



Meath coastline

# FINGAL EAST MEATH FLOOD RISK ASSESSMENT AND MANAGEMENT STUDY

Newsletter – 02  
November 2008

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### Aerial Surveys



## Introduction

Welcome to the Fingal East-Meath Flood Risk Assessment and Management Study (FEM FRAMS) newsletter. This is the second newsletter to be published and follows on from the August 2008 newsletter. The newsletter will be produced every three months to provide information on different aspects of the project and to keep you updated on project progress.

The main objectives of the FEM FRAMS are to: identify and map the existing and potential future flood hazard and risk areas within the study area; build the strategic information base necessary for making informed decisions in relation to managing flood risk; identify viable structural and non-structural measures and options for managing the flood risks; and prepare a Flood Risk Management Plan (FRMP) for the study area, and associating Strategic Environmental Assessment, that sets out the measures and policies, including guidance on appropriate future development, that should be pursued by the Local Authorities, the OPW and other Stakeholders.

It is important that the knowledge and views of the general public are taken into consideration during the development of the Fingal East Meath FRMP. Our website [www.Fingaleastmeathframs.ie](http://www.Fingaleastmeathframs.ie) has a feedback form where you can submit information and views relevant to the study.

## Land Surveys

The land survey elements of the FEM FRAMS will feed into a number of key stages of the project, notably the hydraulic modelling and the flood risk assessment. The FEM FRAMS land surveys involve both a channel and structure cross sectional survey and a flood defence asset survey.

### Channel and structure cross sectional survey

The channel and structure cross sectional survey involves a land survey by teams of surveying specialists. The survey teams will use specialised surveying equipment to gather detailed measurements of the shape of the river channel and any structures located in the river channel such as bridges or weirs. This information will be gathered at regular intervals along the river channels in the form of cross sections.



Surveyor taking measurement of a river channel cross section.

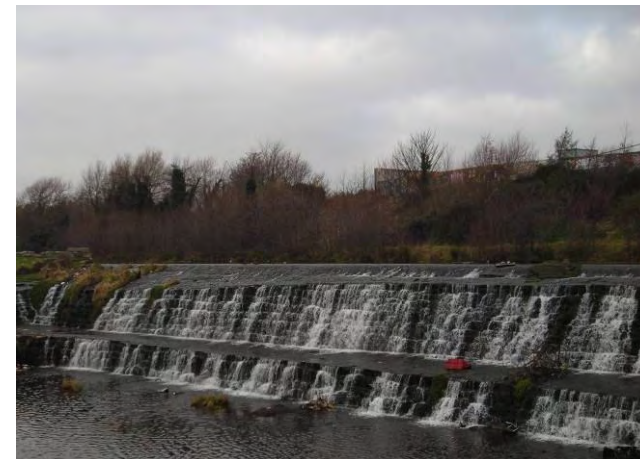
The watercourses that are understood to give rise to the existing or potential future flood risk within the catchment (such areas would include existing towns and villages subject to flooding, and other areas understood to be prone to flooding and for which significant development is anticipated) are defined as High Priority Watercourses (HPWs). For HPWs cross sections will be spaced at approximately 50 to 100 metres. For other areas of the catchment where flood risk is considered to be moderate, the watercourses which flow through these areas are defined as Medium Priority Watercourses (MPWs). Cross sections will be spaced at approximately 750 to 1000 metres for these MPWs.

The channel and structure cross sectional survey is due to commence in November 2008. In order to collect the required data it may be necessary for the survey contractor to gain access to your land. Access inside houses and buildings will not be required. We would be grateful if you could assist

the study by granting the surveyor(s) access to your property to carry out this important survey work. All surveyors will carry identification documents and will take great care not to damage property or inconvenience the occupiers

### Flood defence asset survey

The flood defence asset survey involves gathering information on the type and condition of existing flood defence structures (e.g. flood walls, embankments, bridges, piers, etc.) along the rivers and coast. Data is input, stored and analysed in the Flood Defence Asset Database, a new software tool developed by Halcrow as part of the Lee Catchment FRAMS (information of the Flood Defence Asset Database will be available in a future newsletter).



Assets surveyed in the catchment as part of the defence asset survey.

The survey commenced in August 2008 and is almost complete with 27km of river channel assets and 10km of coastal assets being surveyed. The survey should be completed in November 2008 when the remaining 5km of coastal assets will be surveyed.

The Flood Defence Asset Database and digital background maps are loaded onto Toughbook laptops. Using Global Positioning Systems (GPS) the flood defence assets are accurately located along the rivers and coast. Once located, the asset is inspected more closely and the physical condition is recorded in the database. Historical information from relevant organisations along with other data, such as existing surveys (i.e. Dublin Coastal Flooding Protection Project (DCFPP) and aerial photos) has helped inform the survey.

The survey will provide an overall indication of the condition of various flood defence structures within each of the river catchments and along the coast in the Fingal-East Meath area. This information will be incorporated into our flood risk assessment and used to develop a programme of defence asset management and maintenance.



