



Upcoming Public Consultation Days

It is proposed to hold Public Consultation Days for the draft flood maps that are being developed for the Areas for Further Assessment (AFAs) - the areas shown in black on the map.

These maps will show the predicted river and tidal flood extents and depths for a range of difference scenarios. The process of developing flood maps is described in detail in this newsletter.

All are welcome to attend the Public Consultation Days. Staff from the South Eastern CFRAM study team will be present to discuss and receive comments on the maps. The maps will also be available to view on the study website.

Details of the Public Consultation Days will be advertised in the media and locally; and will be outlined on the study website. You can register your interest in being notified directly of Public Consultation Days in your area on the 'Have Your Say' page of the study website.



DEVELOPING FLOOD MAPS

Flood risk assessment is the process of assessing and understanding flood risk. It involves predicting the extent of flooding in an area and assessing the risk to receptors (people, property, the environment, the economy and cultural heritage).

Flood risk management is about managing the risks to receptors that were identified during flood risk assessment.

The first step in the process of flood risk assessment and management is to predict the volume of water moving through river systems or coastal areas under different conditions, for example, during periods of heavy rainfall or during extreme tidal levels. This is achieved by carrying out hydrological studies. These studies take all of the recorded data available, both meteorological (the amount of rain that has fallen) and hydrometric (measurements of river levels and flows), and use a variety of scientific methods to estimate flows and water levels in rivers and coastal areas for a range of different conditions.

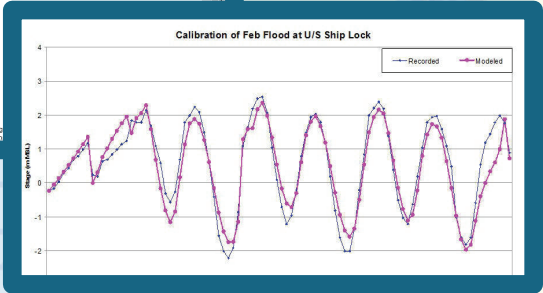
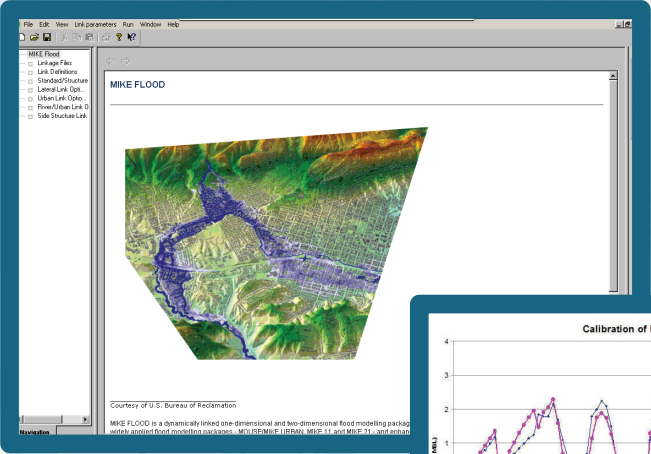
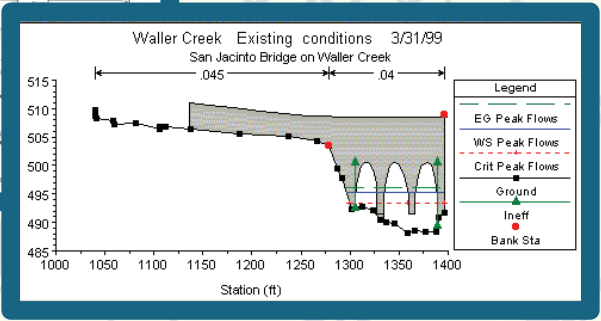
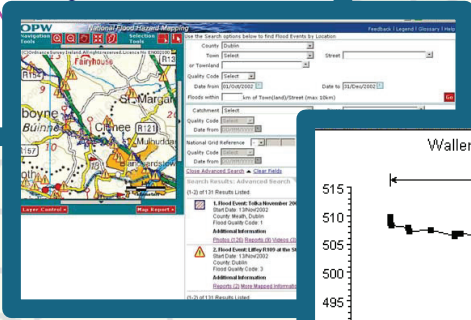
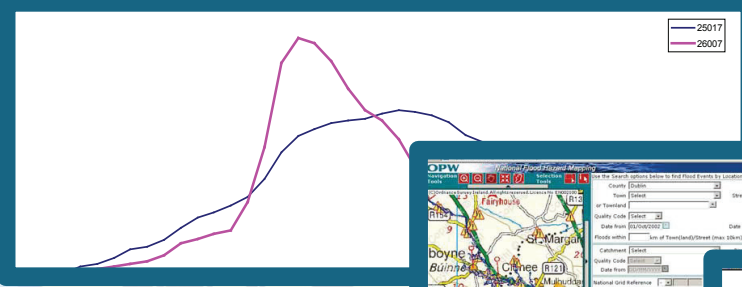
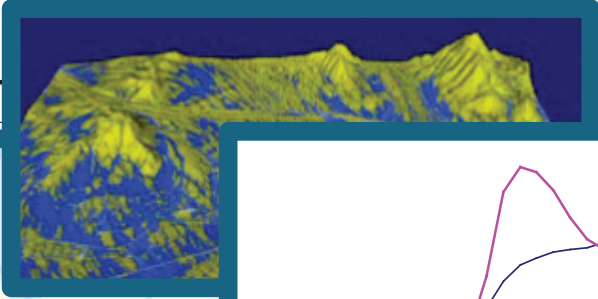
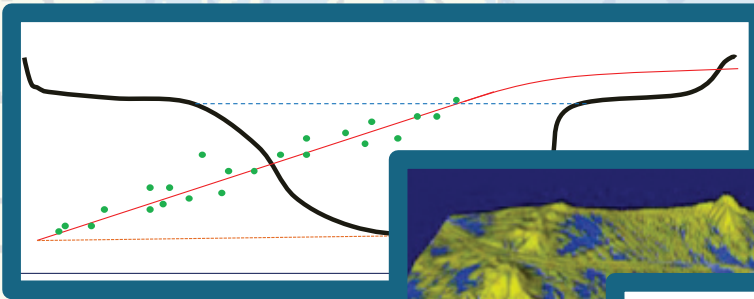
The next step uses computer models to predict how and where flooding is likely to occur. Physical characteristics of rivers, floodplains and coastal areas (such as elevation and shape) generated from land-based and airborne surveys are fed into the computer models. Data from the hydrological studies on the quantity of water moving through the river systems or coastal areas under different conditions is also fed into the models. The models can then be used to predict flooding and produce maps of where flooding is likely to occur and what receptors are likely to be affected by the flooding. Data on real flood events is used to verify that the flooding predicted by the models is accurate. This is achieved by feeding all of the information related to a flood event into the model and comparing the predicted flooding with the flooding that actually occurred.

