

THE EU 'FLOODS' DIRECTIVE: PILOT IMPLEMENTATION IN THE LEE CATCHMENT

ENGINEERS IRELAND

Mark Adamson
Office of Public Works

19th February 2008



PRESENTATION SUMMARY

- **NATIONAL FLOOD POLICY REVIEW & IMPLEMENTATION**
- **EU 'FLOODS' DIRECTIVE**
- **LEE FLOOD RISK ASSESSMENT AND MANAGEMENT STUDY**

NATIONAL FLOOD POLICY REVIEW BACKGROUND

- **LAND IMPROVEMENT FOR AGRICULTURE**
 - Land Drainage / Embankment Schemes
 - Arterial Drainage Act, 1945
- **URBAN FLOOD PROTECTION**
 - Arterial Drainage (Amendment) Act, 1995

NATIONAL FLOOD POLICY REVIEW REVIEW PROCESS

- BACKGROUND

- Initiated: January 2003
- Inter-Departmental Review Group
- Report approved by Government and published: September 2004

- SCOPE

- Role and responsibilities
- Policy for flood management in the future



NATIONAL FLOOD POLICY REVIEW REVIEW OUTCOMES

- POLICY OBJECTIVE:

To minimise the national level of flood risk to people, businesses, infrastructure and the environment, through the identification and management of existing, and particularly potential future, flood risks in an integrated, proactive and catchment-based manner

NATIONAL FLOOD POLICY REVIEW REVIEW OUTCOMES

- **KEY RECOMMENDATIONS**
 - Roles and Responsibilities : OPW Lead Agency
 - Flood Risk Management, rather than Prevention
 - Greater emphasis on non-structural measures
 - Catchment Flood Risk Management Plans

POLICY IMPLEMENTATION

- **MANAGEMENT STRUCTURE**
 - Inter-departmental coordination group
 - Steering groups (specific areas of work)
- **WORK PROGRAMMES:**
 - Strategic information base
 - Non-structural FRM capacity
 - Process for implementation
 - Catchment flood risk management plans

WORK PROGRAMMES

- FLOOD STUDIES UPDATE / R&D
- HYDRO-METEOROLOGICAL MONITORING REVIEW
- RESEARCH & DEVELOPMENT PROGRAMME
- FLOOD HAZARD MAPPING
- CATCHMENT FLOOD RISK MANAGEMENT PLANNING
- FLOOD FORECASTING AND WARNING
- EMERGENCY RESPONSE DEVELOPMENT
- PUBLIC AWARENESS AND PREPAREDNESS
- PLANNING AND DEVELOPMENT CONTROL
- HIGH-RISK CHANNEL DESIGNATION
- PRIORITISATION
- DEFENCE ASSET MANAGEMENT
- REVIEW OF LEGISLATION
- COMMUNICATIONS
- OPW FLOOD RESPONSE

WORK PROGRAMMES 1, 2 & 3

- **1: FLOOD STUDIES UPDATE**
 - Update of FSR
 - Well underway: Completion 2009
- **2: STRATEGIC HYDRO-METEOROLOGICAL MONITORING REVIEW**
 - Strategic plan for monitoring networks
 - Substantially completed
- **3: R&D PROGRAMME**
 - Structured flood risk management R&D programme

WORK PROGRAMMES 4 & 5

- **4: FLOOD HAZARD MAPPING WEBSITE**
 - Complete
 - Ongoing maintenance / update
 - Future Presentation of Predictive Flood Maps
- **5: CATCHMENT FLOOD RISK MANAGEMENT PLANNING**
 - Flood hazard and risk assessment
 - Flood Maps
 - Flood Risk Management Plan

