

Overland Flow/ Surface Water Flooding

DEFRA's 'Making Space for Water' consultation on a new strategy for flood risk management identified that there were many stakeholders interested in the issue of urban flood risk.

When examining extreme flooding events, water can often break out of its traditional flow routes – rivers, brooks and streams and can spill out into the surrounding flood plain. This overland flow is usually responsible for most damage to homes, businesses and other properties.

It is therefore important to be able to model such an event and estimate the potential flow routes and therefore the properties most at risk.

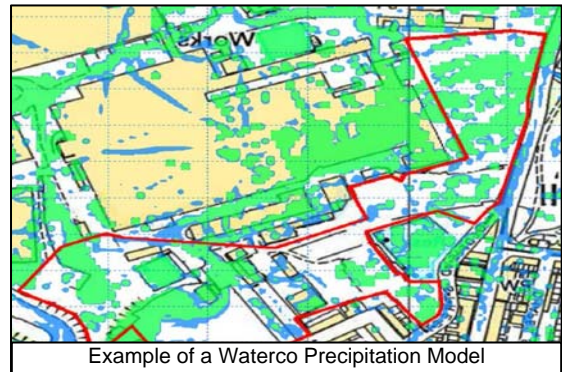
Overland flows are highly complex and therefore benefit from a 2D simulation as this can provide a more detailed representation of the system accounting for structures, vegetation, roads etc.

Modelling Software:

Waterco uses the latest integrated flood simulation package, MIKE FLOOD, which couples together the 1D watercourse models (MIKE11) with a detailed overland flow model (MIKE21) to accurately reproduce these highly complex flow regimes. This approach allows for a more detailed representation of the system as structures, vegetation, roads etc can be included.

New and Existing Developments:

Local Authorities are keen to ensure that existing flood risks are not increased when new developments are built. Both Planning Policy Statement 25 (PPS25) and Technical Advice Note 15 (TAN15) require new developments to have no off-site flooding impacts compared with the existing situation.



Example of a Waterco Precipitation Model

PPS25 also requires any development >1 Hectare to have a Flood Risk Assessment to assess the site surface water run-off impacts-this may require overland flow modelling.

Waterco often uses overland flow models to assess the impact of new developments on existing overland flow routes and on potential downstream flooding. We also have the capability of incorporating the local drainage system, flood defences and buildings into models using MIKE URBAN.

Waterco is also able to produce detailed animations of the overland flow routes, providing our clients with an excellent visualisation tool to illustrate the effect of a new development on the surroundings.

Benefits:

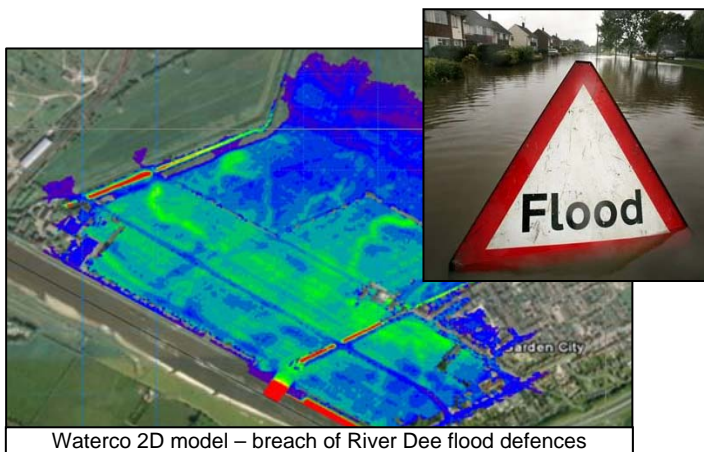
Our experience and understanding of all issues relating to water and drainage means we can identify any additional issues if they arise, so you can adapt your design to avoid potential problems early in your development.

Our technical expertise and in-depth knowledge of our flood modelling software allow us to produce accurate flood models efficiently and at a competitive rate.

We pride ourselves on our level of service and could offer you the following benefits:

- Quick response
- Fixed price quote
- Good track record and experience
- Cost effective

For more information please contact us or visit our website – <http://www.waterco.co.uk>



Waterco 2D model – breach of River Dee flood defences

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