

FLOOD RISK MANAGEMENT AND THE OPW IN 2012 (How We Do Business)

TOPICS

- Legislative Framework
- Preliminary Flood Risk Assessment (PFRA)
- Catchment Flood Risk Assessment and Management Plans (CFRAM)
- Flood Relief Schemes and Minor Works
- Maintenance
- Non Structural Measures (Planning, Flood Forecasting, Emergency Response, Flood Preparedness, Humanitarian Aid,)
- Hydrology (FSR, FSU, FEH)
- Hydrometric Information
- Environment Section

LEGISLATIVE FRAMEWORK

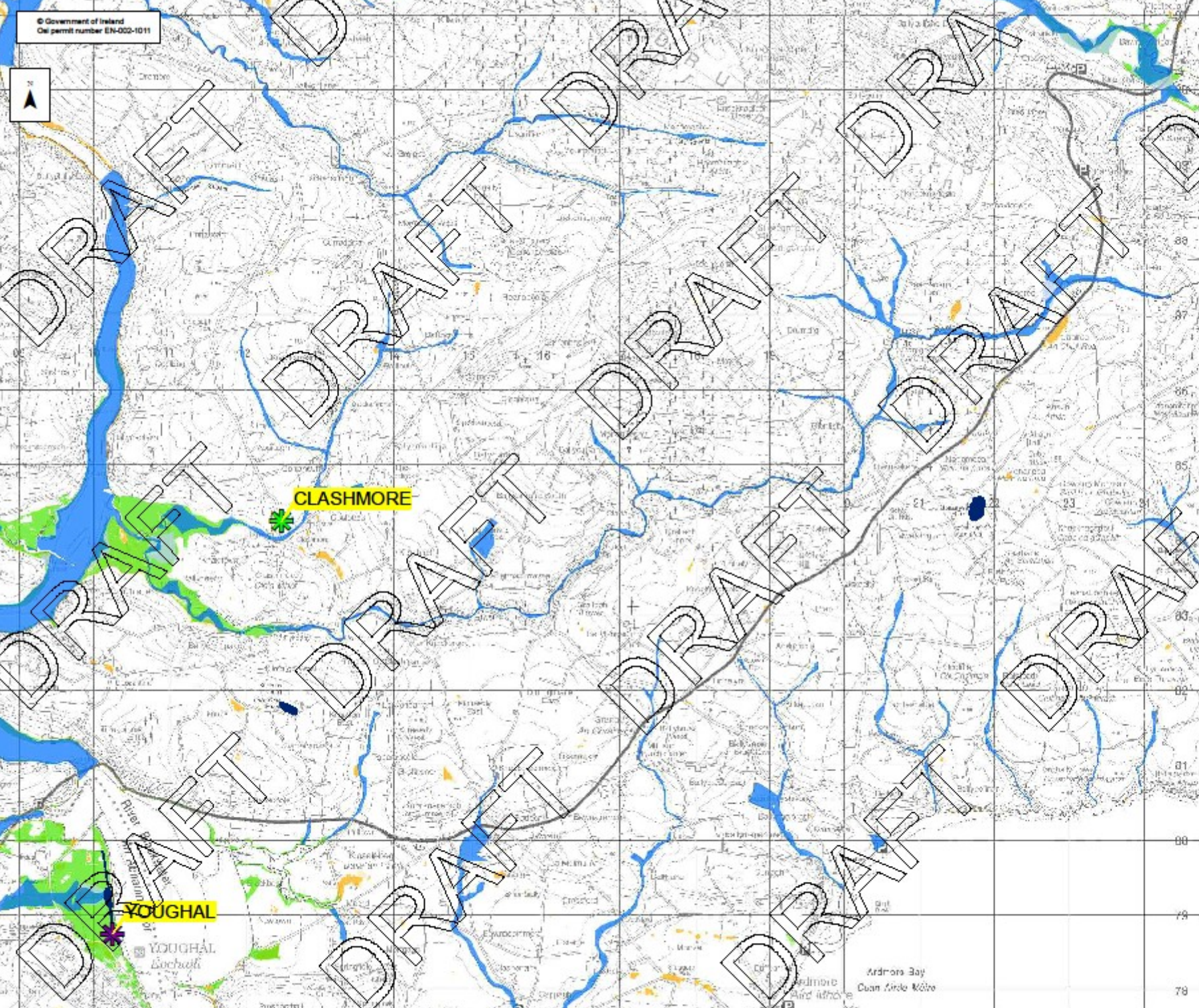
- Arterial Drainage Act, 1945
- Arterial Drainage (Amendment) (No.2) Bill, 1995
- Report of Flood Policy Review Group 2004
- EU Floods Directive 2007
- S.I. No 122 of 2010 (European Communities Assessment and Management of Flood Risk) Regulations 2010

FLOODS DIRECTIVE 2007

- Preliminary Flood Risk Assessment (PFRA)
-Dec 2011
- Flood Risk Maps - Dec 2013
- Flood Risk Management Plans - 2015

