<br>(l/s) | S1.000 | S5 | -0.057 | 0.000 | 0.90 |  |  | 38.8 | OK | S1.001 | S6 | -0.443 | 0.000 | 0.08 |  |  | 37.2 | OK | S1.002 | S7 | -0.419 | 0.000 | 0.06 |  |  | 29.8 | OK | S1.003 | S8 | -0.395 | 0.000 | 0.04 |  |  | 31.2 | OK | S1.004 | S9 | -0.321 | 0.000 | 0.08 |  |  | 40.3 | OK | S1.005 | S10 | -0.298 | 0.000 | 0.09 |  |  | 30.9 | OK | S2.000 | S11.7 | -0.527 | 0.000 | 0.04 |  |  | 14.6 | OK | S2.001 | S11.17 | -0.160 | 0.000 | 0.05 |  |  | 22.6 | OK | S2.002 | S11.21 | -0.121 | 0.000 | 0.04 |  |  | 18.1 | OK | S2.003 | S11.29 | 0.100 | 0.000 | 0.05 |  |  | 9.8 | SURCHARGED | S1.006 | S11 | -0.281 | 0.000 | 0.10 |  |  | 37.5 | OK | S1.007 | S12 | 0.335 | 0.000 | 0.41 |  |  | 32.4 | SURCHARGED |
| PN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | US/MH<br>Name | Surcharged Flooded |                |                | Half Drain Pipe                                                                     |                | Status | Level<br>Exceeded |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               | Depth<br>(m)       | Volume<br>(m³) | Flow /<br>Cap. | Overflow<br>(l/s)                                                                   | Time<br>(mins) |        |                   | Flow<br>(l/s) |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
| S1.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | S5            | -0.057             | 0.000          | 0.90           |                                                                                     |                | 38.8   | OK                |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
| S1.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | S6            | -0.443             | 0.000          | 0.08           |                                                                                     |                | 37.2   | OK                |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
| S1.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | S7            | -0.419             | 0.000          | 0.06           |                                                                                     |                | 29.8   | OK                |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
| S1.003                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | S8            | -0.395             | 0.000          | 0.04           |                                                                                     |                | 31.2   | OK                |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
| S1.004                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | S9            | -0.321             | 0.000          | 0.08           |                                                                                     |                | 40.3   | OK                |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
| S1.005                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | S10           | -0.298             | 0.000          | 0.09           |                                                                                     |                | 30.9   | OK                |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
| S2.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | S11.7         | -0.527             | 0.000          | 0.04           |                                                                                     |                | 14.6   | OK                |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
| S2.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | S11.17        | -0.160             | 0.000          | 0.05           |                                                                                     |                | 22.6   | OK                |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
| S2.002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | S11.21        | -0.121             | 0.000          | 0.04           |                                                                                     |                | 18.1   | OK                |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
| S2.003                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | S11.29        | 0.100              | 0.000          | 0.05           |                                                                                     |                | 9.8    | SURCHARGED        |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
| S1.006                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | S11           | -0.281             | 0.000          | 0.10           |                                                                                     |                | 37.5   | OK                |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
| S1.007                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | S12           | 0.335              | 0.000          | 0.41           |                                                                                     |                | 32.4   | SURCHARGED        |               |    |               |                    |  |  |                 |  |        |                   |              |                |                |                   |                |               |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |    |        |       |      |  |  |      |    |        |     |        |       |      |  |  |      |    |        |       |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |        |       |      |  |  |      |    |        |        |       |       |      |  |  |     |            |        |     |        |       |      |  |  |      |    |        |     |       |       |      |  |  |      |            |
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WML Consulting Ltd

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No. 8 Oak Green  
Stanley Green Business Park  
Earl Rd, Cheadle Hulme, SK8 6QL

Date 23/08/2022 13:44  
File 9003 - SURFACE WATER - ...

Innovyze

Designed by DBaker  
Checked by

Network 2020.1.3

Micro  
Drainage

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 0

Number of Online Controls 2

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 0.360

Region England and Wales Cv (Summer) 0.750

M5-60 (mm) 18.000

Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0

Analysis Timestep 2.5

Second Increment (Extended)

DTS Status OFF

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

Return Period(s) (years) 1, 30, 100

Climate Change (%) 0, 0, 40

PN

US/MH Name

Storm

Return Period

Climate Change

First (X) Surcharge

First (Y) Flood

First (Z) Overflow

Overflow Act.