WWW.FLOODMAPS.IE

Flood Hazard Mapping Application | Irish National Flood Hazard Mapping Web Site

File Edit View Favorites Tools Help

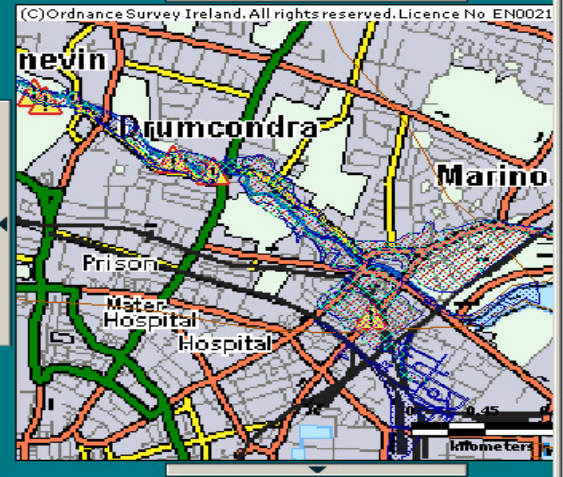
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Address http://193.178.2.190/View/Default.aspx

OPW National Flood Hazard Mapping

Navigation Tools Selection Tools

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Layer Control Map Report



Flood Photos Or Videos | Irish National Flood Hazard Mapping Web Site - Microsoft Internet Explorer

Back Forward Stop Home Search Favorites

OPW National Flood Hazard Mapping [Photos](#)

Flood Event: Tolka December 1954

Start Date: 08/Dec/1954
County: Dublin
Flood Quality Code: 1
National Grid Reference: O 167 364

Photograph Name	File Type & Size	Date	Quality Code	Description	Source of Information	Click On Thumbnails below to view larger Photo
Tolka Dec 1954 - Fairview	Jpg (220Kb)	Dec/1954	2	- (Photo Includes: Flood Extent, Flood Level)	Dublin City Council	
Tolka Dec 1954 - Fairview (aerial photo)	Jpg (301Kb)	Dec/1954	2	- (Photo Includes: Flood Extent, Flood Level)	Dublin City Council	

[Photos \(2\)](#) [Reports \(12\)](#) [Press Archive \(9\)](#) [More Mapped Information](#)

(1-2) of 18 Results Listed. [Next >](#)

Start

Microsoft PowerPoint - [H...]

Flood Hazard Mapping Ap...

Flood Photos Or Video...