PFRA

- Identify Areas of Significant Risk ($>$ or $=$ 25 Houses Every 10 Years)
- Readily Derivable Sources
- Flood History
- Indicative Flood Maps
 - Fluvial (Floodplain Flow= $Q_{\text{design}} - Q_{\text{med}}$)
 - Tidal (ICSSP, MIKE 21FM)
 - Pluvial (Rainfall, RFSM)
 - Groundwater (Historical, Turloughs)
 - DTMs (5m grid \pm 750mm, 2m grid \pm 250mm)



Location Plan :



Legend:

Flood Extents

- Fluvial - Indicative 1% AEP (100)
- Fluvial - Extreme Event
- Coastal - Indicative 0.5% AEP (2)
- Coastal - Extreme Event
- Pluvial - Indicative 1% AEP (100)
- Pluvial - Extreme Event
- Groundwater Flood Extents

Lakes / Turloughs

PFRA Outcomes

- Probable Area for Further Assessment
- Possible Area for Further Assessment

Important User Note:

The flood extents shown on these maps are based on a simple analysis and may not be accurate. Information on the purpose, development, and limitations of these maps is available in the map information leaflets or 'Have Your Say' on www.dra.ie. Users should seek professional advice if they intend to rely on the maps in any way.

If you believe that the maps are inaccurate in some way, please forward full details by contacting the OPW (Public Works) or 'Have Your Say' on www.dra.ie.

Office of Public Works
Jonathon Swift Street
Trim
Co Meath
Ireland



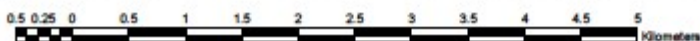
Project:
PRELIMINARY FLOOD RISK ASSESSMENT

Map:
PFRA Indicative extents and outcomes
- Draft for Consultation

Figure By: PJW Date: July 2019
Checked By: MA Date: July 2019

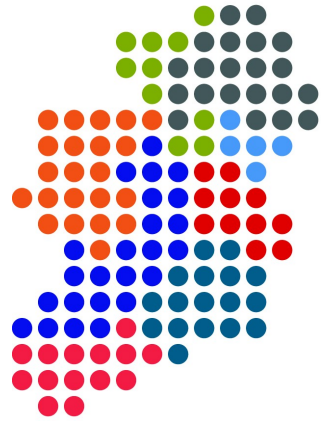
Figure No.:
2019 / MAP / 53 / A

Drawing Scale: 1:50,000 Plot Scale: 1:1





www.cfram.ie



NATIONAL
CFRAM
PROGRAMME
CATCHMENT FLOOD RISK
ASSESSMENT AND MANAGEMENT



WESTERN
CFRAM
STUDY
CATCHMENT FLOOD RISK
ASSESSMENT AND MANAGEMENT

FLOOD RELIEF SCHEMES

- Arterial Drainage Acts (OPW and Minister)
- Part 8 (Local Authorities and Councillors)
- Part 10 (Local Authorities and An Bord Pleanala)

STAGES OF FLOOD RELIEF SCHEME

- Prefeasibility
- Feasibility
- Exhibition
- Construction

FEASIBILITY

- Form Steering Committee (OPW, Local Authority and Consultants when appointed)
- Preparation of Briefs
- Appoint Engineering Consultants (also Project Supervisor Design Process (PSDP))
- Appoint Environmental Consultants

FEASIBILITY TASKS

Engineering C'tants

- Data Collection
- Surveys
- Hydrology
- Hydraulics
- Flood Risk Maps
- Optioneering
- Cost Benefit Analysis
- Outline Design
- Engineering Report

Environmental C'tants

- Data Collection
- Consultation
- Constraints Report
- Impact Assessment of Various Options
- Appropriate Assessment
- Environmental Impact Statement



EXHIBITION

- Notification of County Council/s
- Publication in Iris Oifigiuil and Press
- Interference Notices to Owners and Occupiers
- Copies of The Scheme Exhibited
- Observations (One Month to Make)
- Council Passes Motion of Welcome

CONSTRUCTION

- Detailed Design
- Procurement Process
- Mobilisation
- Construction and Commissioning
- Maintenance Protocols
- Certificate of Completion
- Direct Works Option













MINOR WORKS

- Application from Local Authority
- Cost < 500000 Euros
- Funding Up to 90%
- Rudimentary CBA - Benefit/Cost Ratio > 1.5
- L.A - Property, Planning and Environmental Issues
- c.24m Euros at over 300 Locations since 2009
- www.EngineeringServicesOpw.ie