Once the flood risk is understood, work can begin to develop flood risk management measures to deal with the identified flood risk. These measures can include ‘structural’ measures that block or restrict the pathways of floodwaters (for example building walls and embankments alongside river channels or erecting rock armour in coastal areas) or non-structural measures aimed at reducing the vulnerability of people and communities to flooding (for example flood warning systems, effective flood emergency response procedures, or flood resilience measures).

The models can then be used to predict the effectiveness of the flood risk managements measures. For example, the details of proposed walls or embankments can be fed into the models to predict whether or not they would be effective at preventing or reducing flooding.

BUILDING A RIVER MODEL

Details of the physical characteristics of a river channel and its surrounding floodplain (such as channel shape and roughness, floodplain topography, and details of structures such as weirs, bridges and walls) and the hydrological characteristics of the river (such as the relationship between water level and flow in the river channel) are fed into specialised modelling software to produce a computer model of the river system and its catchment.

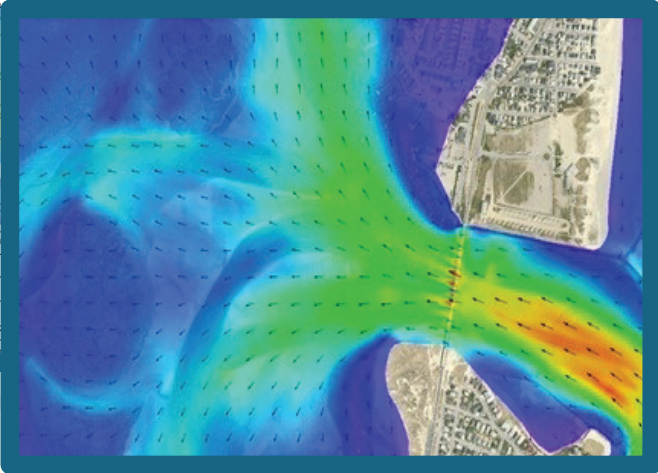
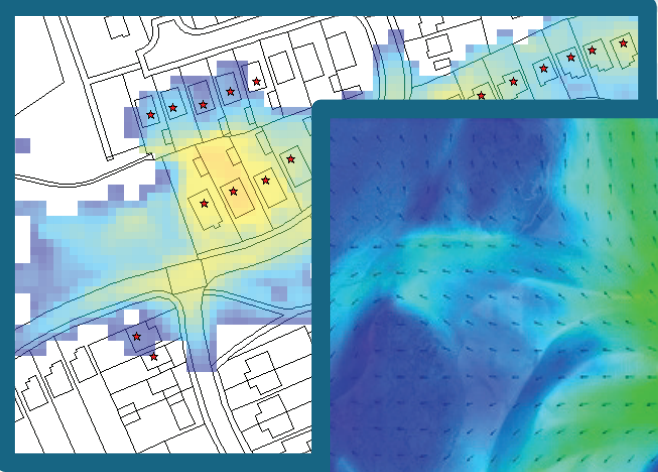


FLOOD PREDICTION

The computer model of the river system and its catchment is used to predict whether or not flooding will occur under a range of different weather and catchment conditions. Recorded data on real flood events is used to ensure that the model is accurately predicting what would happen under various conditions.

FLOOD MAPPING

Flood maps are produced to illustrate the model predictions. Maps can be produced to illustrate a variety of different aspects of flooding including the extent, depth and velocity of the flooding and the level of risk associated with it. The maps can also illustrate the receptors within the floodplain including social (homes and hospitals), environmental (nature conservation sites), cultural heritage (archaeological and architectural sites) and economic (residential and commercial properties, agricultural land and transport and utility infrastructure) receptors.



Queries or submissions can be made at any time by email, in writing, or via the national and study websites. Contact details are as follows:

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SUMMARY OF PROGRESS AND NEXT STEPS

- All survey work, to gather data on the elevation and shape of river channels and floodplains to feed into the computer models, is complete.
- The development of computer models to predict flood extents and flood risk for each AFA is complete.
- Flood mapping will be completed for all of the AFAs within the South Eastern CFRAM study area by June 2014.
- A series of public consultation days will be held in relation to the flood mapping between July 2014 and December 2014. These will be announced online and in the media.
- Flood risk management options to deal with the identified flood risk will be developed during 2015.
- Flood Risk Management Plans, including measures to deal with flood risk, will be published in 2016.



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