

Project programme

Eight hydraulic computer models are now nearing completion and the process of checking the flood extent maps with local knowledge has begun.

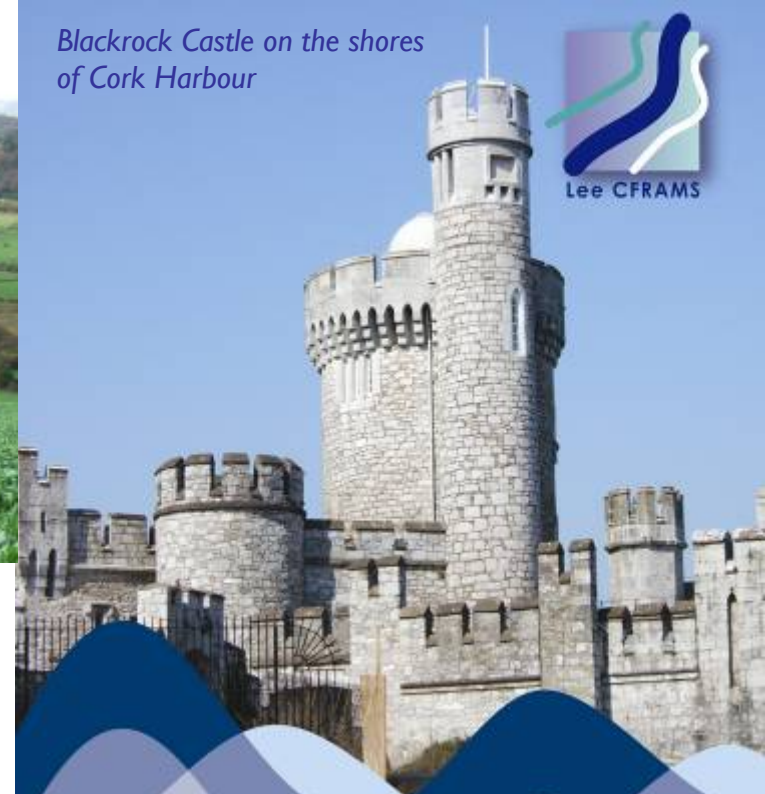
The results of the hydraulic computer modelling are now being used in the assessment of property damages (as described in the **Focus On** section) and the list of flood management options that will be considered and assessed is being developed.

The Strategic Environmental Assessment is ongoing and environmental factors will be fully incorporated into the assessment of the flood risk management options.

Upper Lee catchment



Blackrock Castle on the shores of Cork Harbour



Clarion Hotel on the banks of the River Lee in Cork City

Next issue

In the next issue of the newsletter we will be looking at flood risk mapping. This mapping combines the findings of the damage assessment with the flood hazard mapping (Feb '08 Newsletter). The newsletter will be available at the end of June.

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

LEE CATCHMENT FLOOD RISK ASSESSMENT AND MANAGEMENT STUDY

Newsletter - 21
May 2008

Halcrow



Introduction

Welcome to the May edition of the Lee CFRAMS newsletter. In this newsletter we will focus on the estimation of the economic damages caused by flooding within the catchment. We will also be looking at how the results of the damage calculations are incorporated into the assessment of possible flood risk management options for the Lee CFRAMS.

Focus On

Damage assessment and benefit-cost analysis

Flood extent and flood depth maps, produced from the hydraulic computer models are now being used to assess the damage caused by flooding in both urban and rural areas. A damage assessment is being carried out identifying residential and commercial properties at risk from flooding.

The damage assessment uses information from the GeoDirectory (www.geodirectory.ie) which is a database of all the buildings in the Republic of Ireland. At present approximately 1.8million buildings are contained within the database.

Each property is assigned a unique ID number and information including its exact geographical location, address and the use of the building is stored in the database. The GeoDirectory is created from information contained in OSi maps and aerial photography which is then validated on the ground by An Post delivery persons.

The figure above shows all the buildings within the Owenboy catchment that are contained in the GeoDirectory.



Buildings, protected structures & WWTW in the Owenboy catchment

The flood maps and property information are combined to identify properties which lie within the flood extents and are therefore at risk from flooding. The value of the damage is then calculated for each affected property.

The economic damages for each property depend on the floor area of the property, the depth of flooding which occurs (identified from the results of the hydraulic computer modelling) and the property type (either residential or commercial). The total damage to all properties within defined rural and urban areas is then calculated for use in the benefit-cost analysis.

In parallel with the damage assessment, flood risk management options are being developed. This process identifies the flood risk management options that can be used to protect properties from flooding. Options considered will include structural measures such as flood walls and embankments and

non-structural measures such as the creation of a flood forecasting system.

Once feasible flood risk management options have been identified, the costs of implementing and constructing each of the options will be calculated.

A benefit-cost analysis will then be carried out, comparing the cost of each option with the economic benefits gained. The benefits in this situation are the damages to property that will be avoided if the flood risk management option is implemented.

The preferred flood management option will be selected by taking into account all the important factors within the catchment. This will include the results of the benefit-cost analysis, technical considerations and environmental and social issues identified in the Environmental Scoping Report.