



**OPW** Oifig na  
nOibreacha Poiblí  
Office of Public Works

# Flood Data – Access to Data, Data Usage and the Flood Map Review Programme

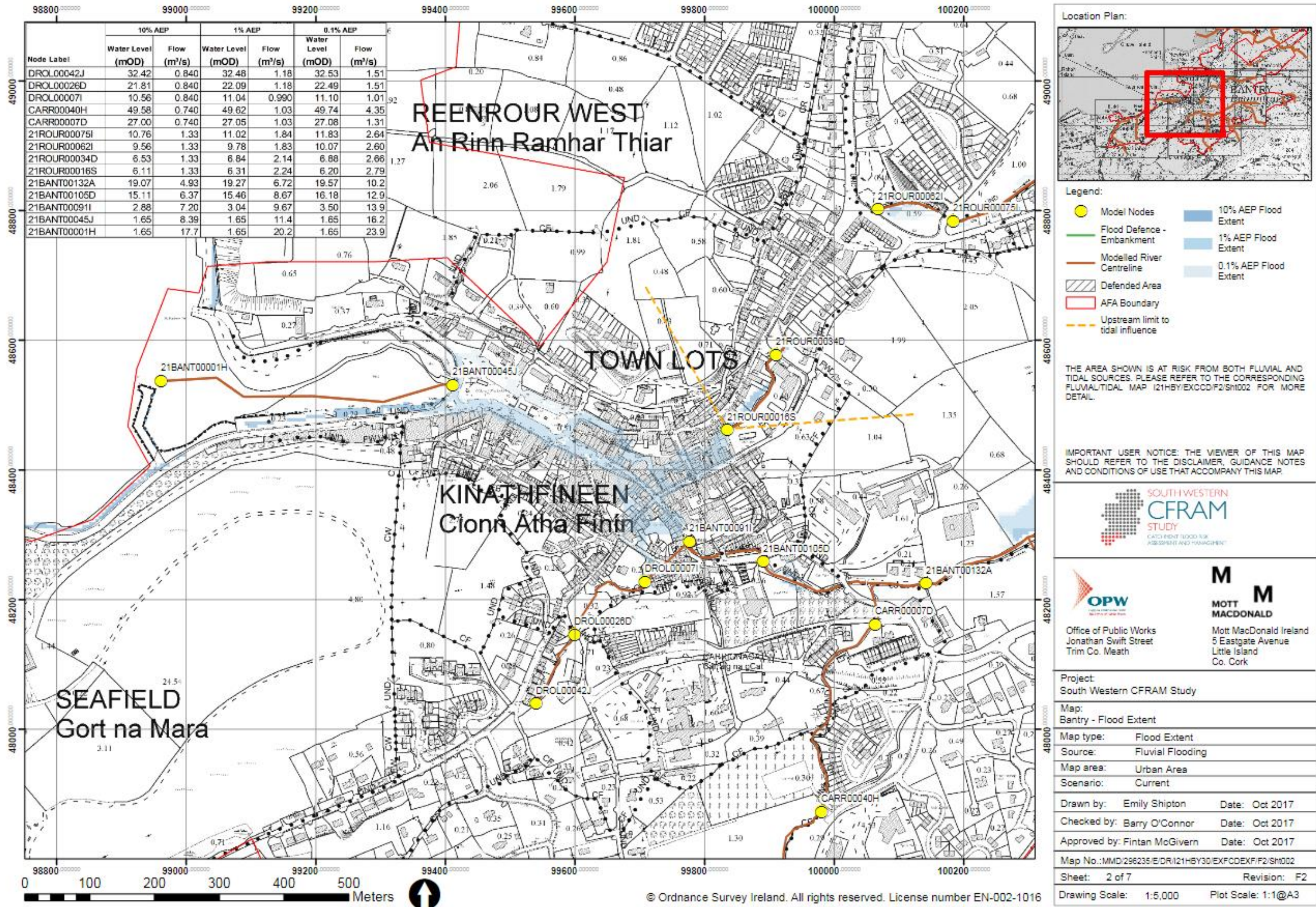
27th January 2023



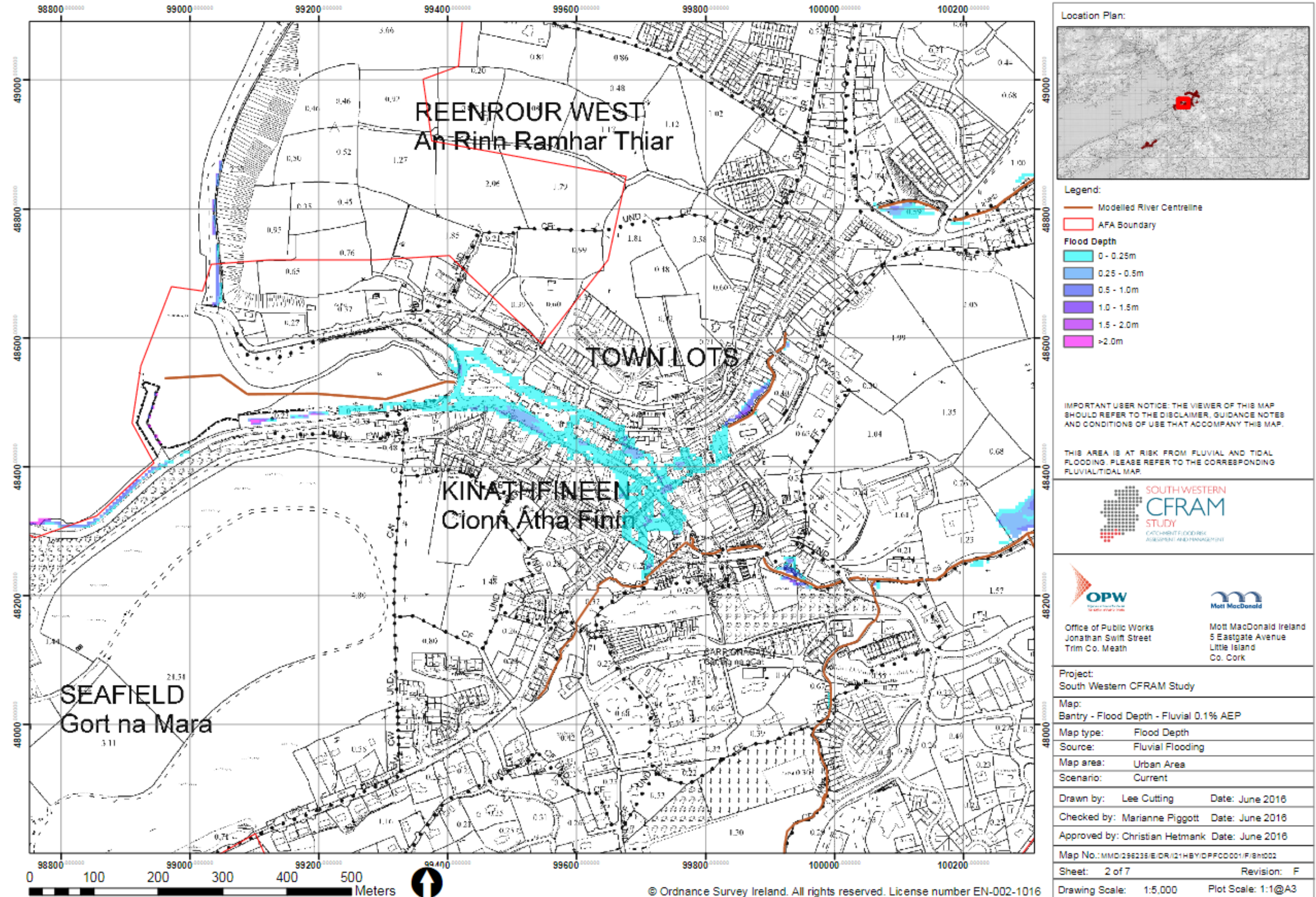
# Access to Data



# Catchment Flood Risk Assessment and Management Programme (CFRAM, 2018)



# Catchment Flood Risk Assessment and Management Programme (CFRAM, 2018)





Active Layers

Add Layer

River Flood Extents - Mid-Range Future Scenario

Modelled extents that take in the potential effects of climate change (increase in rainfall of 20% and sea level rise of 500mm (20 inches))

River Flood Extents - High-End Future Scenario

