

Ireland – Flood Response

National Flood Policy 2004

Catchment Flood Risk Assessment & Management Studies (CFRAM Studies)

Spatial Planning Flooding Guidelines

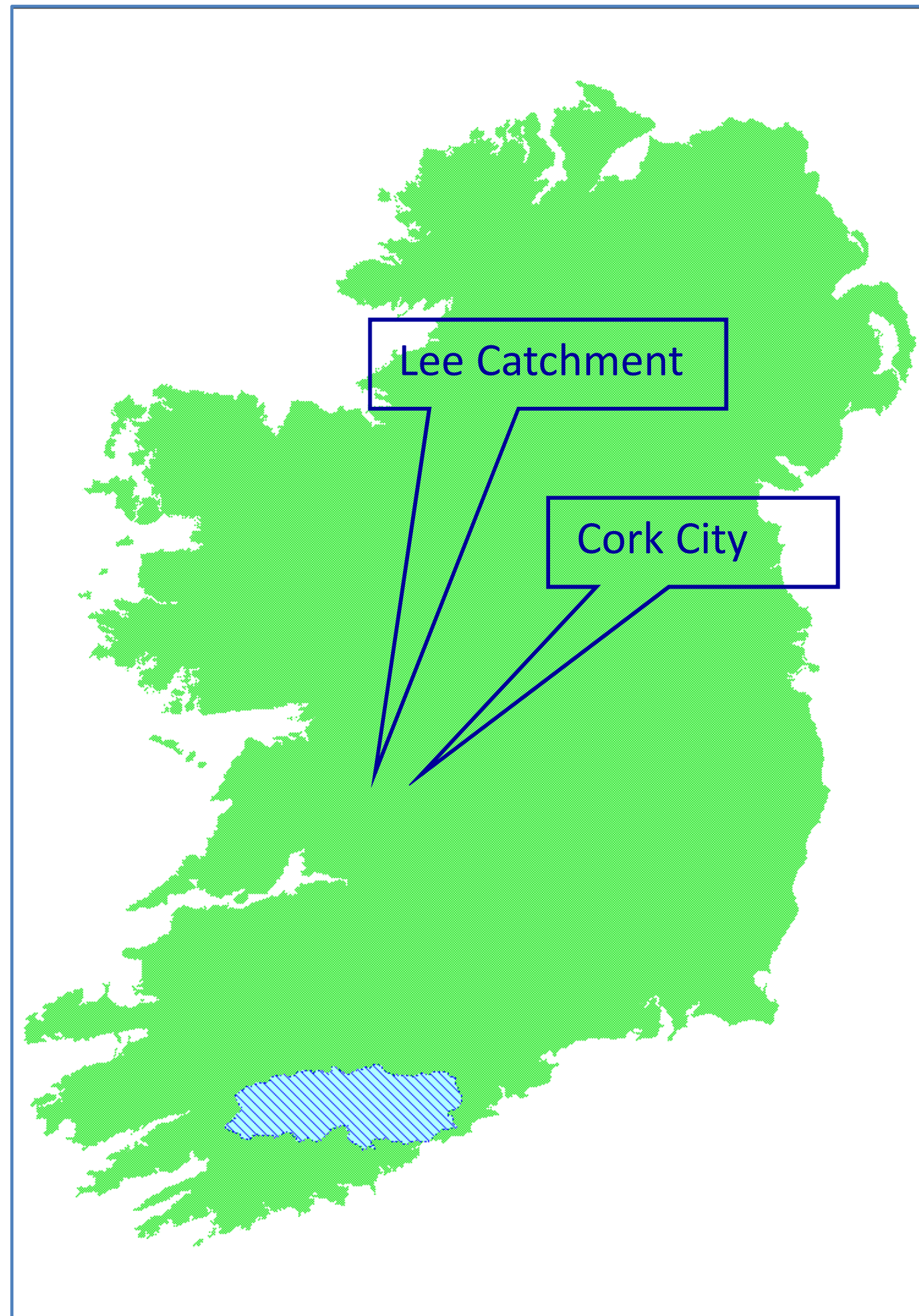
Office of Public Works

- Central Government Agency
- Lead Agency for Flood Risk Management



Cork City Council

- Local Authority
- Local Assistance and Emergency Response



Cork City

2nd City in Ireland - located at mouth of 2000 km² catchment containing 2 hydroelectric dams

Located in inter-tidal area at head of a large natural harbour.

