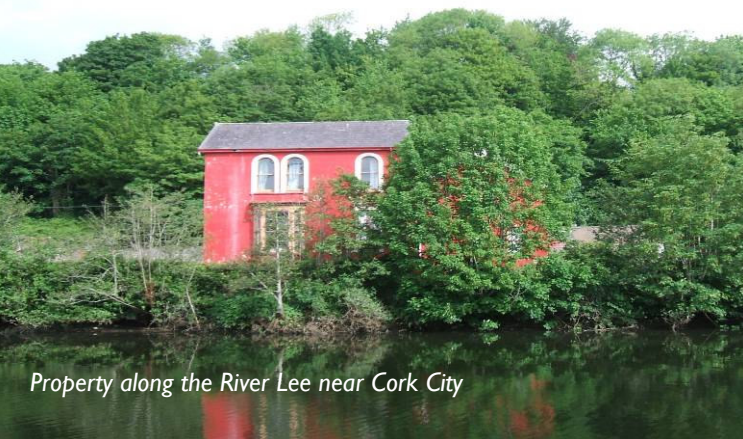


Costing of options

In order to be able to determine the cost/benefits of a particular option (please see May 2008 newsletter for further information) the project team will assess the cost of implementing a particular flood risk management measure. The basic cost of construction and implementation of individual measures has been sourced from a number of organisations, publications and through previous project experience (i.e. OPW have completed a number of flood alleviation schemes in Ireland and Halcrow have experience from international flood alleviation schemes, e.g. the 24.5km long St Petersburg Flood Barrier). The costs are dependant on a number of factors including the type, extent, height and location of a particular measure. Additional costs also taken into consideration include maintenance, operation and allowance for archaeology & environmental mitigating measures.



Slatty pond near Carrigtohill



Property along the River Lee near Cork City

Next issue

In next month's issue we will continue with our series of **Focus On** series looking at flood risk management options for the Lee CFRAMS. The next issue of the newsletter will be available at the end of November.

Contact details and project website

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



St. Fin Barre's Cathedral in Cork City



Lee CFRAMS

LEE CATCHMENT FLOOD RISK ASSESSMENT AND MANAGEMENT STUDY

Newsletter 26 - October 2008



Halcrow

Introduction

Hello and welcome to the October 2008 edition of the Lee CFRAMS newsletter. The project team is continuing with work on assessing flood risk management options for the Lee catchment. In this month's **Focus On** section we provide information on a number of potential flood risk management measures for the Lee catchment.

Focus On

Flood risk management measures

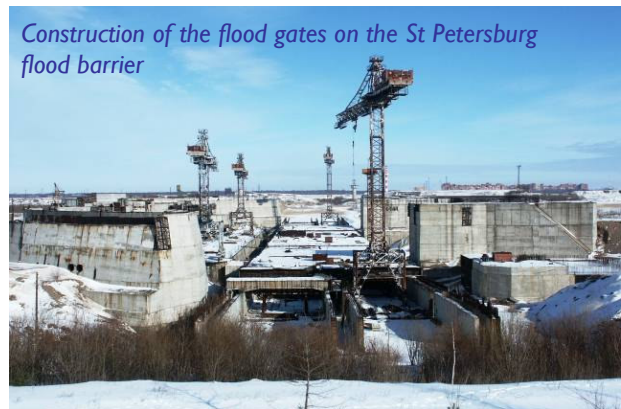
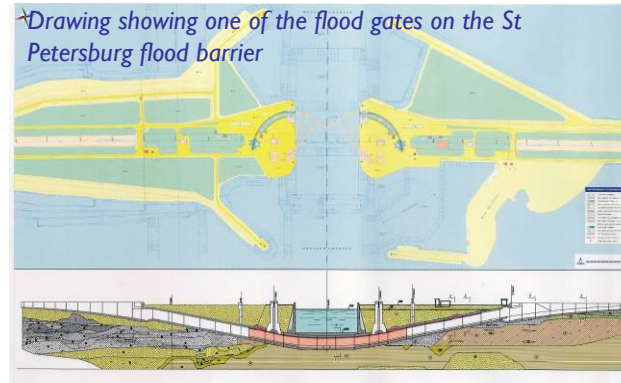
In this month's **Focus On** we continue on from last month's newsletter by providing further information on some of the flood risk management measures being considered for the Lee catchment.

Tidal barrier

The purpose of a tidal barrier is to prevent a tidal or storm surge from entering a bay or harbour, or up any given river when such a threat arises. A storm surge occurs as a result of a low pressure weather system occurring offshore which causes water levels to rise higher than the normal sea level. Storm surges are exaggerated over shallow water areas such as Cork Harbour. Storm surge affects can furthermore be magnified by high tides and fluvial flood flows. The most severe flooding occurs when all these factors take place at the same time, i.e. flooding in Cork Harbour in October 2004.

Tidal barriers are constructed with moveable gates which are closed during storm surge conditions to prevent the propagation of storm surges into a harbour area or up a given river. Under normal conditions the gates remain

open to allow the movement of ships and not to impede the natural tidal cycle.



A number of factors such as costs, effectiveness and possible environmental impacts affect the viability of a tidal barrier.

Flood Walls and Embankments

Flood walls and embankments are constructed above the flood water level to provide a physical defence and protection against flooding. These measures are typically considered in urban areas where there is a high risk of flooding. Where space permits embankments are typically constructed, otherwise walls are built. Flood walls need to withstand the pressures of containing flood waters and are usually constructed of

reinforced concrete or steel sheet piling with stone or timber cladding to improve visual impact.

The use of flood walls and embankments is limited by a number of factors including the depth of flooding, available space, impact on flood risk elsewhere in the catchment, ground conditions and environmental considerations.



Individual property protection

Individual property protection involves the use of 'off the shelf' products which are fitted to at risk properties to prevent the ingress of flood waters. Such products include flood gates, air vent guards and non return valves for pipes and drains. The use of individual property protection is dependant on having adequate flood warning to allow time for implementation of the defences.

The measures discussed above will be considered as part of a suite of flood risk management options for the Lee catchment. The viability of these options is being determined through a detailed analysis of the flood risk management objectives for the catchment.