Modelled extents that take in the potential effects of climate change (increase in rainfall of 30% and sea level rise of 1,000 mm (40 inches))

Coastal Flood Extents - Mid-Range Future Scenario

Modelled extents that take in the potential effects of climate change (increase in rainfall of 20% and sea level rise of 500mm (20 inches))

Coastal Flood Extents - High-End Future Scenario

Modelled extents that take in the potential effects of climate change (increase in rainfall of 30% and sea level rise of 1,000 mm (40 inches))

Rainfall (Pluvial) Flooding

Modelled extent of land that might be directly flooded by rainfall in a severe rainfall event.

Rainfall (Pluvial) PDF Maps

Arterial Drainage Schemes

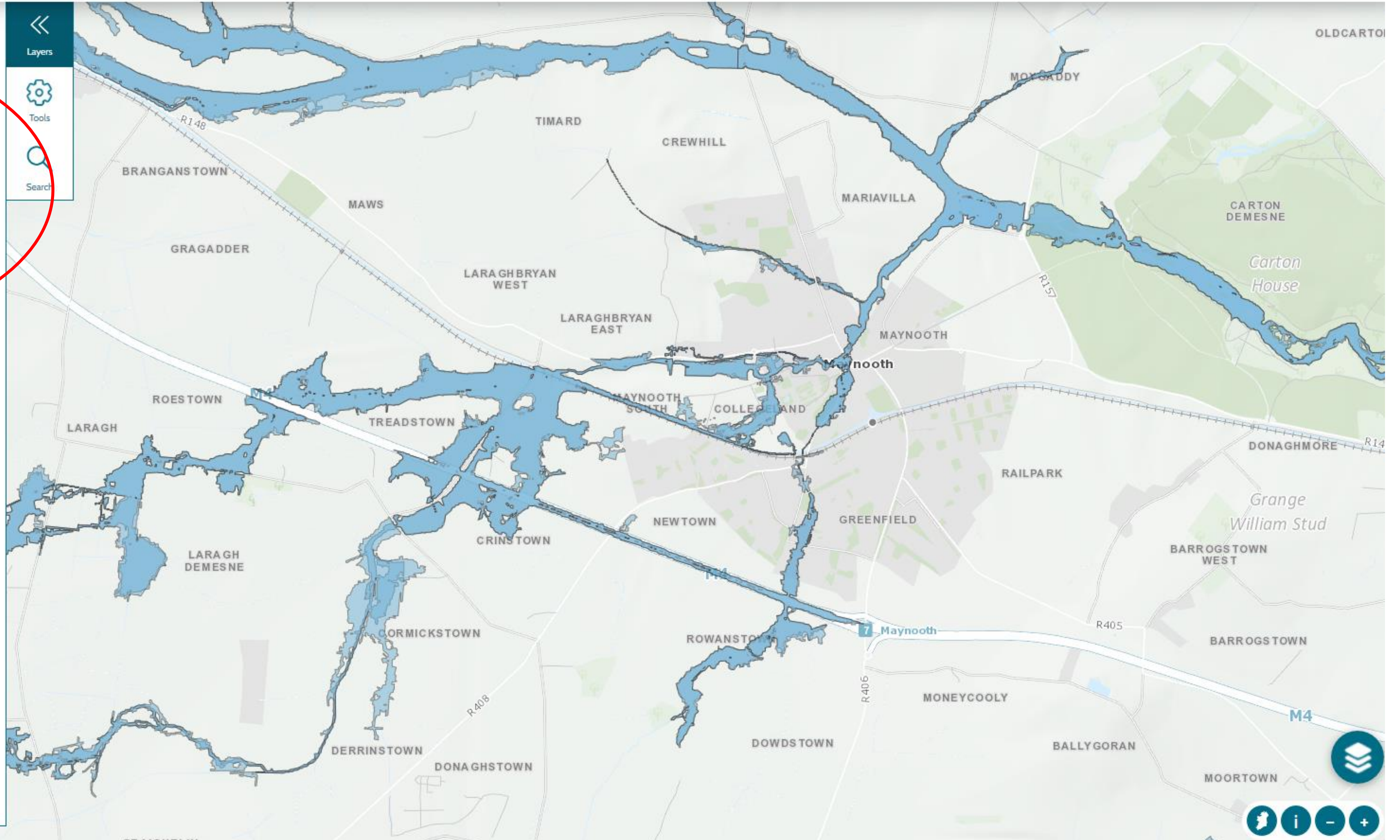
Schemes OPW has a statutory duty to maintain.