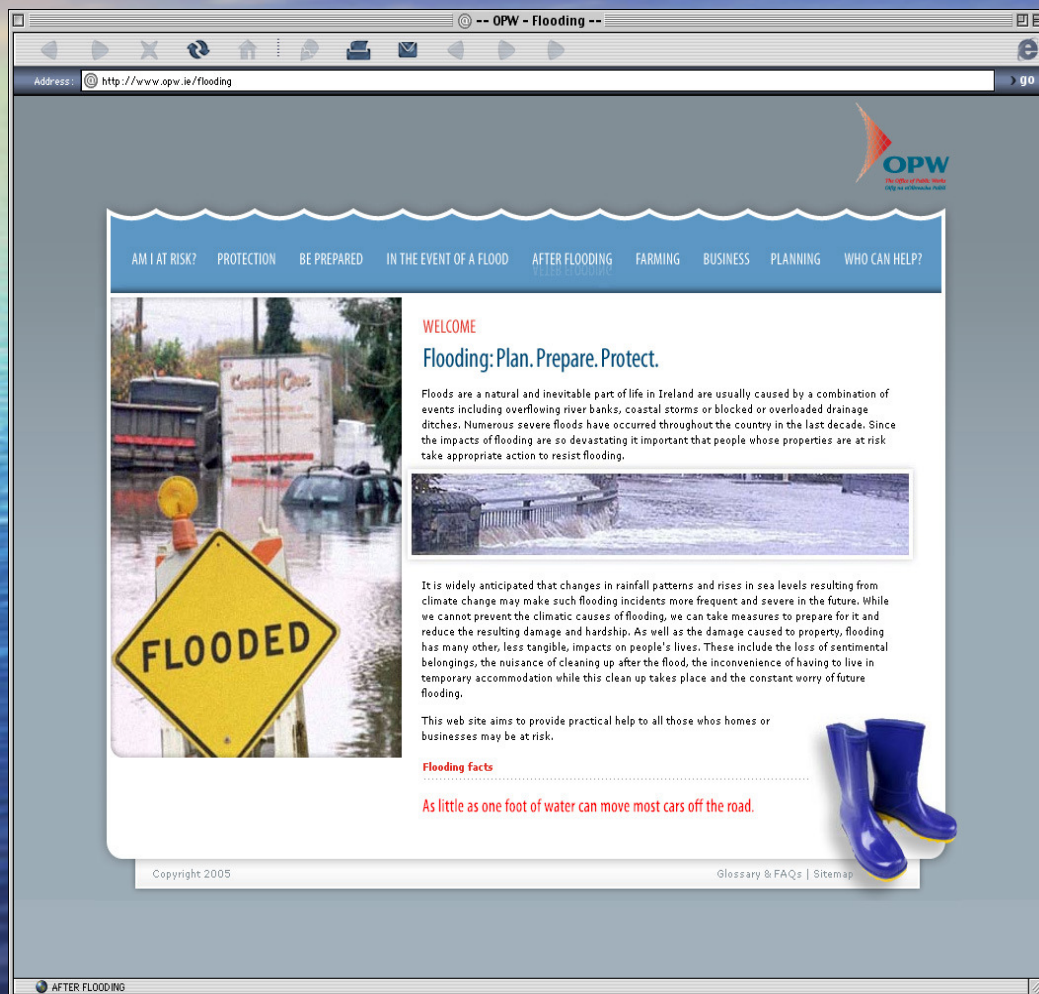
Internet

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WORK PROGRAMMES 6, 7 & 8

- **6: FLOOD FORECASTING**
 - Systems for Suir, Munster Blackwater
 - National service under discussion
- **7: EMERGENCY RESPONSE DEVELOPMENT**
 - Guidelines and Template Plan at final draft stage
 - Mallow and Fermoy among Pilot Areas
 - Assisting DoEHLG (Protocol)
- **8: AWARENESS AND PREPAREDNESS**
 - General campaign launched (www.flooding.ie)
 - Local campaigns dependent on flood map availability

WWW.FLOODING.IE



WORK PROGRAMMES 9, 10 & 11

- **9: PLANNING AND DEVELOPMENT MGT**
 - Partnership with DoEHLG, DAFF
 - Section 28 Guidelines
 - Draft Summer 2008
- **10: HIGH-RISK CHANNEL DESIGNATION**
 - Permit OPW Maintenance of non-scheme channels
 - Process under development
- **11: PRIORITISATION**
 - Incorporation of all elements of risk in prioritisation
 - Scoping study of risk indicators & methods underway

WORK PROGRAMMES 12 - 15

- **12: DEFENCE ASSET MANAGEMENT**
 - Identification and survey of flood defence assets
 - National defence asset database
- **13: REVIEW OF LEGISLATION**
 - Incl Transposition of Floods Directive - Underway
- **14: COMMUNICATIONS**
- **15: OPW FLOOD RESPONSE**

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EU 'FLOODS' DIRECTIVE

- **EU FLOOD ACTION PROGRAMME**
 - EU Flood Action Programme: Initiated 2004
 - Directive to form one of three 'pillars'
- **COMMISSION PROPOSAL: JAN 2006**
- **ENTERED INTO FORCE: NOV 2007**

EU 'FLOODS' DIRECTIVE

- KEY REQUIREMENTS
 - Preliminary flood risk assessment
 - Flood maps
 - Flood risk management plans
- OTHER PROVISIONS
 - Co-ordination with WFD implementation
 - Trans-boundary co-operation

EU 'FLOODS' DIRECTIVE

- RECITALS

- Provide Context / Background
- Do not set out legal requirements
- Expression of 'spirit' of Directive, e.g.,
 - Why is a Directive needed
 - Need for co-ordination with WFD
 - Need for subsidiarity