History of flooding

Tidal – Regular -
Significant events 2004,
2014 – insurance costs
€25 million

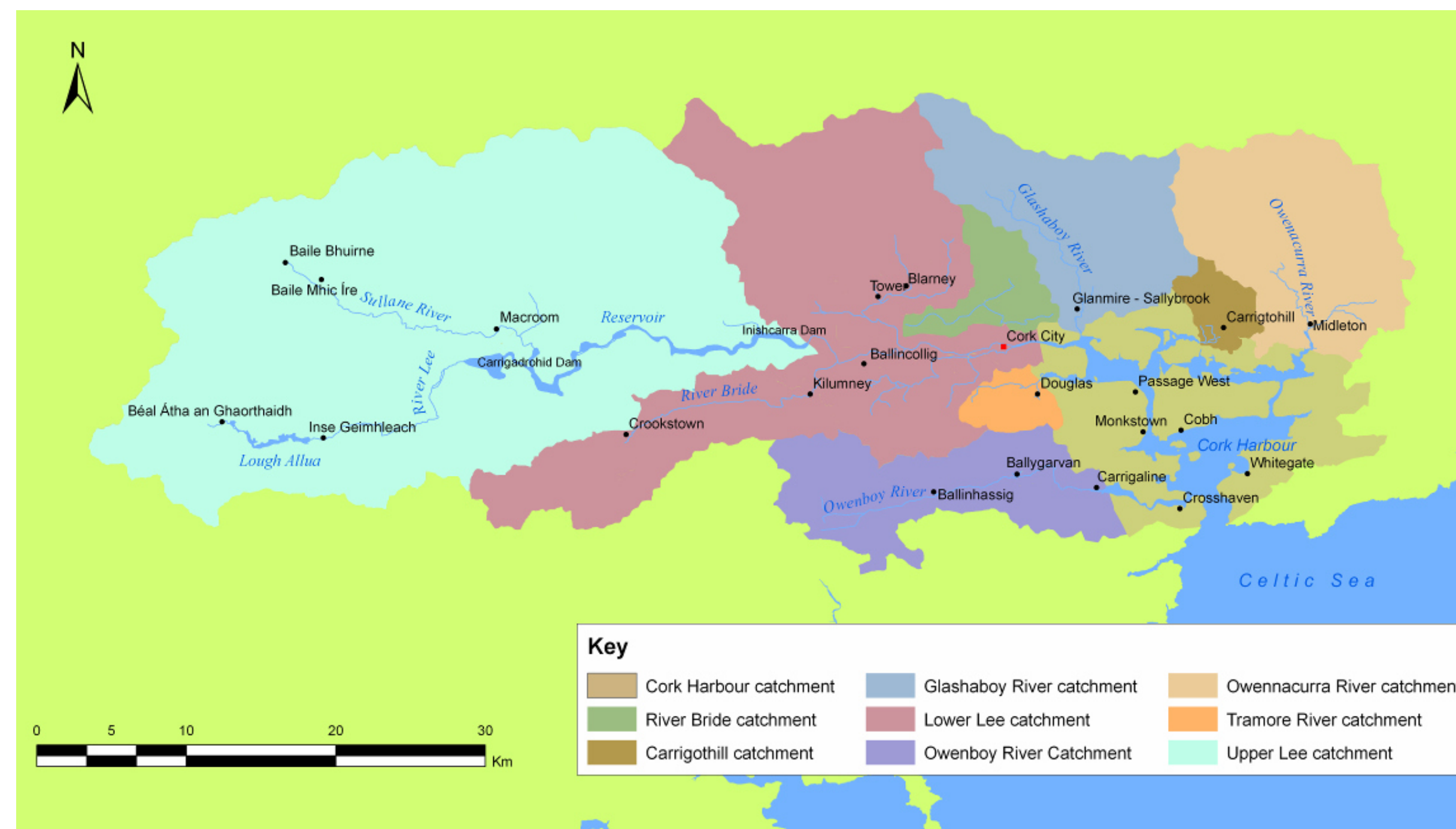
Fluvial – Irregular –
Significant event in 2009
–insurance costs €100
million
- No loss of life



Pilot CFRAM Study Lee (2005 -2010)

Objectives

- Assess flood risk in catchment as whole
- Identify probable future climate change impacts
- Map flood extent, hazards and risks
- Carry out Strategic Environmental Assessment
- Develop long term strategy for managing risk



Stages

- Flood Defence Survey
- Topographical Survey
- Hydrological Assessment
- Computer Modelling
- Flood Risk Mapping
- Identification of Options
- Option Assessment
- Catchment Flood Risk Management Plan

Lower Lee (Cork City) Flood Relief Scheme

Objectives

Develop a viable, cost effective and Sustainable Flood Relief Scheme for the Study Area (building upon the findings of the Lee CFRAM Study) The Required Standard of Defence is

1% AEP Fluvial 0.5% AEP Tidal Combination

Proposed solution - suite of measures as follows:

- Development of a **Detailed Flood Forecasting System & Warning System**
- Development of **Optimised Dam Operating Procedures for Extreme Flood Events**
- **Localised Defences and/or Individual Property Protection** at an isolated number of properties between Dam and City

- **Flow Reduction Structure on South Channel** to rebalance flows in the North and South Channels through the City (divert greater proportion of flow to North Channel during extreme events)
- **Direct Defences on River Banks upstream of and both channels within the City** (Walls, Embankments, Building upon existing Quay Walls)
- Possible **Raising of Pedestrian Bridges** to improve conveyance
- **Localised Surface Water Pumps** to deal with 'back of wall drainage'

Progress

Design ongoing. Construction to commence 2016

Issues Outstanding

Development of a sustainable forecasting system

Resolve operational and commercial issues related to use of hydroelectrical reservoirs for flood management

Mitigate visual and spatial impact of permanent flood barriers

Mobilise business and community support



Current



Proposed