

15th Europe International Network of Basin Organisations Conference
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Flood Risk Management In Ireland

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Office of Public Works

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FLOOD RISK MANAGEMENT IN IRELAND



- FLOOD RISK IN IRELAND
- FLOOD RISK MANAGEMENT POLICY
- THE 'CFRAM' PROGRAMME
- FUTURE CHALLENGES

FLOOD RISK IN IRELAND

Coastal Flood, February 2002 – Dublin
Appx. €60m Damages



FLOOD RISK IN IRELAND

November 2009

>1,600 Properties, Insured Losses Circa €250m

Athlone, River Shannon





Clonmel, River Suir

FLOOD RISK IN IRELAND

6th February 2014

>€100m Damage to Public Infrastructure

FLOOD RISK IN IRELAND

Winter 2015/16

>500 Properties (\approx 2,000 Properties under Threat)



River Shannon

FLOOD RISK IN IRELAND



- RECENT FLOOD EVENTS
 - November 2009: >1,600 Properties, Insured Losses ≈€250m
 - October 2011: Nearly 1,700 Properties, Insured Losses >€125m
 - June 2012: >€50m Insured Losses
 - Winter 2013/14 Storms: >€100m Damage to Public Infrastructure
 - Winter 2015/16: >500 Properties (≈ 2,000 Properties under Threat)
- EXPECTED INCREASE IN RISK UNDER CLIMATE CHANGE
 - Sea Level Rise (Coastal Cities), Wetter Winters, Warmer Summers

FLOOD RISK MGT POLICY



- HISTORICAL FOCUS ON LAND DRAINAGE
 - ‘Land Commission’ Embankments (1800’s)
 - Drainage Districts (Acts 1925, 1929) – Local Drainage Schemes
 - Arterial Drainage Act, 1945 – Catchment Drainage Schemes
- ARTERIAL DRAINAGE AMENDMENT (1995) ACT
 - Local, Urban Flood Protection Schemes
 - Completed: 38 Schemes Protecting $\approx 7,700$ Properties, $>€1\text{bn}$ Benefits
 - In-Hand: 11 Schemes in Construction, 26 Schemes in Design / Planning
 - Minor Works: $€38\text{m}$ Approved for ≈ 600 Local Schemes (Since 2009)

FLOOD RISK MGT POLICY



- NATIONAL FLOOD POLICY REVIEW, 2004
 - ‘Blue-Skies’ Review by Inter-Dept. Group of National Flood Policy
 - Wide Range of Recommendations:
 - OPW ‘Lead Agency’ to Co-ordinate Flood Risk Management
 - Pro-Active, Catchment-based Approach
 - Programme of Flood Mapping
 - Preparation of Flood Risk Management Plans
 - Emphasis on Flood Risk Management, Rather than Just ‘Protection’
 - Prevention
 - Protection
 - Preparedness and Resilience

FLOOD RISK MGT POLICY

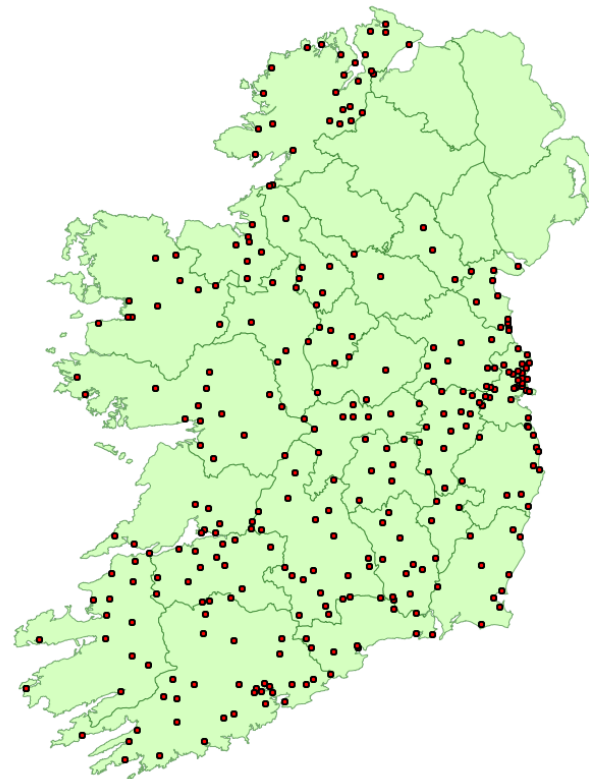
- EU 'FLOODS' DIRECTIVE, 2007
 - KEY REQUIREMENTS
 - Preliminary Flood Risk Assessment (PFRA)
 - Flood Maps
 - Flood Risk Management Plans
 - OTHER PROVISIONS
 - Coordination with WFD Implementation
 - Trans-Boundary Co-operation
 - Public Dissemination / Engagement
 - 6-YEAR REVIEW CYCLE