Drainage Districts

Drainage areas Local Authorities have a responsibility to maintain

Benefitting Areas Notified to Insurance Ireland

OPW completed flood defence schemes data provided to Insurance Ireland



Active Layers

Add Layer

River Flood Extents - Mid-Range Future Scenario +  
Modelled extents that take in the potential effects of climate change (increase in rainfall of 20% and sea level rise of 500mm (20 inches))

River Flood Extents - High-End Future Scenario +  
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Coastal Flood Extents - Mid-Range Future Scenario -  
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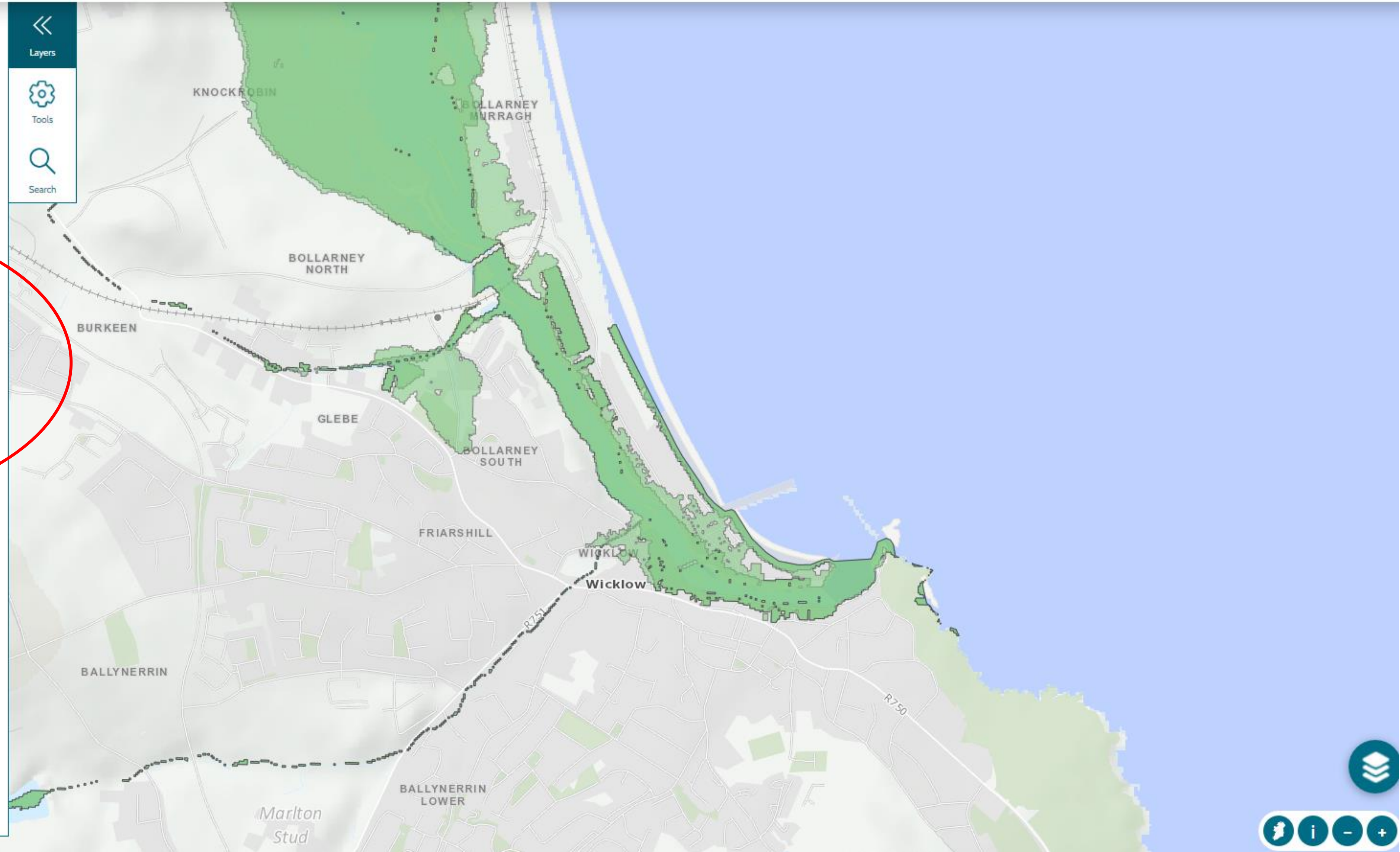
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Rainfall (Pluvial) PDF Maps +

