

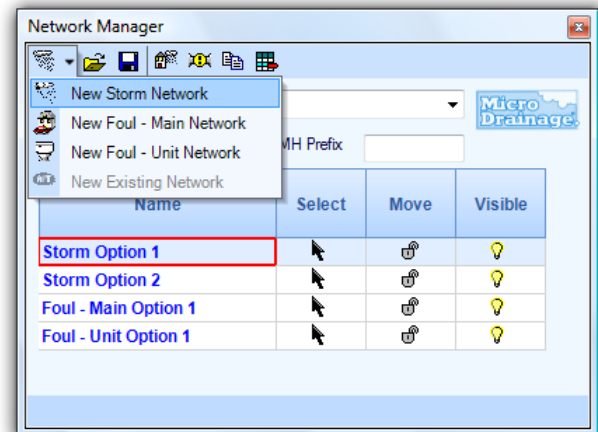
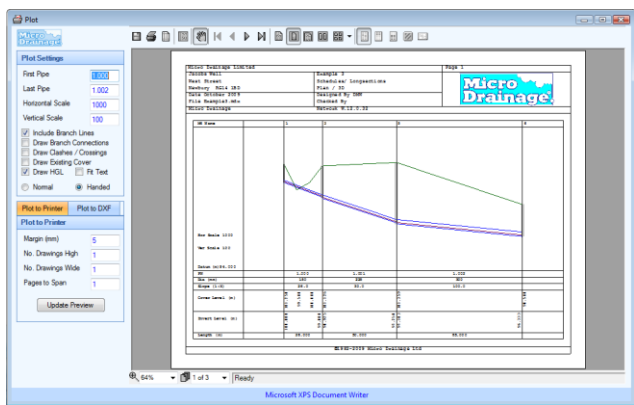
Overview

System 1 is the drainage design module of the WinDes suite with the capability to design both Storm and Foul (Sanitary) Water Networks using intuitive spreadsheet based data entry.

Description

Design networks to working loads

- ⊗ Design Storm Water Networks in accordance with the Rational and Modified Rational Methods
- ⊗ Support for both FSR and FEH rainfall in the UK and Ireland
- ⊗ Specify local rainfall directly for international use
- ⊗ Design Foul (Sanitary) Networks to both the Main Drainage and Fixture Unit methods (BS8301 and EN752)
- ⊗ Check combined and overloaded systems
- ⊗ Take into account friction losses
- ⊗ Calculate capacity using either Colebrook-White or Manning's equations
- ⊗ Size pipes using a pre-defined library of available diameters
- ⊗ Edit to insert pipe, delete pipe, goto and undo
- ⊗ Use pre-set circular pipes, open ditches, culverts and non-standard sections
- ⊗ Specify slope, fall or auto design to give self cleansing velocity
- ⊗ Optimise the network to minimum cover depth
- ⊗ Tie-in to fixed levels at the outfall



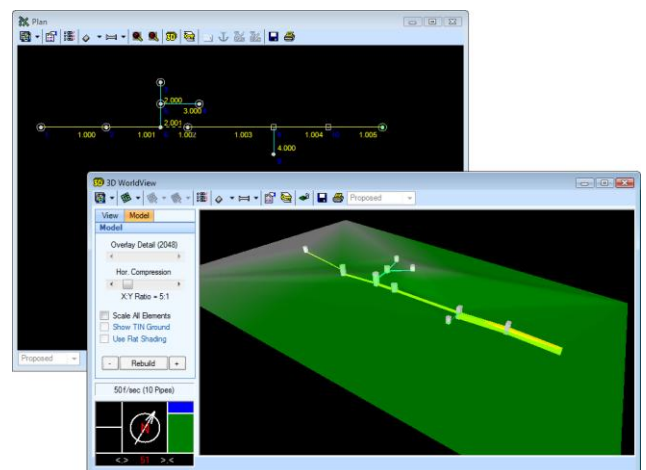
- ⊗ Automatic backdrop removal based on pre-defined range
- ⊗ Split network into individual sub catchments for independent design
- ⊗ Combine completed sub catchments for integrated design and analysis

Schedules

- ⊗ Size manholes using a pre-defined library of available chambers, based on diameters and depths of connecting pipes
- ⊗ Produce pipeline and manhole schedules