EU 'FLOODS' DIRECTIVE

- ARTICLE 1

- Purpose of Directive:

- "to establish a framework for the assessment and management of flood risks, aiming at the reduction of the adverse consequences for human health, the environment, cultural heritage and economic activity associated with floods in the Community"*

EU 'FLOODS' DIRECTIVE

- ARTICLE 2 – DEFINITIONS
 - Generally as per WFD
 - Floods – All sources, but *may* exclude floods from sewerage systems
- ARTICLE 3 - ADMINISTRATION
 - May use different competent authorities
 - May define 'Units of Management' different from WFD RBDs

EU 'FLOODS' DIRECTIVE

- ARTICLES 4 & 5 – PRELIMINARY FLOOD RISK ASSESSMENT (PFRA)
 - Define areas for which
"potential significant flood risks exist or might be considered likely to occur"
 - Based on 'available or readily-derivable' information
 - Completion by 22/12/2011

EU 'FLOODS' DIRECTIVE

- ARTICLE 6 – FLOOD MAPS
 - Only required for areas of significant risk
 - Flood Hazard Maps
 - Low, medium and (option) high probability events
 - Flood extent
 - Depth or water level
 - (option) velocity or flow

EU 'FLOODS' DIRECTIVE

- ARTICLE 6 – FLOOD MAPS (Cont'd)
 - Flood Risk Maps – Show Advsere Consequences
 - Indicative no. inhabitants
 - Type of economic activity
 - Environmental sensitivities (WFD, Seveso, IPPC, etc.)
 - (Option) Other information, e.g., debris, other sources of pollution
 - Completion by 22/12/2013

EU 'FLOODS' DIRECTIVE

- ARTICLE 7 – FLOOD RISK MANAGEMENT PLANS (FRMPs)
 - At RBD / UoM level, but only required to address areas of significant risk
 - Establishment of flood risk management objectives
 - Develop FRMPs (including prioritised measures) for achieving objectives
 - Details of FRMPS and Reviews in Annex A & B

EU 'FLOODS' DIRECTIVE

- ANNEX A – First FRMPs
 - Conclusions of PFRA
 - Flood maps
 - Objectives
 - Summary of measures, CBA and prioritisation
 - Public and stakeholder consultation
 - Method for implementation and monitoring

EU 'FLOODS' DIRECTIVE

- ANNEX B – Review / Update of FRMPs
 - Changes made to initial FRMP & summary of review
 - Progress in achieving objectives
 - Explanation for measures not implemented
 - Additional measures

EU 'FLOODS' DIRECTIVE

- ARTICLE 7 – FRMPs (Cont'd)
 - Range of issues to take into account:
 - Costs and benefits
 - Conveyance routes & natural storage areas
 - Environmental objectives of WFD & nature conservation
 - Spatial planning and land use
 - Navigation and port infrastructure
 - Completion by 22/12/2015

EU 'FLOODS' DIRECTIVE

- **ARTICLE 8 – TRANSBOUNDARY ISSUES**
 - Coordinated or joint FRMP
 - Referral to EC in event of disagreements
- **ARTICLE 9 – COORDINATION WITH WFD**
 - Coordination or (option) integration of preparation of flood maps and FRMPs with WFD implementation

EU 'FLOODS' DIRECTIVE

- ARTICLE 10 - CONSULTATION
 - Encourage involvement of public / stakeholders
 - PFRA, maps and FRMPs to be made publicly available
- ARTICLE 13 – TRANSITIONAL MEASURES
 - No PFRA if decision already taken that an area is at significant risk (Article 5)
 - May make use of existing equivalent maps and FRMPs, if finalised by 22/12/2010

EU 'FLOODS' DIRECTIVE

- ARTICLES 11, 12, 14 – 19:
 - EC Powers and Duties
 - EU-level Management Structure
 - Reviews and Reports
 - Transposition within 2 years (2009)
 - Entry into force