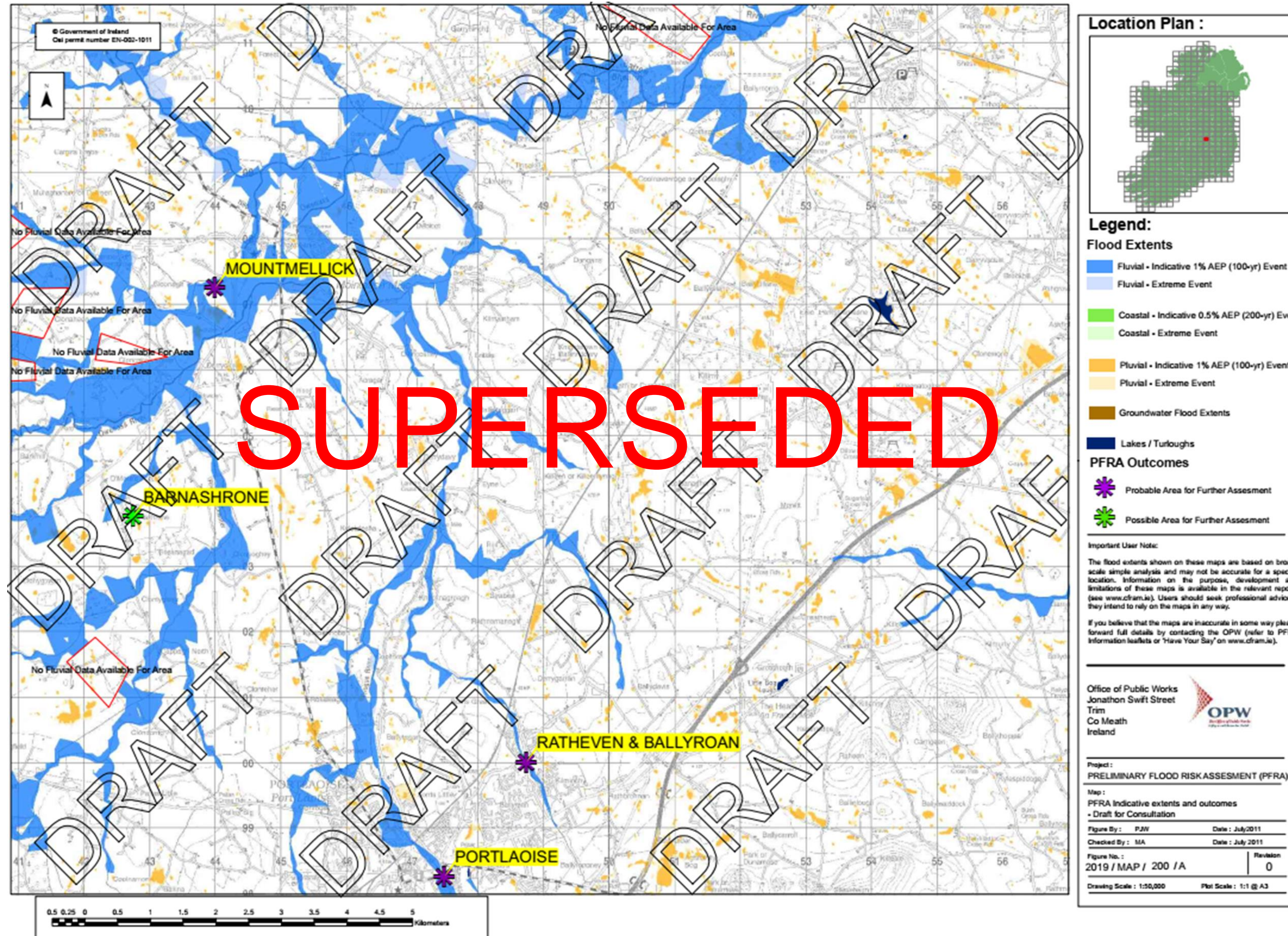
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# Preliminary Flood Risk Assessment (PFRA, 2012)





# National Indicative Fluvial Mapping (NIFM, 2020)



Flood Maps

HOME ABOUT PUBLICATIONS RESOURCES REPORT PAST FLOOD FEEDBACK HELP DISCLAIMER

Active Layers + Add Layer

- CFRAM River Flood Extents – Present Day
- CFRAM Coastal Flood Extents – Present Day
- National Indicative Fluvial Mapping - Present Day** 
  - River - Low Probability  Legend: Layer Queryable: No
  - River - Medium Probability  Legend: Layer Queryable: No
- CFRAM PDF Maps (Printable)
- Geological Survey Ireland (GSI) Groundwater Flooding Probability Maps
- Past Flood Events