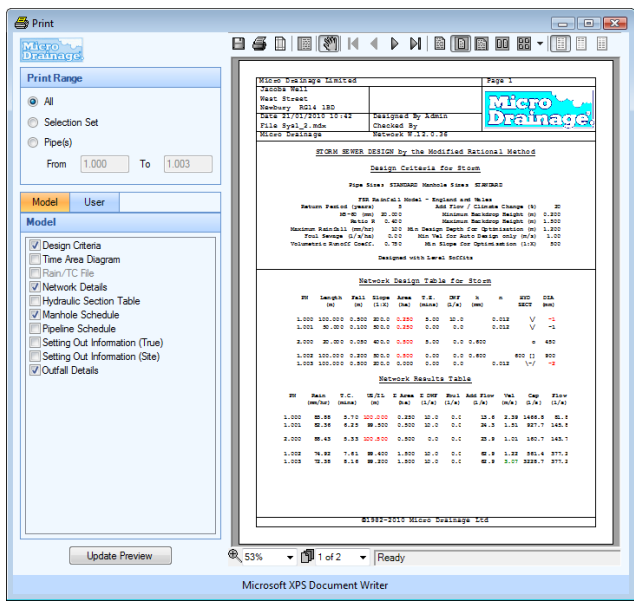
Visualisation

- ⊗ View network in longsection or schematic form with user definable colours
- ⊗ Specify coordinates to view a virtual site in 3D



Results

- Intuitive colour coding used to aid understanding of tabular results
- Print design data and results in pre-defined reports
- Produce longsections and output to printers, plotters or AutoCAD®
- Export to a wide range of formats such as Excel or HTML
- Export design data to third party engineering applications



With Other Modules

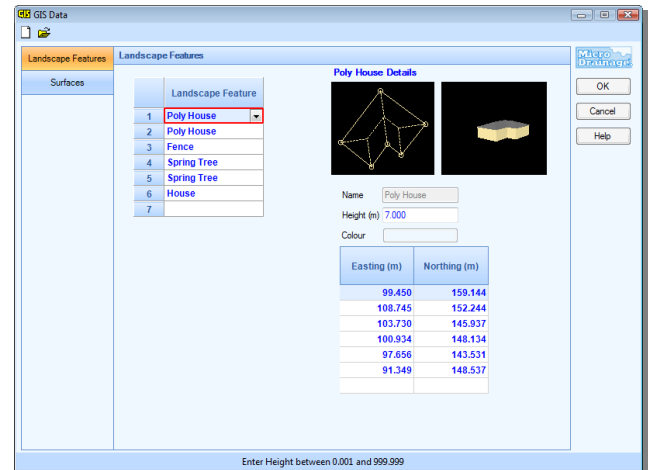
Data is defined in System 1. It is a starting point for the WinDes workflow process. System 1 functionality can be used alone or combined with the other pipe based modules (DrawNet, QuOST, Simulation).

The following extensions are also available if the relevant modules are licensed:

APT

- Position aerial photo, or other imagery, on plan view
- Model existing networks
- Import river models from Channel
- Define terrain information to include spot levels and breaklines

- Produce fully triangulated surface model. Automatic adoption of cover levels at manhole position.
- Define landscape features such as trees, houses and other buildings which can be viewed in Plan and 3D Worldview



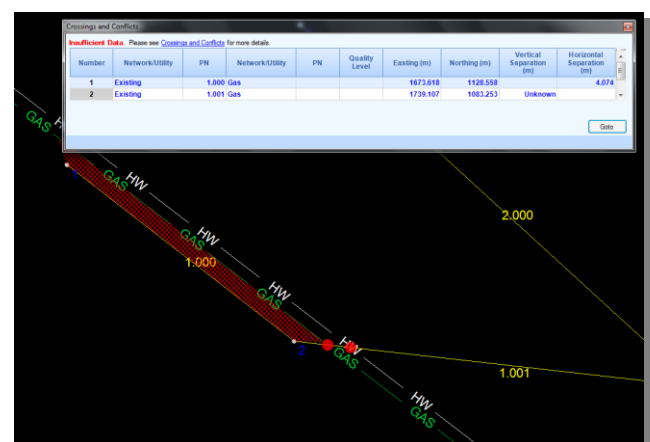
- Specify Design Flow where flow restrictions apply. Downstream pipes can then be downsized to accommodate only the reduced flow.

QuOST

- Compare cost implications of design decisions as they are made

Additional Features in WinDes W.12.6

Checking crossings and conflicts has been improved to include detection of horizontal regions within set tolerances.



