

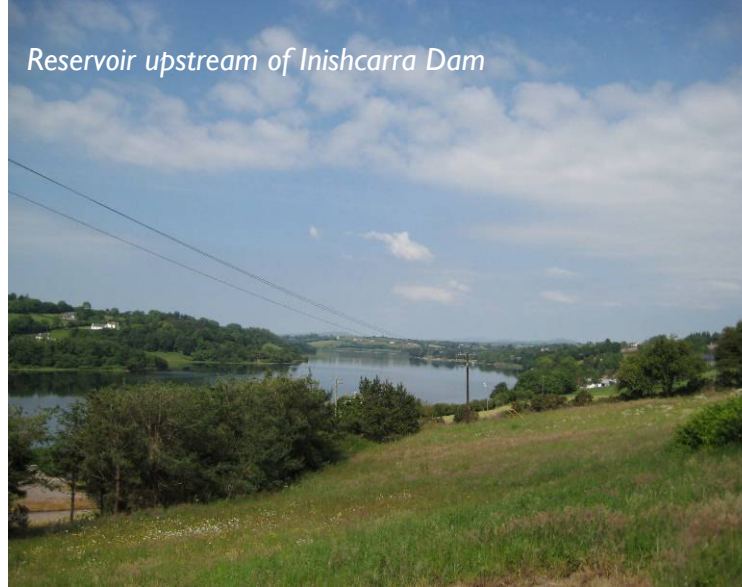
## The River Lee Hydro-Electric Scheme

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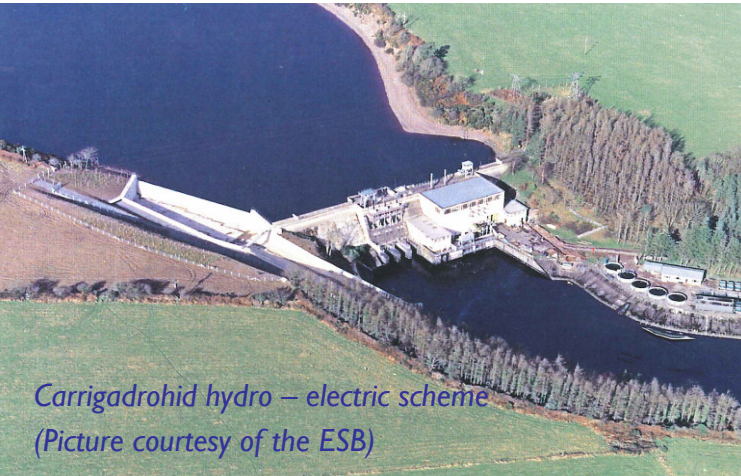
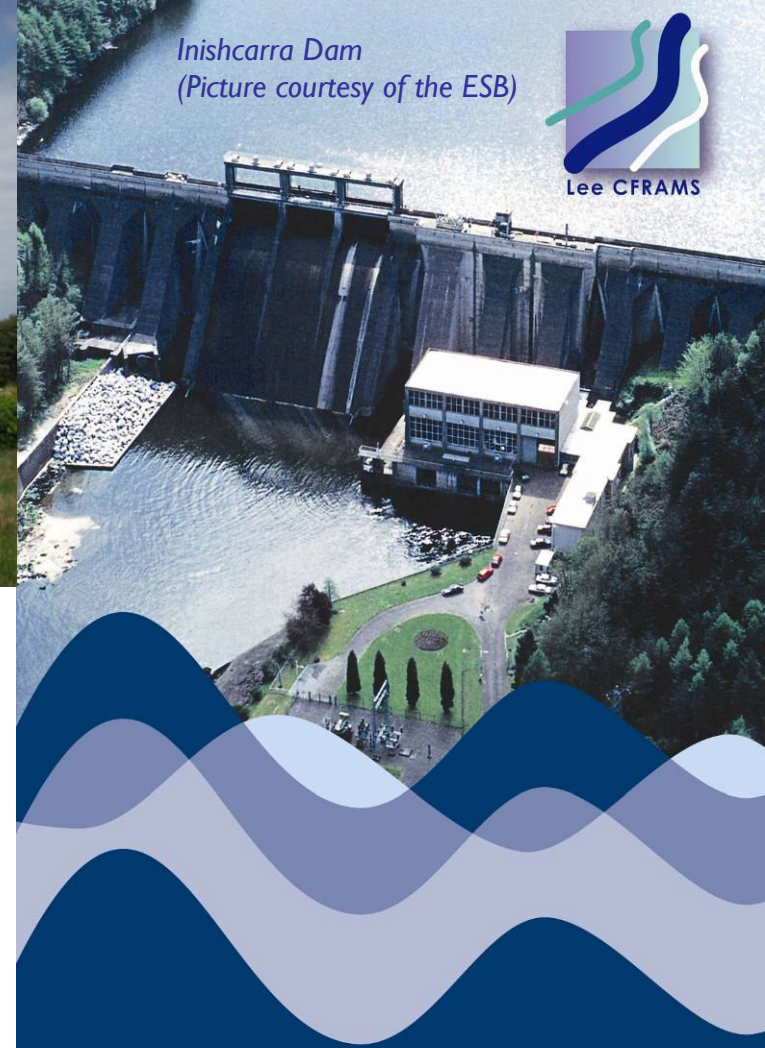
water management and are co-ordinated with forecast high tide levels in Cork City. Flood warnings are issued by the ESB to those known to be at risk of flooding downstream of Inishcarra dam.