EU 'FLOODS' DIRECTIVE

- IMPLEMENTATION IN IRELAND
 - Programme
 - Preliminary flood risk assessment: 2011
 - Flood maps: 2013
 - Flood risk management plans: 2015
 - Review cycle: 6 years
 - Implementation Process
 - Under discussion
 - Probable lead role for OPW
 - Likely to be based around existing WP5

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WORK PROGRAMME 5

- 'CFRAM' STUDIES

- Comprehensive flood risk assessment and management studies, at catchment level

- OUTPUTS

- Flood maps
- Catchment Flood Risk Management Plan
 - Long-term plan for cost-effective and sustainable management of flood risk
 - Prioritised set of future actions, measures & works (existing and future risk)
 - Analytical tools for flood management

WORK PROGRAMME 5

- NEED FOR PILOT STUDIES
 - New type of study
 - Issues:
 - Level of detail / spatial scope
 - Establish protocols / formats for national implementation
- WHY THE LEE CATCHMENT?
 - Area of significant risk
 - Representative of issues in other catchments, e.g.,
 - Range of scale of urban areas (cities – villages)
 - Fluvial and coastal conditions
 - Issues, catchment activities, constraints



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Cork County Council

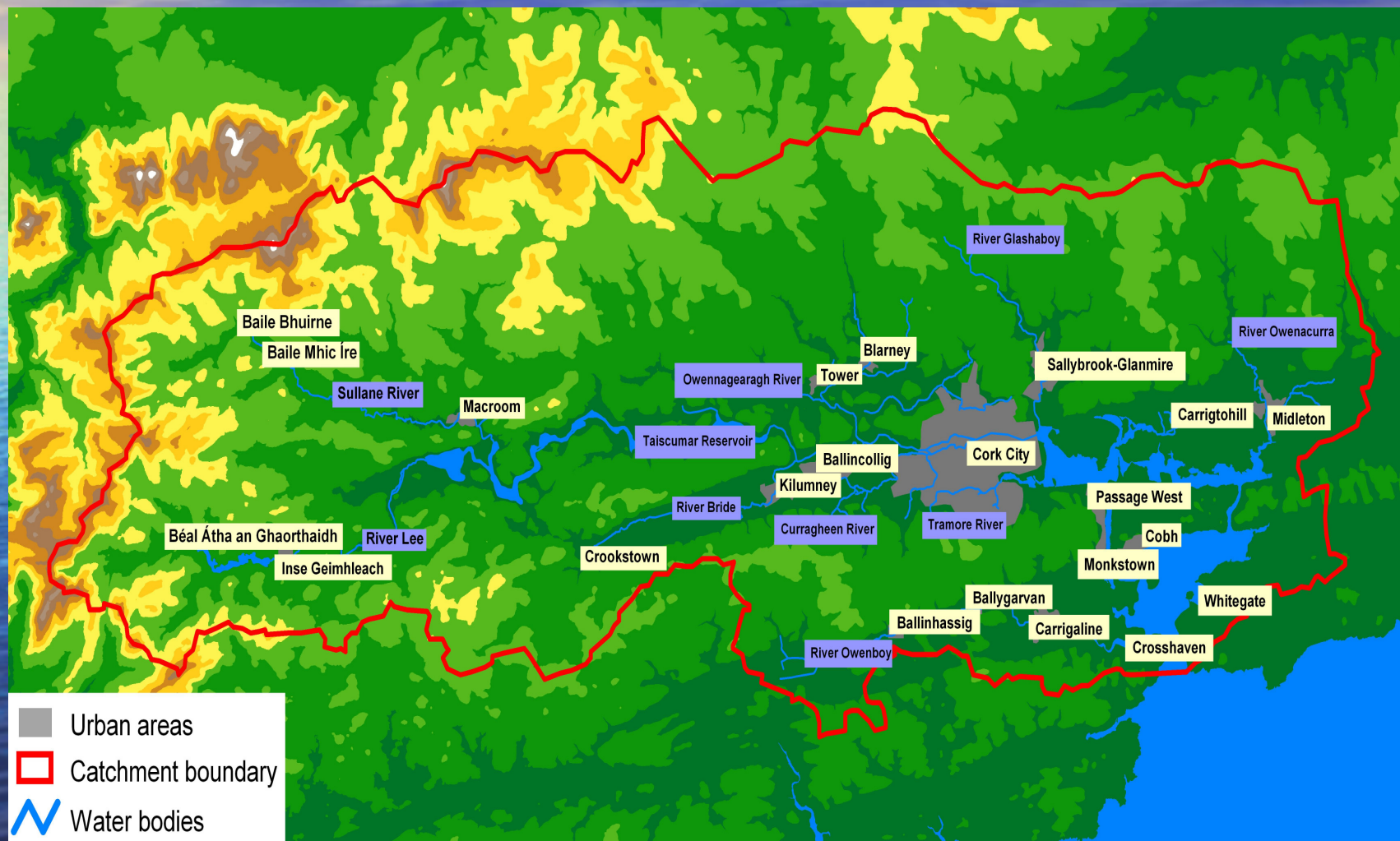
Lee Catchment Flood Risk Assessment and Management Study