THE 'CFRAM' PROGRAMME

- THE NATIONAL CATCHMENT-BASED FLOOD RISK ASSESSMENT & MANAGEMENT PROGRAMME
 - Developed to Implement 2004 National Flood Policy
 - Flood Maps
 - Flood Risk Management Plans
 - Deliver on Requirements of 2007 EU 'Floods' Directive
 - Pilot Studies:
 - 2005-2011: Lee, Dodder, Fingal-East Meath
 - National Programme: 2011-2017

THE 'CFRAM' PROGRAMME

- FOCUS ON 300 AREAS FOR FURTHER ASSESSMENT ('AFAs')
 - Communities Subject to Potentially Significant Flood Risk
 - Identified through the 'PFRA'

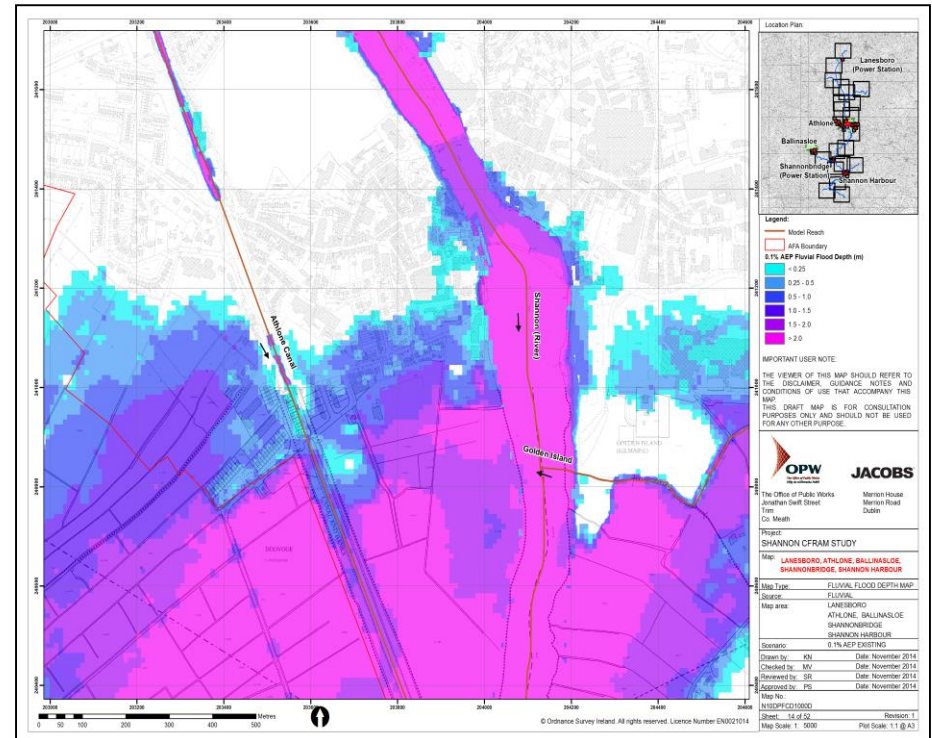
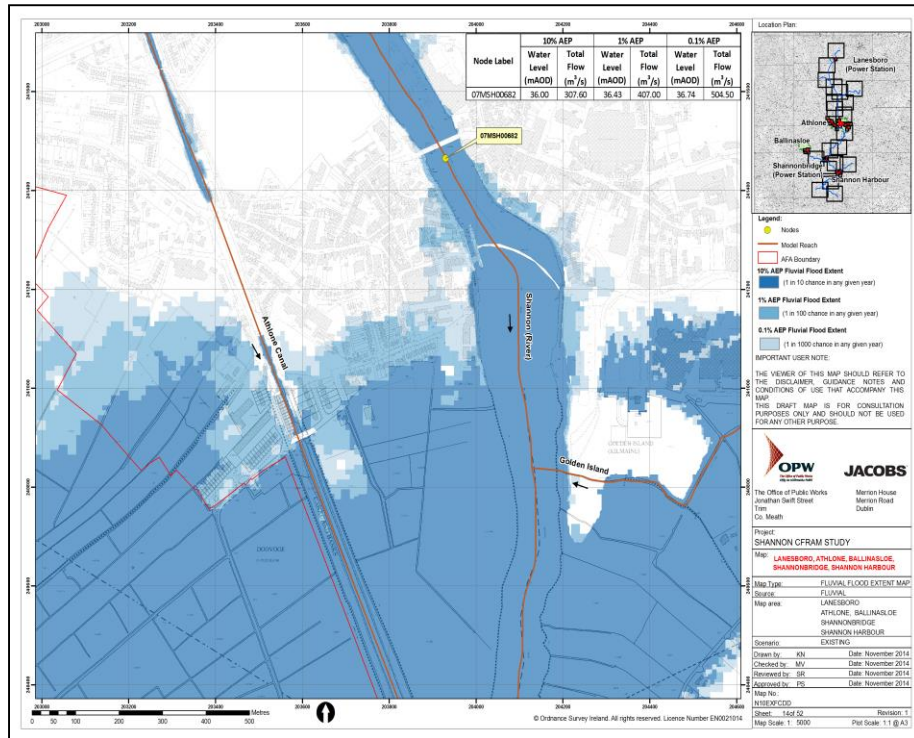


