

Project Progress

Over the last four weeks the project work has been focussed on the hydraulic computer modelling of the catchment including calibration of the models using flow and level gauges and records of previous flood events (Jan '08 Newsletter) and the production of flood maps.

In the coming months the project will move forward into stage 3 where the flood risk and hazard maps will be used to identify potential flood risk management options.

GIS will again feature in this stage of the project as we use the flood maps to aid the identification of specific flood risk management options for areas identified as being at risk of flooding in the catchment.



Blarney River at Blarney Castle

Boats moored on Lough Allua.



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



Mardyke Bridge over the River Lee in Cork City

Next issue

In the next issue of the newsletter we will be looking at the ongoing Strategic Environmental Assessment (SEA) and in particular highlighting the special protection areas, such as The Gearagh, within the catchment. The next issue of the newsletter will be available at the end of April.

LEE CATCHMENT FLOOD RISK ASSESSMENT AND MANAGEMENT STUDY

Newsletter - 19
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Halcrow



Introduction

Welcome to the March edition of the Lee CFRAMS newsletter. In this month's newsletter we look at how Geographical Information Systems (GIS) are used in the Lee CFRAMS.

The Lee CFRAMS is a data intensive study involving several different forms of data supplied from a variety of organisations. GIS allows the project team to integrate, analyse and utilise this data.

Focus On

Geographical Information Systems (GIS)

The Lee CFRAMS involves the collection and generation of large amounts of data throughout the life of the project. The data required to carry out the study is provided by several organisations and a process of collection and collation of this data is vital to the progression of the project.

A geographical information system (GIS) is a computer based method which allows the integration and analysis of spatially referenced information, such as topographical survey data, locations of gauging stations and locations and extents of historical flood events. GIS allows the received data to be stored, used, compared and analysed through one common viewing platform. The use of GIS allows easy comparison of related datasets and helps in the management and sharing of data between all members of the project team.

One of the outputs from a geographical information system (GIS) is in the form of maps. These maps can be generated in the form of layers for different or combinations of datasets, or to display results of analysis on these datasets.



GIS in the Lee CFRAMS

Along with being used as a tool for collating and displaying the spatial data received in the project, GIS is particularly used in several key areas in the study including the hydrological assessment (Feb '07 Newsletter) and the creation of the flood risk and hazard maps (Aug '07 and Feb '08 Newsletters).

Key tasks for which GIS are presently being used within the Lee CFRAMS include:

- To store, assess and distribute all hydrological and meteorological data from the Lee catchment including: rainfall data, water level data and flow data from gauging stations.
- To undertake analyses including the identification of the Lee catchment area and the sub catchment boundaries from topographical data.

- To assist in the creation of the hydraulic computer models of the rivers and harbour by collating the data gathered in the flood defence asset survey, the topographical survey and the digital terrain model (DTM) (created from LiDAR (Light Detection and Ranging) (Feb '08 Newsletter)).
- To identify the locations of the gauging stations to be used in calibration of the hydraulic computer models.
- To support the assessment of economic damage caused by flood events.
- To aid the creation of the flood risk and hazard maps. GIS is used to create 1-dimensional and 2-dimensional flood maps using the digital terrain model and results from the hydraulic computer models.