www.leecframs.ie



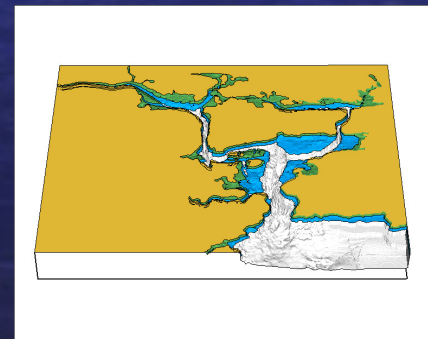
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LEE CFRAM STUDY

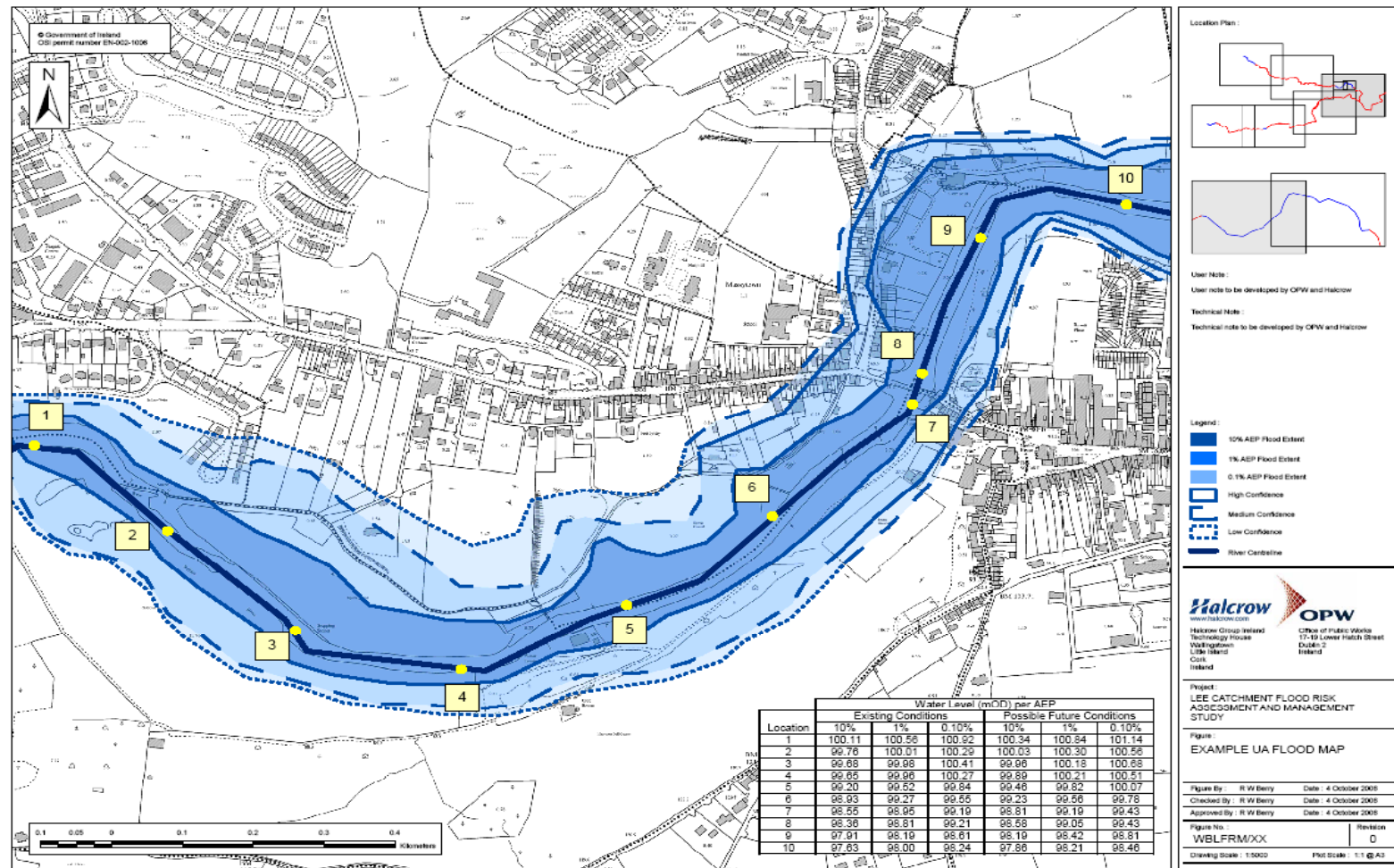


LEE CFRAM STUDY

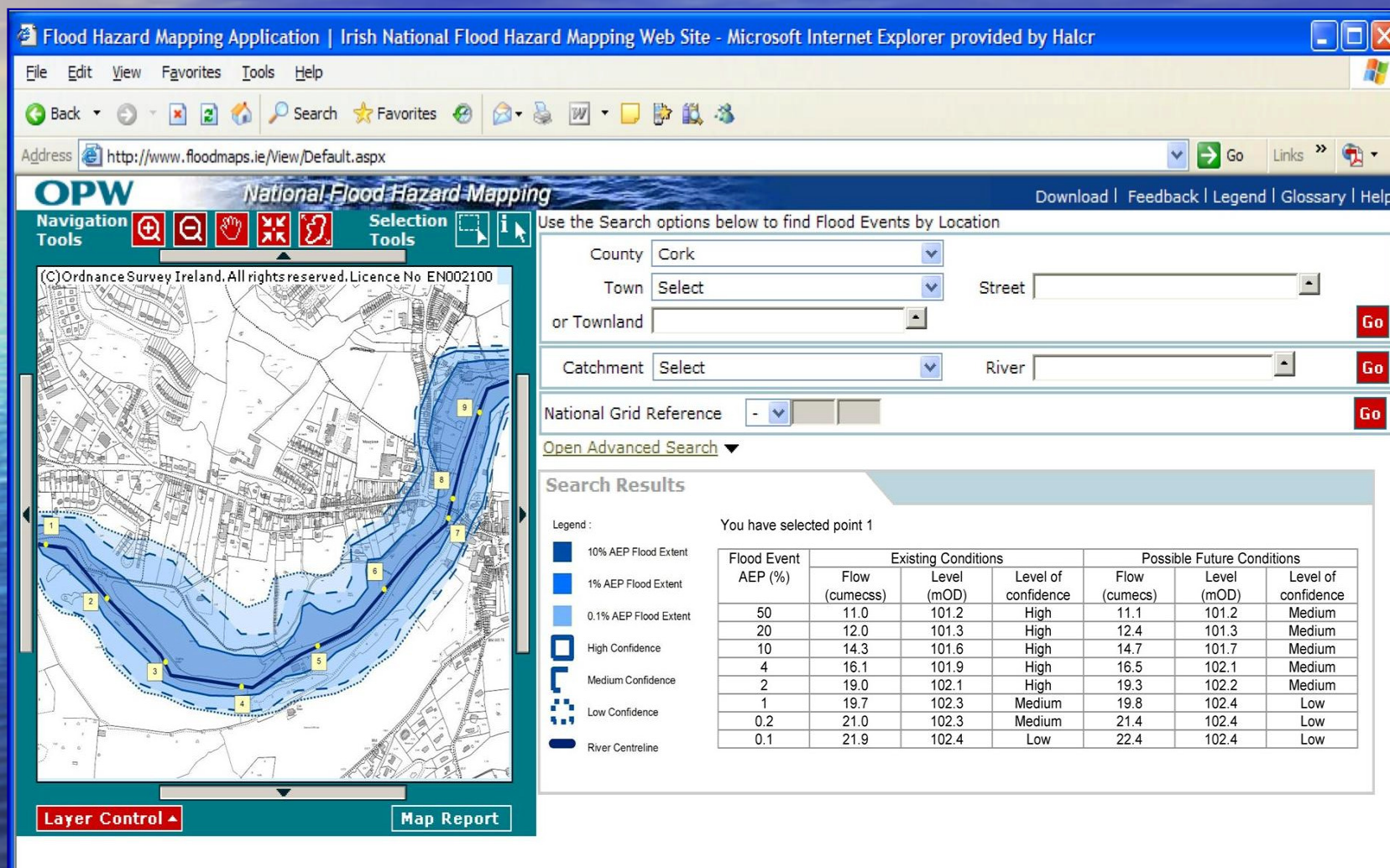
- SCOPE OF WORK
 - Survey
 - Data Collection
 - Strategic Environmental Assessment (SEA)
 - Hydrology
 - Hydraulics / Flood Mapping
 - Risk Analysis
 - Flood Risk Management Options
 - Flood Risk Management Plan