THE 'CFRAM' PROGRAMME



- FLOOD MAPPING
 - Extent, Depth, Velocity, 'Risk-to-Life', Flood Zone & Various Risk Maps

THE 'CFRAM' PROGRAMME



THE 'CFRAM' PROGRAMME



- FLOOD MAPPING
 - Extent, Depth, Velocity, 'Risk-to-Life', Flood Zone & Various Risk Maps
 - Maps Produced for up to 8 Flood Event Probabilities / Magnitudes:
 - 50% up to 0.1% Annual Probability
 - Climate Change Scenarios: 2 Representative Future Scenarios
 - Benefits:
 - Preparedness & Resilience
 - Emergency Response
 - Sustainable Planning

THE 'CFRAM' PROGRAMME



- FLOOD RISK MANAGEMENT PLANS (FRMPs)
 - 29 FRMPs at River Basin Level
 - High-Level Measures
 - Prevention
 - Sustainable Planning and Development & Urban Drainage Systems, Home Relocation, Land Use / Natural Flood Management
 - Preparedness & Resilience
 - National Flood Forecasting Service, Emergency Response Planning, Individual / Community Resilience, Individual Property Protection

THE 'CFRAM' PROGRAMME

- FLOOD RISK MANAGEMENT PLANS (FRMPs)
 - Community-Level Measures
 - Appraisal of Options for Flood Risk Management Measures
 - 'Line & Level' Design
 - Consideration of Climate Change Adaptation
 - Costed and Subject to Economic Cost–Benefit Analysis
 - Appraisal using 'Multi-Criteria Analysis'
 - Environmental Appraisal
 - Extensive Public Consultation (National and Community-Level)
 - Flood Relief Schemes Proposed for ~120 Communities

FUTURE CHALLENGES

- IMPLEMENTATION OF CAPITAL PROGRAMME
 - ≈160 Flood Relief Schemes, >€1bn
- RURAL RISK
- CRITICAL INFRASTRUCTURE
- CLIMATE CHANGE ADAPTATION
- NATURAL FLOOD MANAGEMENT
- PUBLIC AND STAKEHOLDER ENGAGEMENT
 - National Level
 - Community Level

FUTURE CHALLENGES



- PROGRESS MADE SINCE 1995
 - Protection
 - Flood Relief Schemes Providing Safety to Communities and Citizens
 - Prevention
 - Policies to Ensure Sustainable Development, Informed by Flood Mapping
 - Preparedness and Resilience
 - Empowering Communities and Citizens to Recover from Flood Events
 - FRMPs
 - Set Effective, Sustainable Strategy for Flood Risk Mgt
- SIGNIFICANT WORK DONE – MUCH STILL TO DO!

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