Flood defence asset survey

As part of our flood defence asset survey, we have recently completed a very high resolution LiDAR geometric survey of major flood defences in the catchment. The work was carried out by BKS Surveys Ltd using FLI-MAP 400 - a helicopter mounted laser scanner system. The laser scanners gather detailed ground point data with up to forty points gathered per square meter of ground area. The survey provides detailed information on the shape and height of major flood defences in the catchment. This data will be input to the Flood Defence Asset Database (October 2007 newsletter) and will also be used in the hydraulic computer models.

Cobh from Cork Harbour

Next issue

In the next issue of the newsletter we will be providing information on Geographical Information Systems (GIS). The Lee CFRAMS is a data intensive study involving different forms of data supplied from a variety of organisations. GIS allows the project team to integrate, analyse and utilise this data. The next issue of the newsletter will be available at the end of March.

Glanmire on the Glashaboy River

Contact details

If you have any questions or require any further information relating to this study or if you would like to be included on a distribution list for future issues of this newsletter please email LeeCFRAMStudy@opw.ie

Further information is also available on our project website at www.leecframs.ie

Halcrow

Blarney Castle

Lee CFRAMS

LEE CATCHMENT FLOOD RISK ASSESSMENT AND MANAGEMENT STUDY

Newsletter - 18
February 2008

OPW

Introduction

Welcome to the February edition of the Lee CFRAMS newsletter. In this months newsletter we provide information on flood hazard mapping and the flood defence asset survey.

For the Lee CFRAMS we are producing three key flood mapping formats, namely flood extent maps, flood hazard maps and flood risk maps. Following on from our August 2007 newsletter which discussed flood extent maps, this months Focus On section provides information on flood hazard maps. In a future edition of the newsletter we will provide information on flood risk maps.

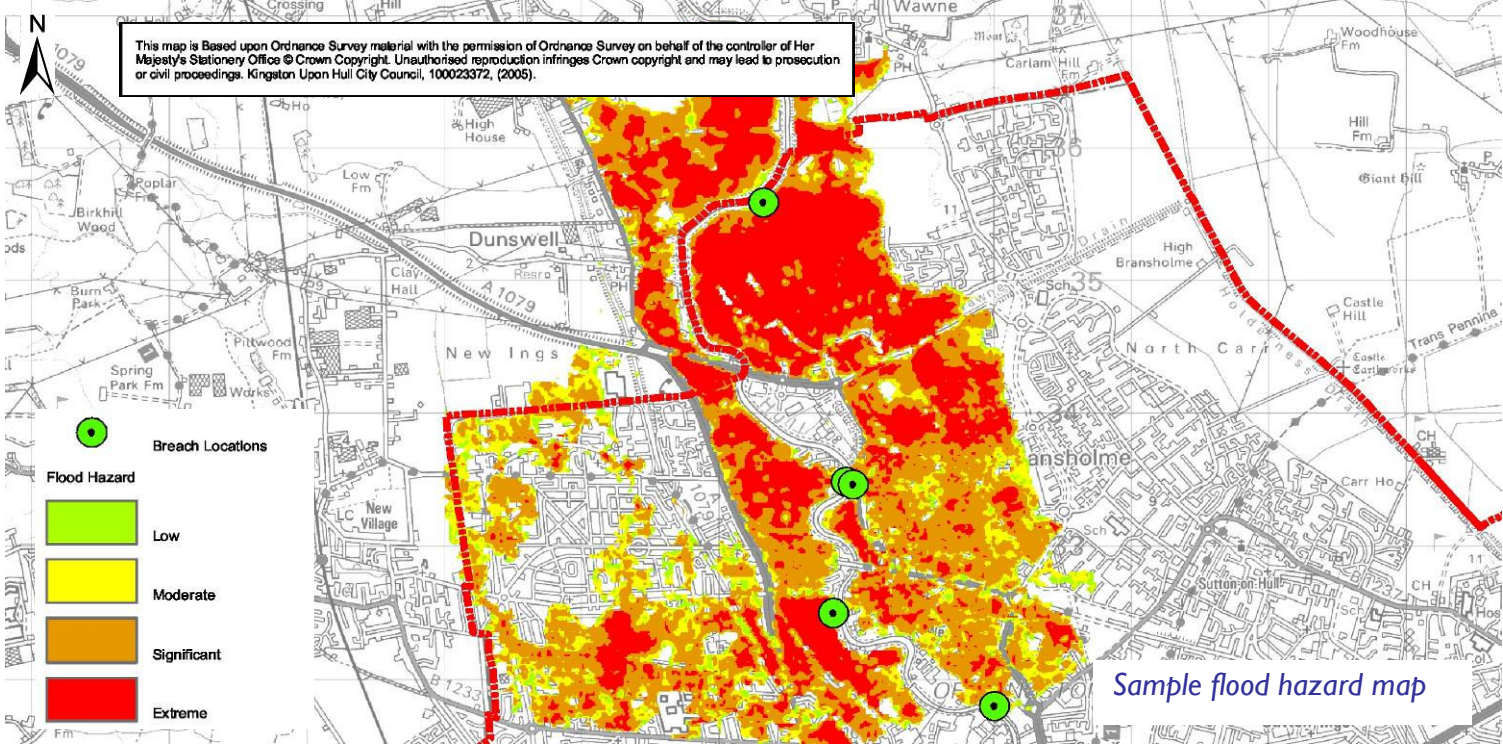
Focus On

Flood hazard mapping

Flood maps are one of the main outputs of the hydraulic modelling process and will form the way in which the hydraulic model results are communicated to each of the end users including for example, the general public and planning authorities.

Flood extent maps illustrate the estimated area inundated by a particular flood event for a given annual exceedence probability (AEP). Flood hazard maps indicate the hazard, or potential danger, associated with a given flood extent. The maps will provide flood hazard information to:

- Planning authorities to assist in the management of their planning and development;
- Local authorities for emergency response planning; and
- General public to raise the awareness of risk to property and life.



Sample flood hazard map

The calculation of flood hazard is based upon a mathematical formula which takes into account the depth and velocity of flood waters to provide a flood hazard value. These depths and velocities are derived from the hydraulic modelling results combined with the Digital Terrain Model (DTM) of the floodplains. The results of the mathematical formula are linked with a flood hazard category and a description of the danger associated with that category. The table below is sample of possible flood hazard categories and descriptions linked to sample flood hazard values.

The flood hazard categories are assigned a colour code and the spatial extent of the hazard mapped to produce the flood hazard maps. The map above is a sample of a flood hazard map from Hull City Council Strategic Flood Risk Assessment.

Flood hazard maps will be produced for a number of annual exceedence probabilities and will be available for the eight river models (May 2007 newsletter) and Cork Harbour (March 2007 newsletter).

Sample flood hazard value	Flood hazard category	Description
>2.20	Extreme	Dangerous for all. *Flood zone with deep fast flowing water.*
1.20 – 2.20	Significant	Dangerous for most people. *Flood zone with deep fast flowing water*
0.70 – 1.20	Moderate	Dangerous for some (i.e. children). *Flood zone with deep fast flowing water.*
0 – 0.70	Low	Caution. *Flood zone with shallow flowing water or deep standing water.*