6 Active Layers

+ Add Layer



Layers



National Coastal Extreme Water Level Estimation Points 1

Coastal Areas Potentially Vulnerable to Wave Overtopping (CAPOs) 2

National Coastal Flood Hazard Mapping 2021 - Present Day 2

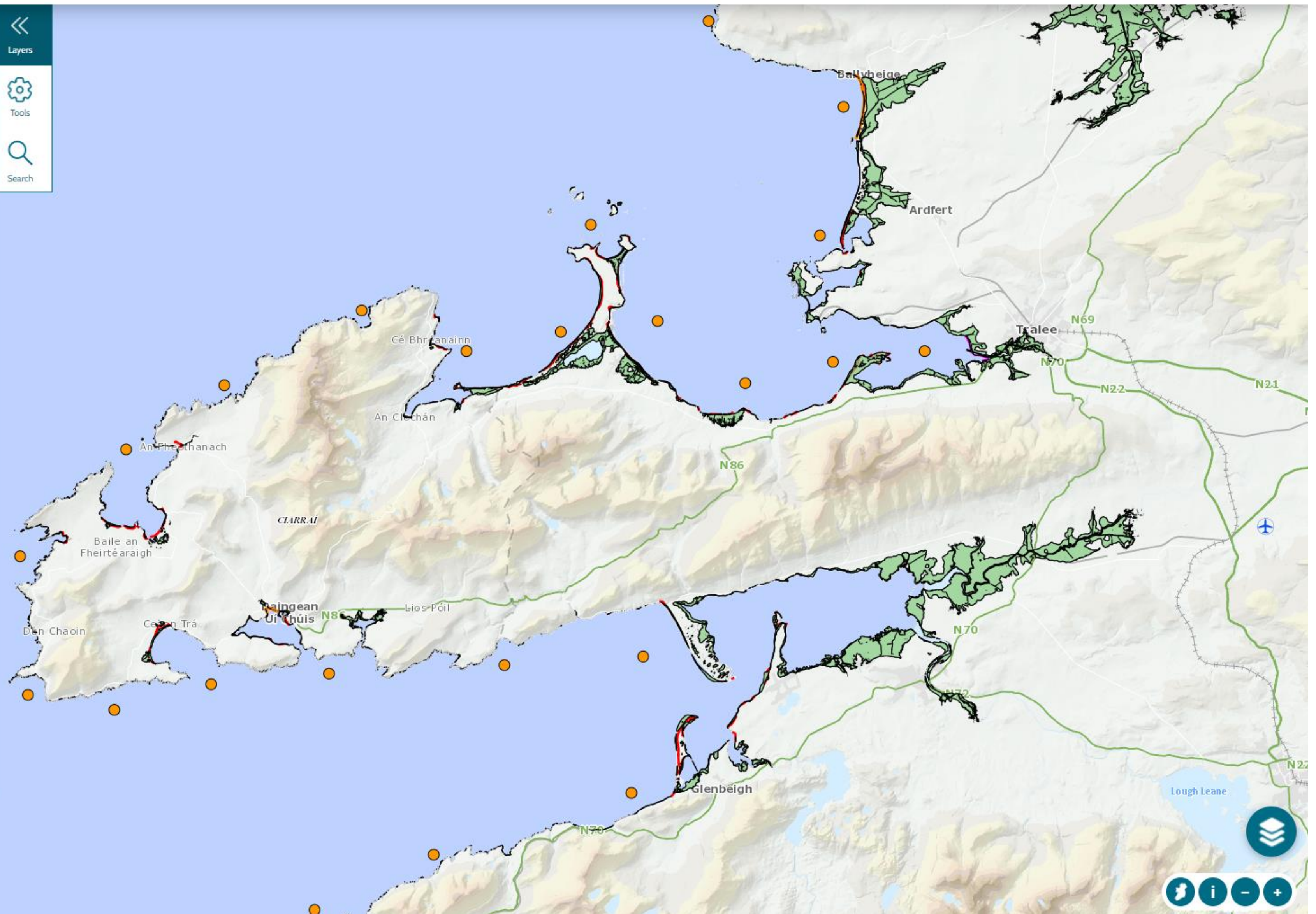
National Coastal Flood Hazard Mapping 2021 - Mid-Range Future Scenario 0

National Coastal Flood Hazard Mapping 2021 - High-End Future Scenario 0

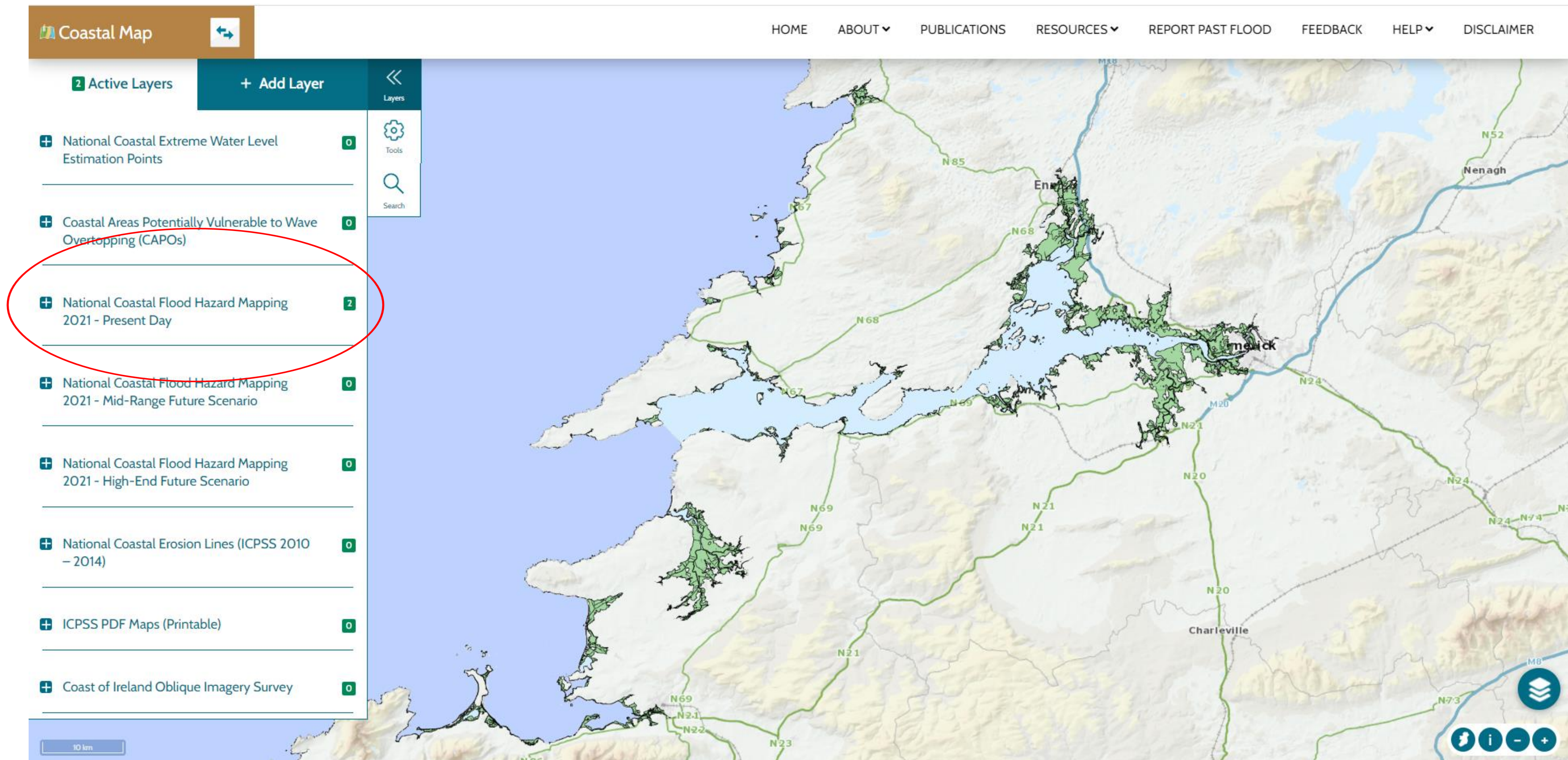
National Coastal Erosion Lines (ICPSS 2010 - 2014) 1