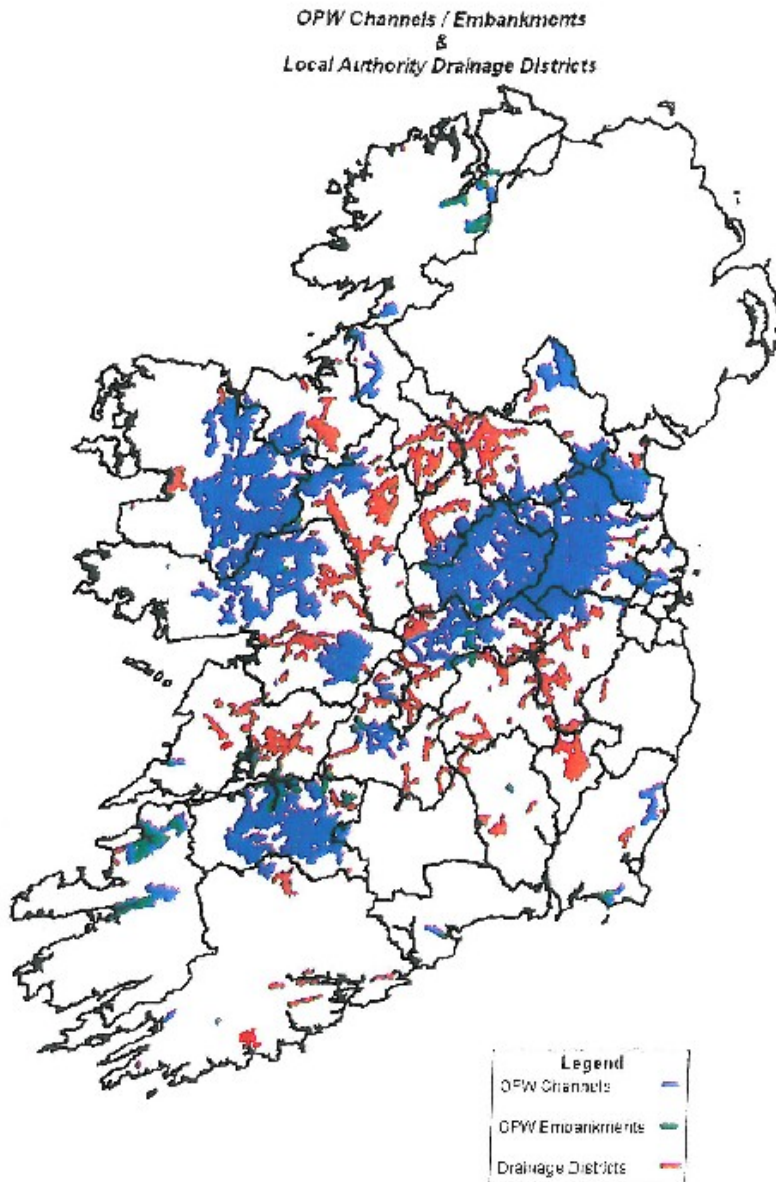
MAINTENANCE

OPW

- c.11500km Channel
- c. 800km Embankment
- c.19000 Structures

Local Authority

- 170 D.Ds
- c.4600 km Channel
- Quinquennial Inspections (41 D.Ds)
- Annual Returns



PLANNING

- Guidelines
- Flood Risk Maps
- Development Plans
- Applications (almost no role)
- Section 9
- Section 50

Guidelines for Planning Authorities

November 2009



Department of the Environment, Heritage and Local Government



Construction, Replacement or Alteration of Bridges and Culverts

A Guide to Applying for Consent under
Section 50 of the Arterial Drainage Act, 1945

OPW

The Office of Public Works
Public Works Administration

SECTION 50

No local authority, no railway company, canal company or other similar body and no industrial concern shall construct any new bridge or alter, reconstruct or restore any existing bridge over any watercourse without the consent of the Commissioners or otherwise than in accordance with plans previously approved by the Commissioners

FLOOD FORECASTING

- Strategic Review of Options for Flood Forecasting and Flood Warning in Ireland (OPW, MET Eireann, CCMA)
- Location Specific Forecasts
- Tidal Surge
- European Flood Alert System (EFAS)

EMERGENCY RESPONSE

Local Authority Has Primary Role

Our Resources Placed at Their Disposal

Pilots in Mallow, Fermoy and Clonmel

Centrally Involved in Preparation of

Guidance Document – Template

Protocol Document - Roles and Responsibilities

FLOOD PREPAREDNESS

www.flooding.ie

HUMANITARIAN AID

Dept. Of Social Protection

OPW Provides Technical Reports on
Applications for Relocation

FLOOD STUDIES UPDATE

Flood Studies Report 1975

35 Years of Record

Technological Advances

Web Based/User Friendly/GIS

Rainfall 2km grid, 15minutes – 25 days, 2 yrs-200
yrs

Physical Catchment Descriptors (PCD) 500m
Intervals on Catchments >1 sq km

Pooling Groups, Pivotal Sites

Hydrograph Shape

HYDROMETRIC SECTION

373 Surface Water
Gauges

62 Rain Gauges

[Www.hydro.ie](http://www.hydro.ie)

Real Time Info

ENVIRONMENTAL SECTION

Legal Compliance

Liaise with
Environmental
Stakeholders

Continuous
Improvement of
Systems

Staff Training and
Monitoring