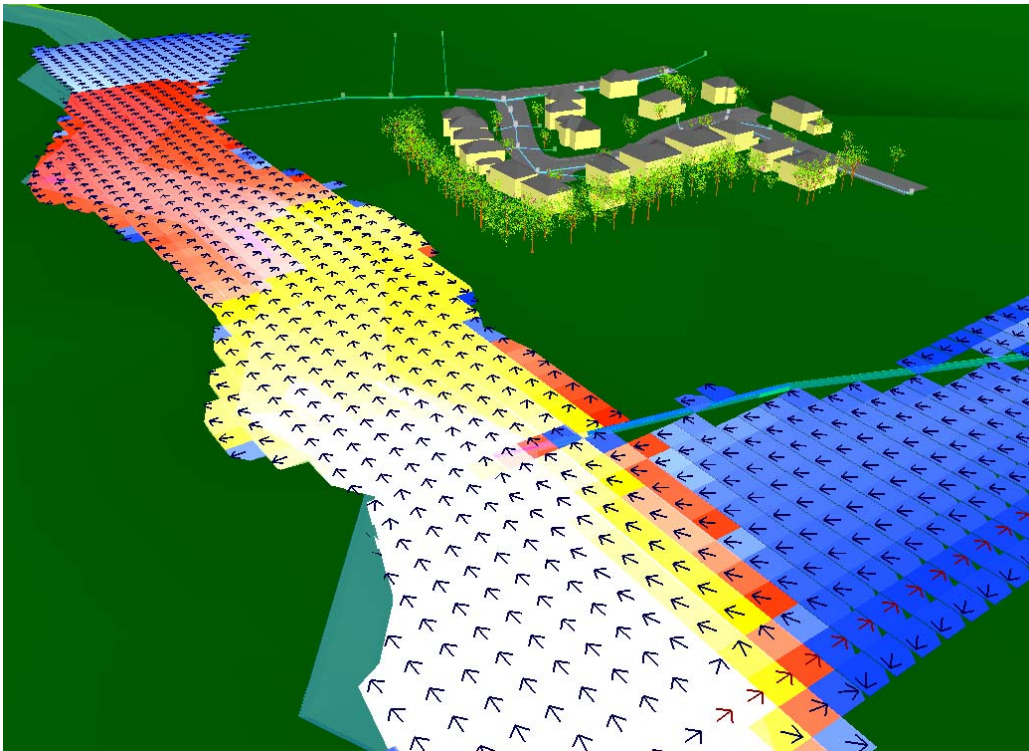


FloodFlow introduces graphical flood flow path modelling for WinDes®

Aidan Millerick, managing director of Micro Drainage Ltd, discusses the central requirement of risk assessment, and describes a new analysis and modelling module that addresses the key challenges it presents to engineers.

Exceptional rainfall events such as Carlisle, Boscastle and York have made flooding a significant political issue. Indeed, emerging climate change patterns suggest that we may have to review our definition of "exceptional".



As a result, the emphasis for approval and regulatory scrutiny is rapidly shifting towards risk assessment, rather than simply testing for failure. Moreover, flooding at nodes is no longer the primary concern - it is where the water goes that is determining the destiny of proposed developments.

Regulatory compliance

The most significant regulatory requirements for civil engineers and their clients all set out new criteria for planning approval, in which risk assessment and sustainability are central themes. They include:

- o PPS25 (England)
- o TAN15 (Wales)
- o SPP7, PAN61, PAN69 (Scotland)
- o GDSDS (Ireland)