ICPSS PDF Maps (Printable) 0

Coast of Ireland Oblique Imagery Survey 0



# National Coastal Flood Hazard Mapping (NCFHM, 2021)



# Past Flood Events



**Flood Maps** [Home] [About] [Publications] [Resources] [Report Past Flood] [Feedback] [Help] [Disclaimer]

Active Layers [Add Layer]

- Past Flood Events
  - Go to the Tools tab to create a past flood event summary report.
  - Past Flood Event
    - Single Flood Event
    - Recurring Flood Event
    - Layer Queryable: Yes
  - Past Flood Event Photos
    - Legend: [Photo Icon]
  - Past Flood Event Extents
    - Legend: [Dotted Box Icon]
    - Layer Queryable: Yes

Map showing flood events near Roscommon and Ballygar. Legend: Single Flood Event (Yellow Triangle), Recurring Flood Event (Red Triangle).

**Flood Summary (ID-146)** [Record 1 of 5]

**Flood Event:** Suck Athleague Recurring

**Record Type:** Recurring Flood

**Flood Source:** River

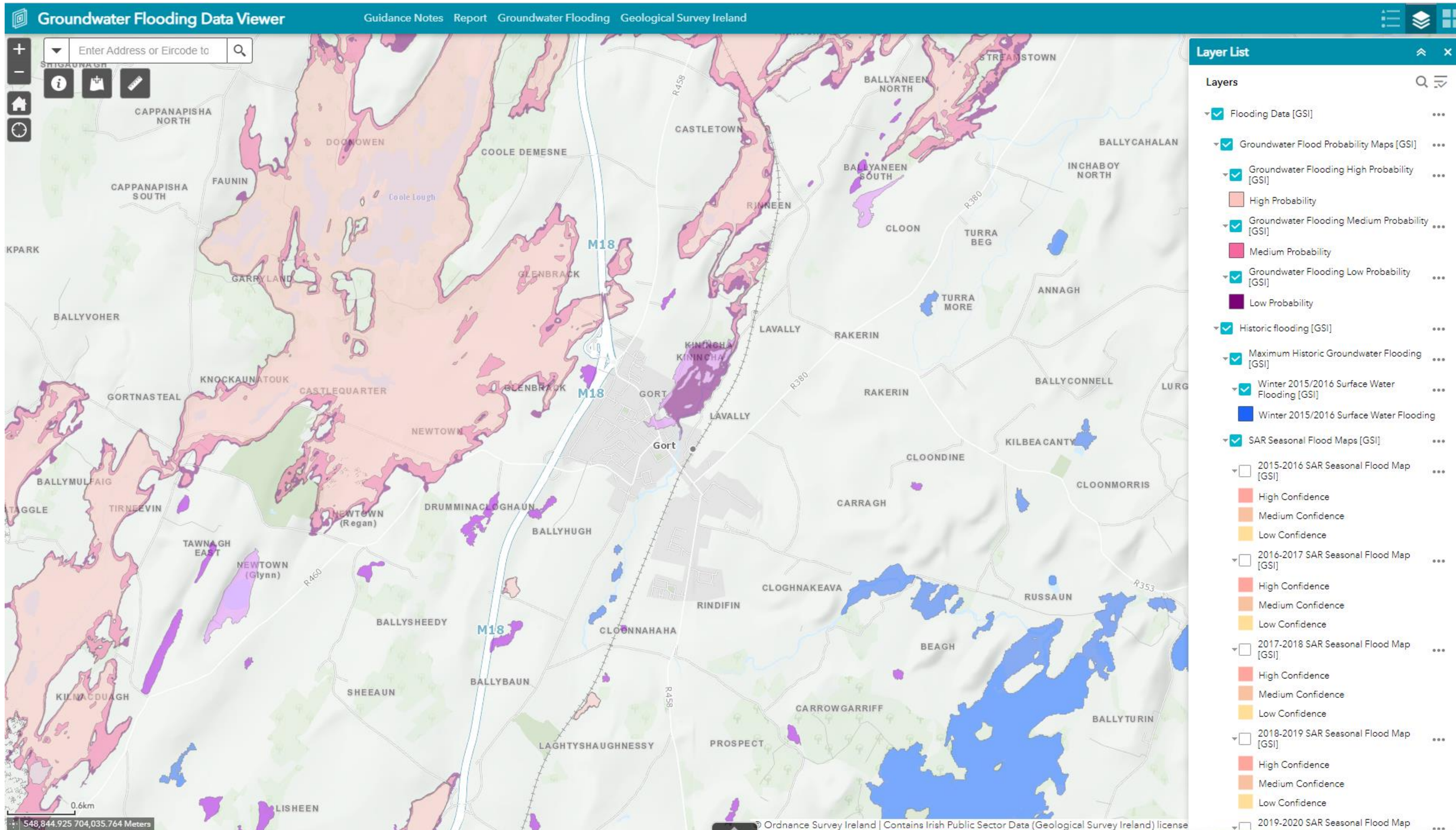
**Geographical Quality:** Approximate Point