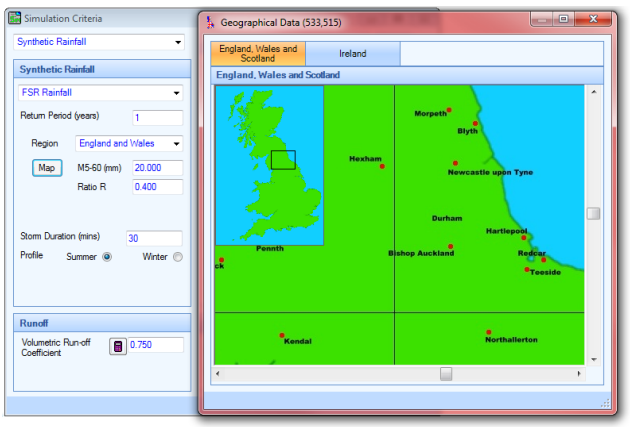
Additional Features in WinDes W.12.6 (cont'd)

The Easi-Base Manhole from FPMcCann can now be automatically scheduled.

Speed increases will help larger models, most notably with Plan, 3D WorldView and large spreadsheets.

Printing and graphs have improved speed and reliability.

MAP buttons are now provided in the DrawNet, System 1, Simulation and Source Control modules.



Copy and Paste into spreadsheets for easier data input such as;

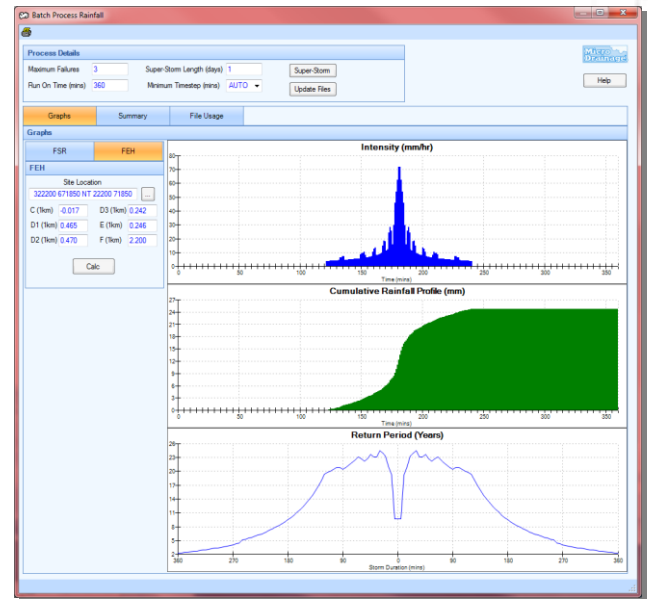
- ⊖ Manhole coordinates
- ⊖ Utility forms
- ⊖ CRP, IDF & rainfall profiles
- ⊖ Depth flow relationship

Update MH Cover from the TIN. When importing a drainage network with a TIN it will not force updated cover levels for manholes outside the TIN extents.

Compress Rainfall/Hydrographs allows the user to load in large sets of data and break them up into individual files in order to remove any values below a set threshold e.g. X mm of rainfall or X l/s of flow.

Super-Storm creates a single all encompassing 'Super-Storm' from a set of rainfall files so that the key criteria of both Peak Intensity and Total Volume are preserved. It is possible to view the resulting storm to see which aspects were taken from each file and compare this with either Flood Studies Report (FSR) or Flood Estimation Handbook (FEH) rainfall data to view the equivalent Return Period.

Batch Process Rainfall enables the user to automatically set a batch of rainfall files.



WinDes can now support larger pipe numbers, from 1.000 to 9999.999 in a single network.

WinDes will now detect if a file is already in use, to prevent file locking issues and avoid any errors when saving.

Support Material

WinDes is supplied with a hard-copy manual which includes worked examples. All the modules benefit from extensive online help including 'How Do I' tutorials for frequently asked questions.

All Micro Drainage software is backed up by a comprehensive support and maintenance programme.

Training

Training Course A covers the Design Fundamentals associated with System 1.

Contact Details

For further information about WinDes, training and workshops, visit www.microdrainage.co.uk, email info@microdrainage.co.uk or call +44 (0)1635 582555.

If you have been struggling to keep abreast of the latest guidance, rules and regulations visit the Micro Drainage Blog at <http://pipedup.wordpress.com>



WinDes W.12.6, keeping you up to date and industry compliant.