LEE CFRAM STUDY



LEE CFRAM STUDY



LEE CFRAM STUDY

- COMPLIANCE WITH FLOODS DIRECTIVE
 - PFRA
 - Areas of significant risk: Derived in consultation with Cork County and City Councils for Lee CFRAM Study
 - Require systematic approach for National PFRA
 - FLOOD MAPS
 - Flood hazard maps as required
 - Flood risk maps: Hazard maps + Risk receptor data
 - FLOOD RISK MANAGEMENT PLANS
 - As required (subject to detailed issues)

LEE CFRAM STUDY

- COMPLIANCE WITH FLOODS DIRECTIVE
 - COORDINATION WITH WFD
 - Through SEA for Lee CFRAM Study
 - Require formalised approach for national implementation
 - PUBLIC CONSULTATION
 - As required (through SEA) for Lee CFRAM Study
 - Standardised approach in national implementation
 - 'OTHER' SOURCES OF FLOODING
 - Lee CFRAM focuses on Fluvial and Tidal / Coastal
 - Floods Directive is all-inclusive: Pluvial, (Sewer Systems), Groundwater, Canals, Water Supply, etc.
 - REPORTING FORMATS

SUMMARY

- NATIONAL FLOOD POLICY REVIEW
 - Flood Risk Management rather than Flood Prevention
 - OPW Lead Agency
 - 15 Work Programmes – Delivery of policy
- EU 'FLOODS' DIRECTIVE
 - Aligned with policy and strategy in Ireland
 - Requirements for PFRA (2011), Flood Maps (2013) & FRMPs (2015)

SUMMARY

- LEE CFRAM STUDY
 - Pilot for National FRAM Programme
 - Process and outputs generally well aligned with requirements of Floods Directive, except:
 - Need systematic PFRA
 - Formalise aspects of implementation (e.g., coordination with WFD)
 - Consideration of 'other' sources of flooding
 - Good model / pilot for national implementation of Directive

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