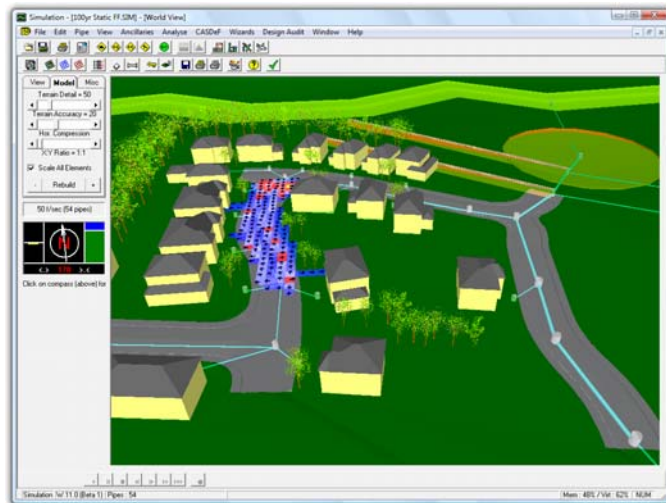
The long-term performance of the system is a key consideration for the regulations covering the adoption process. These are covered by the Sewers For Adoption (SFA) standards in England, Wales and Scotland, and the Regional Drainage Policies in Ireland.

Protection of existing river catchments is covered by the guidance set out in the Interim Code of Practice for SUDS and CIRIA C697 and C698 - the SUDS manuals.

There are no shortcuts for engineers seeking to familiarise themselves with these regulations. Yet the pressure to maintain productivity, and deliver accurate results against increasingly tight deadlines, can make it difficult to introduce risk-based design and analysis to the acceptable standard. Automation is essential for engineers seeking to maintain and enhance

productivity, while achieving compliance with the demanding new approval requirements.

WinDes already incorporates a wealth of functionality to assist with compliance in all these regulatory areas. The new FloodFlow module brings an enhanced capability to the suite that directly addresses the primary concern of approving authorities: the risk to property from flooding.

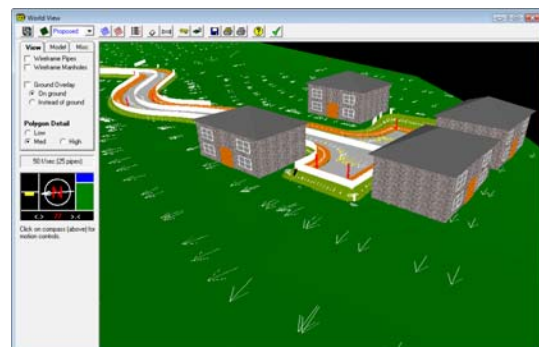


By enabling the development of dynamic models of flood flow paths, FloodFlow gives engineers the ability to test systems for regulatory compliance and present robust proof of the integrity of their analysis.

It is a quick and efficient way of organising the complex data required for risk assessment into manageable, easily understood reports, with clear 3D visual representations of the results.

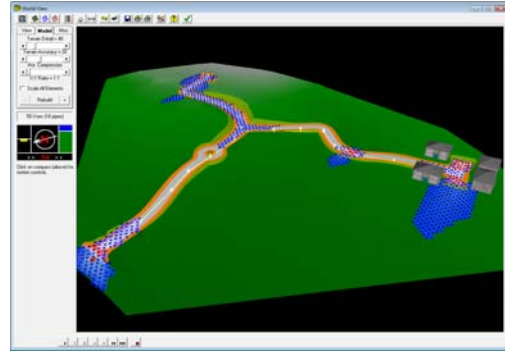
Key functions

FloodFlow works in conjunction with the triangulated terrain maps available within the WinDes Advanced Productivity Tools (APT).



The program provides four calculation modes, details are covered in the FloodFlow brochure.

The 3D visual capabilities of WinDes allow the creation of detailed representations of the site, complete with buildings and other landscape features. If the system fails, the affected properties can be identified virtually door by door.



FloodFlow enables engineers to model events in fine detail, demonstrating the critical storms and, crucially, the capacity of their designs to accommodate them, leaving vulnerable properties unharmed.

With FloodFlow, the surface terrain can now be fully introduced into the design of the system as a whole, and, where acceptable flow paths are shown, can actually become an active contributor to the mitigation of flooding. With sustainability commanding equal attention from approving authorities, this capability introduces a valuable new asset for integration with SUDS systems and conventional controls: the land itself.

Call +44 (0)1635 582555, use the link on www.microdrainage.co.uk, or email sales@microdrainage.co.uk for more information and a quotation.