Flooding downstream of Inishcarra Dam is affected by a number of factors including the additional flows to the River Lee from the Bride, Shournagh and Curragheen catchments which comprise over 30% of the overall River Lee catchment area. Additionally, high tide levels and storm surges affect water levels in the River Lee in the vicinity of Cork City.

Reservoir upstream of Inishcarra Dam



Inishcarra Dam  
(Picture courtesy of the ESB)



Carrigadrohid hydro – electric scheme  
(Picture courtesy of the ESB)

### 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](mailto:LeeCFRAMStudy@opw.ie)

Further information is also available on our project website at [www.leecframs.ie](http://www.leecframs.ie)

### Next issue

In next month's edition of the newsletter we will focus on the calibration of both the harbour and river hydraulic computer models. Calibration involves checking the computer models against recorded flood information to ensure that they were working correctly. The next edition of the newsletter will be available at the end of January. Until then, the project team would like to wish you all a Happy Christmas and peaceful New Year.

## LEE CATCHMENT FLOOD RISK ASSESSMENT AND MANAGEMENT STUDY

Newsletter - 16  
December 2007

**Halcrow**



## Introduction

Hello and welcome to our Christmas edition of the Lee CFRAMS monthly newsletter. In this month's newsletter we mark the 50th anniversary of the construction of the two dams on the River Lee at Inishcarra and Carrigadrohid. The dams have played an important role in the management of flood waters on the River Lee over the last 50 years and will continue to do so in the future.

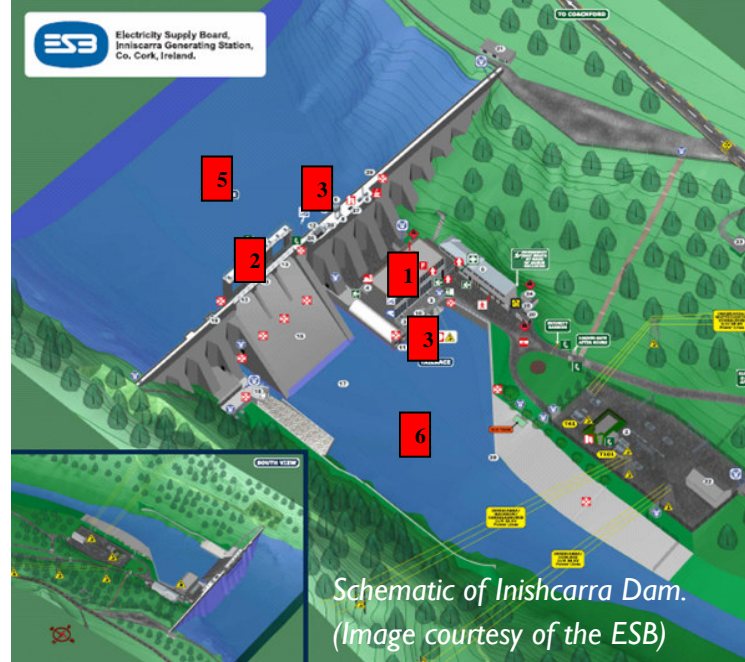
For all the latest information on the project please visit our website at [www.leecframs.ie](http://www.leecframs.ie)