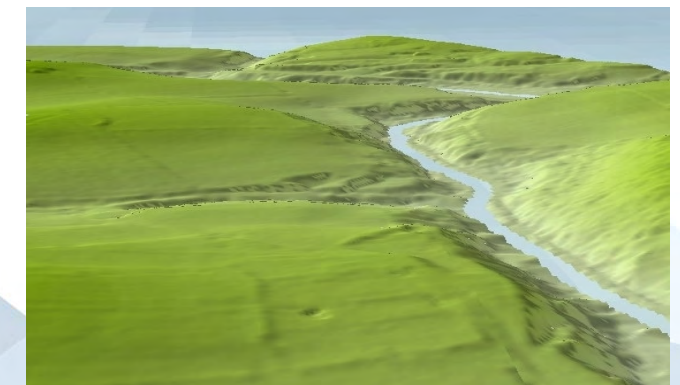
Map of the Fingal East Meath study area showing watercourses, HPWs and flood defence assets surveyed to date.

## Aerial Surveys

### LiDAR survey

LiDAR (Light Detection and Ranging) involves using an aeroplane with a special measuring device to provide detailed information on the shape and height of the ground. LiDAR data will be captured for the FEM FRAMS study along the river channels and river floodplains. The LiDAR data will be used to develop a high resolution Digital Terrain Model (DTM) of the river catchments.

The DTM will be used in a number of the project activities including the hydraulic computer modelling and flood mapping process. The DTM will also be used to estimate property threshold levels to allow us to determine the depth to which properties are likely to be flooded. This data will then be used to assess the damage occurring as a result of the flood inundation.



3D image of LiDAR DTM data along the Owenboy River in Cork.

### Aerial Photos

As part of the LiDAR survey, aerial photos will be captured for the catchment. The aerial photos provide extremely useful information for a study of this scale, i.e. for analysis of results and for identifying catchment characteristics.

## Newsletter map

In this quarter's newsletter map we provide information on the land survey data being gathered in the Fingal East Meath catchment.

The map shows the location of some of the major watercourses in the catchment and the lengths of these watercourses which have been classified as HPWs. The channel and structure cross sectional survey will concentrate on these HPWs in the catchment.

The map also shows the location of the flood defence assets surveyed to date along the catchment watercourses and along the Fingal and Meath coastline.

## Project progress update

Throughout the project we will keep you updated on our progress through both the quarterly newsletter and project website,

## Strategic Environmental Assessment (SEA) Scoping Report

The purpose of the SEA is to ensure that environmental constraints and opportunities are fully considered in the development of the Flood Risk Management Plan. We are currently at the scoping stage of the study, which involves establishing the environmental baseline and identifying key environmental constraints, issues and opportunities to inform the identification of flood risk management options. An Environmental Scoping Report will be produced in early 2009 to document the outcome of this scoping process. This report will be published on the project website and comments will be invited. Further information on the SEA will be published in the next edition of the newsletter.

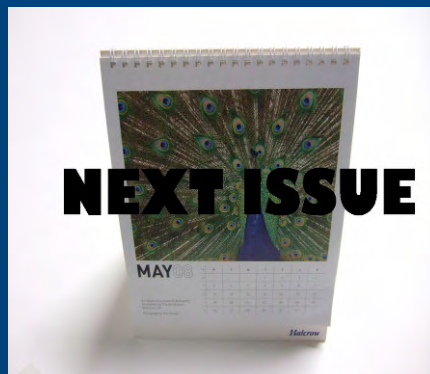
## External communications

We are currently consulting with organisations that may have an interest in the FEM FRAMS to

study; to obtain information about of the Fingal East Meath catchment area that may be useful to the study; to seek their views and experiences of flooding; and to request their future involvement in the study. We encourage and welcome the involvement of any groups or organisations that have an interest in the study and recognise the value of this external input to the study. If you wish to get involved, please register your interest by e mailing [denise.treacy@fingalcoco.ie](mailto:denise.treacy@fingalcoco.ie) with your contact details.

## Project Inception Report

A project inception report has been prepared. This report provides detail on the data collected for the project to date and the interpretation of this data. The data collection process involves gathering information such as, reports, drawings, photographs and historical data. The report also sets out the current progress of the project and any issues that have been encountered during the inception phase that may affect the proposed methodologies or the project programme.



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 [denise.treacy@fingalcoco.ie](mailto:denise.treacy@fingalcoco.ie).

If you would like to contact us by post, please send your request to Denise Treacy, Water Services Department, Fingal County Council, Grove Road, Blanchardstown, Dublin 15.

In the next issue of the newsletter we will be providing information on the Strategic Environmental Assessment (SEA) and the Environmental Scoping Report.

We will also update you with our progress on the survey works and other key project activities.

The next issue will be available in February 2009.

Our project website [www.fingaleastmeathframs.ie](http://www.fingaleastmeathframs.ie) provides up to date information on the FEM-FRAM Study, including project activities, project programme, public information days and project reports.

A feedback form on the website provides you with an opportunity to provide information you feel is relevant to the study.