Past Flood Event User Guidance Notes can be found [here](#)

**Associated Information:**

- VIEW REPORTS (4)
- VIEW PHOTOS (4)
- VIEW PAST FLOOD EVENT LOCAL AREA SUMMARY REPORT







# Data Usage

# Use of National CFRAM Flood Maps



Additional sources of information such as SSFRA or more recent surveys should be included - particularly the case for sites at the edge of a Flood Zone

For reaches between the AFAs and down to the sea:

- Guide as to where further assessment may be necessary;
- Should not be used as the sole basis for defining Flood Zones or making decisions on planning applications.





# Use of National Indicative Flood Mapping – NIFM & NCFHM



Provide an indication of areas that may be prone to flooding and are not necessarily locally accurate and should not be used:

- to assess the flood hazard and risk associated with individual properties or point locations, or to replace a detailed flood risk assessment;
- as the sole basis for defining the Flood Zones, or for making planning policy and development management decisions.

# Stages in the assessment of flood risk



## Stage:

1. Flood risk identification – *identify issues that warrant further investigation;*
2. Initial flood risk assessment – *use existing information to assess impact;*
3. Detailed flood risk assessment – *quantitative appraisal, typically involves modelling.*

	Flood risk identification	Initial flood risk assessment	Detailed flood risk assessment
Regional Flood Risk Appraisal	Required	Unlikely to be needed	Unlikely to be needed
Strategic Flood Risk Assessment – County-wide	Required	Probably required	Unlikely to be needed
Strategic Flood Risk Assessment – City or town within a county plan	Required	Required	Probably required
Site-specific Flood Risk Assessment	Required	Required	Required

# Stage 1 – Flood risk identification



Identify whether there may be any flooding or surface water management issues related to a plan area or proposed development site that may warrant further investigation.

- Detail the information you have - checklist of all sources of flooding
- If a potential flood risk issue is identified, the Flood Risk Assessment must progress to Stage 2: Initial flood risk assessment.
- If no potential flood risk issue has been identified, following a comprehensive review of available information, and bearing in mind the precautionary approach, then the assessment can end at Stage 1.

# Stage 1 – Flood risk identification



What	Where	When			
		RFRA	SFRA <i>County</i>	SFRA <i>City</i>	Site FRA
Existing waterbodies and features	<a href="#">EPA Maps</a> [ Water Features]	✓	✓	✓	✓
National Flood Extents and Levels*	<a href="#">floodinfo.ie</a> [Flood Maps]	✓	✓	✓	✓
Groundwater Flood Extents	<a href="#">Groundwater Flooding Data Viewer</a>	✓	✓	✓	✓
Past Flood Events	<a href="#">floodinfo.ie</a> [Flood Maps]	✓	✓	✓	✓
Flood Risk Management Plans	<a href="#">floodinfo.ie</a> [Flood Plans]	✓	✓	✓	✓
Previous SFRA's and Spatial Plans	Planning Authority website	✓	✓	✓	✓
Consultation with authorities	Local authorities, OPW	✓	✓	✓	(✓)
Consultation with public	Local people, historians	-	-	(✓)	✓
Topographical maps	<a href="#">Open Topographic Data Viewer</a>	(✓)	✓	✓	✓
Site reconnaissance	Site walkover	-	-	(✓)	✓
Anecdotal evidence and records	Local library, newspapers	-	✓	✓	✓

\*Includes CFRAM, NIFM, ICWWS and NCFHM

## Stage 2 – Initial flood risk assessment



What			
	SFRA <i>County</i>	SFRA <i>City</i> *	Site FRA
An examination of all sources of flooding that may affect a plan area	✓	✓	✓
An appraisal of the availability and adequacy of existing information	✓	✓	✓
Produce flood zone map where not available	-	✓	✓**
Determine what technical studies are appropriate	✓	✓	✓
Describe what residual risks will be assessed	✓	✓	✓
Potential impact of development on flooding elsewhere	✓	✓	✓
Scope of possible mitigation measures, what compensation works may be required, and what land may be needed	-	(✓)	✓
Set out requirements for subsequent stages of FRA	✓	✓	-

\*The SFRA at city level, or Local Area Plan should confirm the previous findings of the SFRA at county level, or Development Plan

\*\*A site-specific FRA is only required to produce flood zones where no SFRA has been produced

## Stage 2 – Initial flood risk assessment



Confirm the sources of flooding, assess the adequacy of existing information, may involve preparing Flood Zone Maps and identify further studies required to fully address flooding issues.