## Focus On

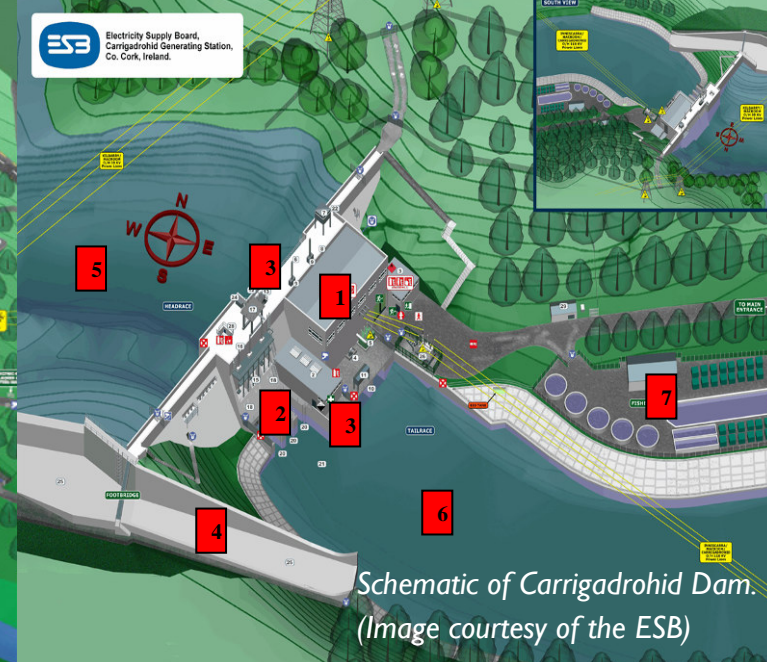
### The River Lee Hydro-Electric Scheme

This year marks the 50<sup>th</sup> anniversary of the construction of the River Lee dams at Inishcarra and Carrigadrohid. Over the last 50 years the River Lee Hydro-Electric Scheme has had a number of important benefits for the people of Cork including the generation of green electricity, the management of flood waters, storage of water for the Cork Harbour water supply and the creation of a significant leisure amenity. In this month's Focus On section we provide some general information on the hydro-electric schemes and their role in the management of flood waters of the River Lee.

The River Lee Hydro-Electric Scheme was built during the period 1952 to 1957 at a cost of £4.5 million. Inishcarra Dam is located approximately 13km west of Cork City with Carrigadrohid Dam a further 14km upstream. The dam at Inishcarra is 250 meters long and 45 meters high while Carrigadrohid Dam is 22 meters in height and 130 meters long. Between them, the dams generate



Schematic of Inishcarra Dam.  
(Image courtesy of the ESB)



Schematic of Carrigadrohid Dam.  
(Image courtesy of the ESB)

<b>1</b>	<b>Power station</b>	<b>3</b>	<b>Fish gates</b>	<b>5</b>	<b>Headrace</b>	<b>7</b>	<b>Fisheries</b>
<b>2</b>	<b>Sluice gates</b>	<b>4</b>	<b>Station bypass</b>	<b>6</b>	<b>Tailrace</b>		

almost 80 million units of electricity a year. The construction of the dams created two lakes which stretch from Inishcarra upstream to the Gearagh. The lakes cover an area of approximately 14 square kilometres and have a storage capacity of 45 million cubic meters.

The construction of the dams and storage reservoirs resulted in a number of negative impacts including the loss of the private lands and homes, the destruction of the Gearagh forests and the collapse of the wild salmon fisheries. The ESB have made a significant contribution to reverse the impacts on the environment with the introduction of the fish hatchery at Carrigadrohid and the re-establishment of significant salmon and coarse angling on the River Lee. The Gearagh is now a wild life sanctuary and designated as an area of special conservation. This was established through the co operation of the ESB, NPWS and other bodies.

Dams and reservoirs play a significant role in flood risk management through the provision of storage and controlled discharge of flood waters. The dams on the River Lee play an important role in the management of flood risk in the Lee valley downstream of Inishcarra Dam. Inflow from the upper Lee catchment is controlled at Carrigadrohid through storage in the reservoir and controlled discharge via Carrigadrohid's generating station and spillway gates. Inishcarra reservoir provides additional flood storage potential and controlled discharge via Inishcarra generating station and three overflow spillway gates.

During a storm event, rainfall data from the upper Lee catchment together with information on water levels in the reservoirs is transmitted to a central control room. Operations at both reservoirs are co-ordinated to optimise flood (continued on back page)