Water Level (m)

S1.000

S5 15 Winter

100

+40%

100/15 Summer

47.788

S1.001

S6 60 Winter

100

+40%

100/15 Winter

47.439

S1.002

S7 60 Winter

100

+40%

100/15 Winter

47.438

S1.003

S8 60 Winter

100

+40%

100/15 Winter

47.438

S1.004

S9 60 Winter

100

+40%

100/15 Winter

47.437

S1.005

S10 60 Winter

100

+40%

100/15 Winter

47.436

S2.000

S11.7 60 Winter

100

+40%

47.710

S2.001

S11.17 60 Winter

100

+40%

100/15 Summer

47.709

S2.002

S11.21 60 Winter

100

+40%

100/15 Summer

47.706

S2.003

S11.29 60 Winter

100

+40%

30/15 Winter

47.706

S1.006

S11 60 Winter

100

+40%

100/15 Winter

47.434

S1.007

S12 60 Winter

100

+40%

30/15 Summer

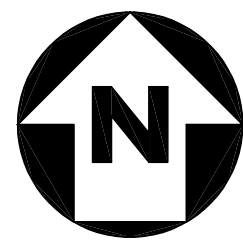
47.433

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|                                                                                               |            |            |             |             |                                  |             |                                                                                     |            |                |
|-----------------------------------------------------------------------------------------------|------------|------------|-------------|-------------|----------------------------------|-------------|-------------------------------------------------------------------------------------|------------|----------------|
| WML Consulting Ltd                                                                            |            |            |             |             |                                  | Page 14     |                                                                                     |            |                |
| No. 8 Oak Green<br>Stanley Green Business Park<br>Earl Rd, Cheadle Hulme, SK8 6QL             |            |            |             |             | Designed by DBaker<br>Checked by |             |  |            |                |
| Date 23/08/2022 13:44<br>File 9003 - SURFACE WATER - ...                                      |            |            |             |             |                                  |             |                                                                                     |            |                |
| Innovyze                                                                                      |            |            |             |             | Network 2020.1.3                 |             |                                                                                     |            |                |
| <u>100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm</u> |            |            |             |             |                                  |             |                                                                                     |            |                |
|                                                                                               |            | Surcharged | Flooded     |             |                                  | Half Drain  | Pipe                                                                                |            |                |
| PN                                                                                            | US/MH Name | Depth (m)  | Volume (m³) | Flow / Cap. | Overflow (l/s)                   | Time (mins) | Flow (l/s)                                                                          | Status     | Level Exceeded |
| S1.000                                                                                        | S5         | 0.163      | 0.000       | 1.61        |                                  |             | 69.7                                                                                | SURCHARGED |                |
| S1.001                                                                                        | S6         | 0.739      | 0.000       | 0.09        |                                  |             | 45.5                                                                                | SURCHARGED |                |
| S1.002                                                                                        | S7         | 0.763      | 0.000       | 0.07        |                                  |             | 36.4                                                                                | SURCHARGED |                |
| S1.003                                                                                        | S8         | 0.788      | 0.000       | 0.06        |                                  |             | 42.7                                                                                | SURCHARGED |                |
| S1.004                                                                                        | S9         | 0.867      | 0.000       | 0.10        |                                  |             | 49.8                                                                                | SURCHARGED |                |
| S1.005                                                                                        | S10        | 0.896      | 0.000       | 0.10        |                                  |             | 37.4                                                                                | SURCHARGED |                |
| S2.000                                                                                        | S11.7      | -0.170     | 0.000       | 0.03        |                                  |             | 14.5                                                                                | OK         |                |
| S2.001                                                                                        | S11.17     | 0.904      | 0.000       | 0.05        |                                  |             | 25.3                                                                                | SURCHARGED |                |
| S2.002                                                                                        | S11.21     | 0.941      | 0.000       | 0.04        |                                  |             | 18.6                                                                                | FLOOD RISK |                |
| S2.003                                                                                        | S11.29     | 1.166      | 0.000       | 0.05        |                                  |             | 10.0                                                                                | FLOOD RISK |                |
| S1.006                                                                                        | S11        | 0.914      | 0.000       | 0.11        |                                  |             | 42.1                                                                                | SURCHARGED |                |
| S1.007                                                                                        | S12        | 1.533      | 0.000       | 0.41        |                                  |             | 32.4                                                                                | SURCHARGED |                |
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GENERAL NOTES

- DO NOT SCALE FROM THIS DRAWING WORK TO FIGURED DIMENSIONS ONLY.
- NO DEVIATION FROM THE DETAILS SHOWN ON THIS DRAWING IS ALLOWED WITHOUT PRIOR PERMISSION IN WRITING.
- ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL ARCHITECTS, ENGINEERS AND SPECIALISTS DRAWINGS AND THE SPECIFICATION.
- THE CONTRACTOR SHALL INCORPORATE ALL THE REQUIREMENTS OF THE PRE-TENDER STAGE HEALTH & SAFETY PLAN.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH WML DRAWINGS:
  - 9003-WML-ZZ-XX-DR-C-1052
  - 9003-WML-ZZ-XX-DR-C-1054
  - 9003-WML-ZZ-XX-DR-C-1055
  - 9003-WML-ZZ-XX-DR-C-1056



EXCEEDANCE FLOW ROUTES  
SHEET 2