The initial flood risk assessment must:

- Take a precautionary approach where limited data or information is available;
- Be sufficiently detailed to apply the sequential approach to flood zones;
- Ensure potential conflicts between flood risk and the development are assessed at an appropriate level of detail;
- Consider the location and standard of existing defences, together with residual risk.

## Stage 3 – Detailed flood risk assessment



Quantitative appraisal of identified flood risk issues including existing flood risk, post-development risks and impacts elsewhere, and the need for and design of mitigation and compensation measures.

The detailed flood risk assessment must:

- Rely on estimation of flow, level, and likelihood of flooding;
- Deliver accurate “fit-for-purpose” information for decision-making;
- Utilise appropriate mathematical modelling, except in exceptional circumstances;
- Consider residual flood risk i.e. infrastructure failure, breach, exceedance events;
- Assess the impacts of climate change.



# Map Review Programme

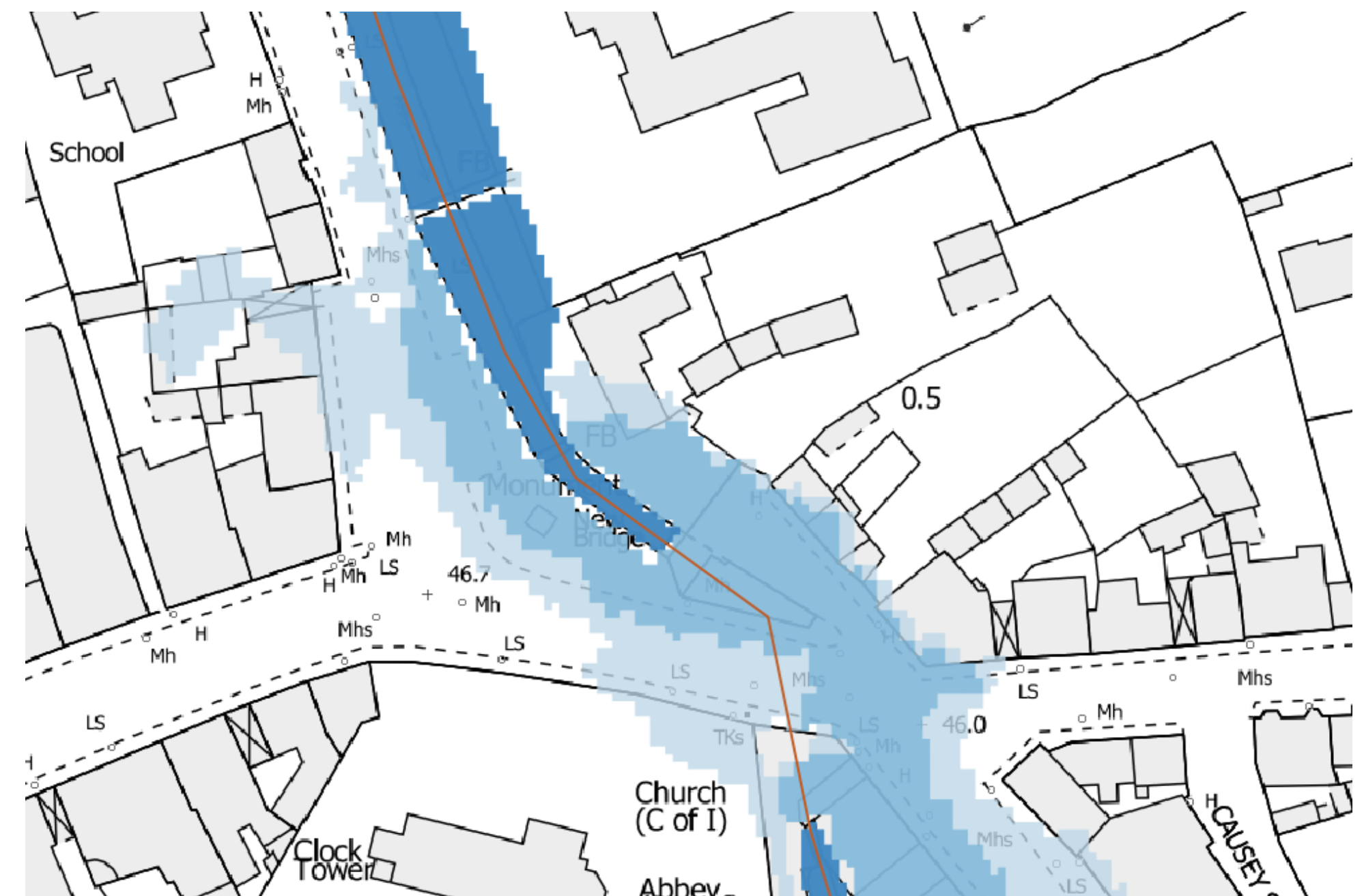


# Map Review Programme



Changes may have occurred since the CFRAM flood maps that would affect the watercourse and floodplains, and hence the Flood Zones.

- Limited information on past flood events against which to calibrate the models;
- More recent flood events;
- A more detailed local assessment such as site-specific flood risk assessment.



# Map Review Programme

- Reviews can be requested by OPW Staff, Local Authorities or members of the public.
- Requests are reviewed to confirm if there is a change in the hydraulics / hydrology, or an error, or an OPW scheme constructed.



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## FLOOD MAP REVIEW REQUEST FORM

As part of the Flood Map Review Programme, the OPW continues to update predictive flood mapping to provide the best available flood risk information to the general public. A flood map review for a location will only commence once a Flood Map Review Request Form has been submitted to the OPW. For further information on the flood map review process, please refer to the Flood Map Review Programme - Guidance Note.

### 1. CONTACT DETAILS

Company (if applicable):

Name:

Address:

