



**OPW**

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Office of Public Works

# National Coastal Change Management Strategy

## Pillar Two

Patrick Hall, Head of Coastal Change Section, OPW

22 May 2026



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# Agenda

1. Role of the OPW
2. Coastal Surveys and Monitoring
3. Past Coastal Erosion Database
4. National Coastal Erosion Hazard Mapping



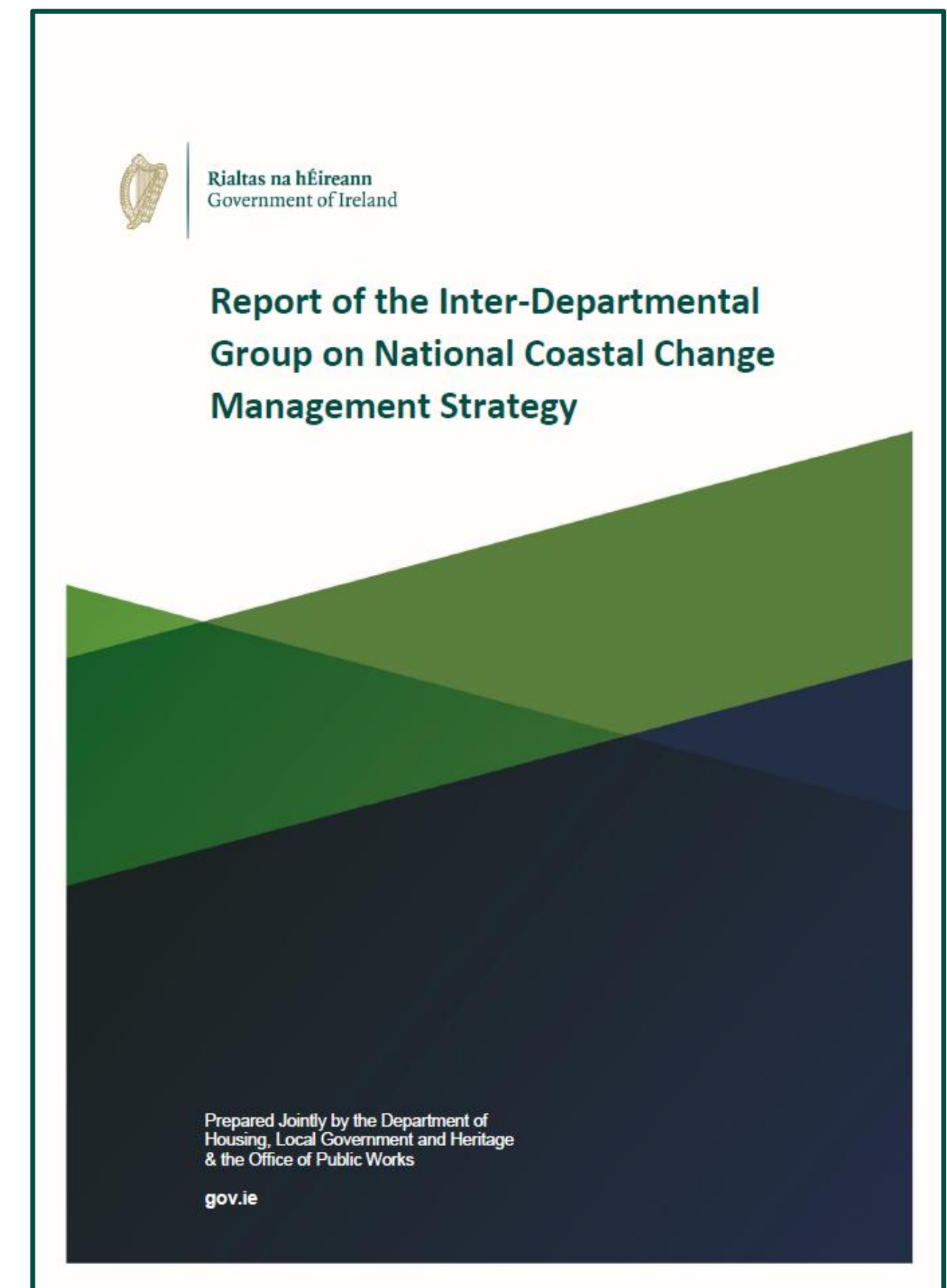
# 1 Role of the OPW

# Coastal Change Management Strategy



Report on the National Coastal Change Management Strategy published in October 2023:

- Joined up, whole of Government response to coastal change
- Interdepartmental Steering Group to be established
- Department of Housing, Local Government and Heritage to take on lead coordination role / Chair Inter-Dept. Steering Group
- The OPW designated as national lead coordinating body for the assessment of coastal change hazards and risks and the assessment of technical options and constraints (Pillar 2)
- Three Strategic Pillars and 15 Recommendations



# Pillar Two

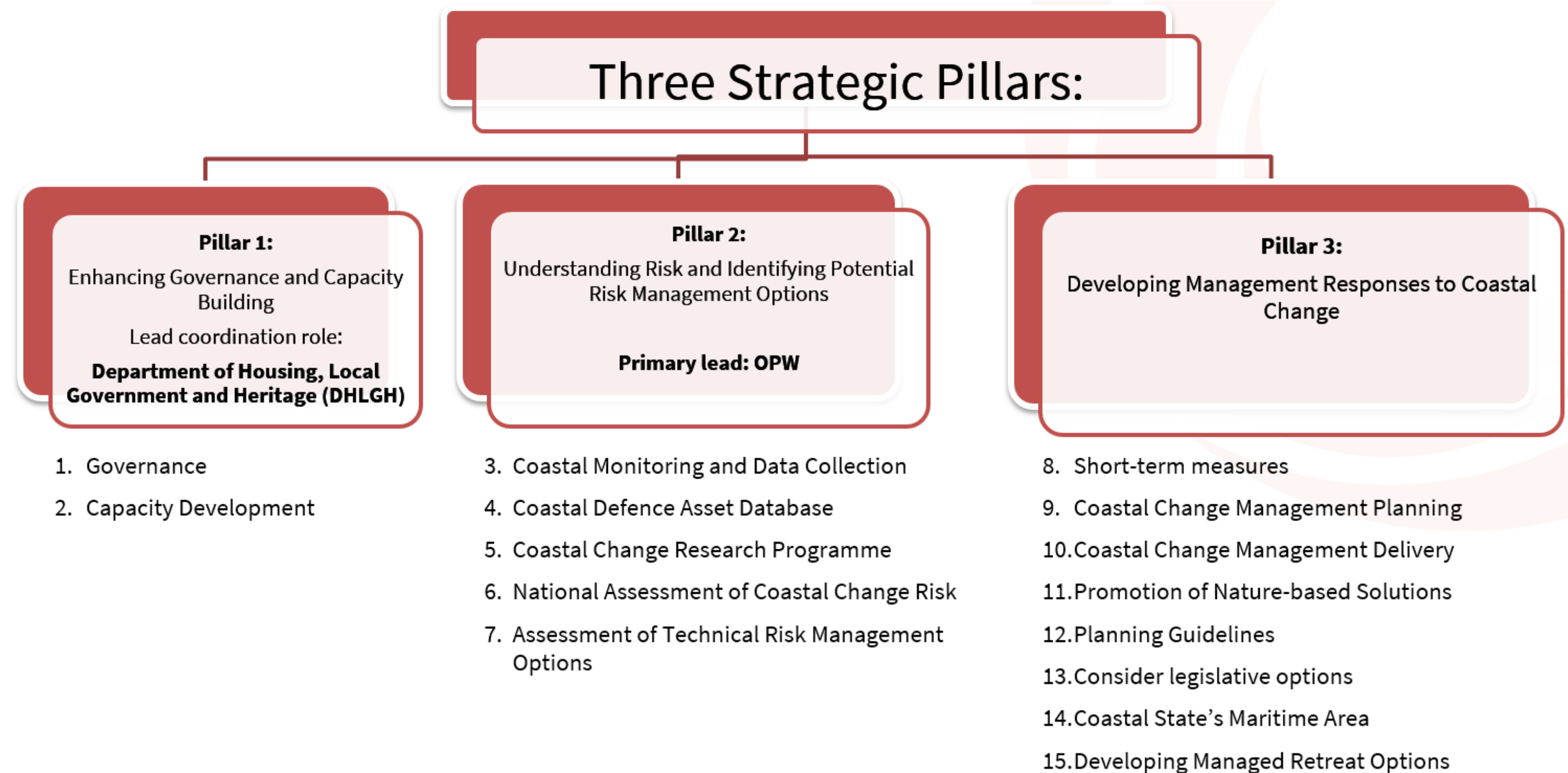


## Pillar Two Working Group:

- Established 2024
- OPW, CCMA, CAROs, NPWS, EPA, GSI, Marine Institute

## Project Steering Groups:

- For individual projects
- Local authorities invited where relevant (e.g. Coastal Erosion Hazard Mapping Pilot Study)



# Recommendations of the Inter-Departmental Group on National Coastal Change Management Strategy (IDGR)

R - IDGR recommendation number

**Estimated Completion Date**

- ✔ Existing prior to the IDGR
- Short-Term 2026 to 2027
- Medium-Term 2028 to 2030
- Long-Term 2031 onwards



## MONITOR

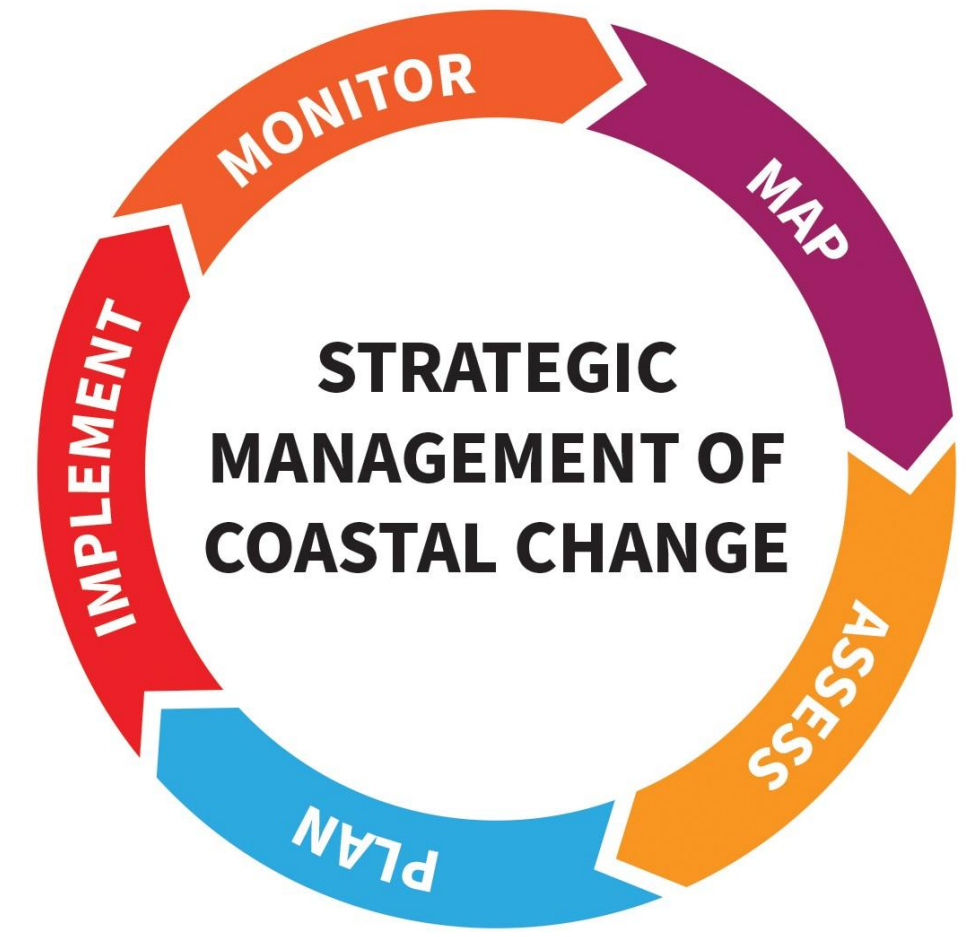
- National Coastal Change Monitoring Programme by the OPW (R3.a)
- Coastal Defence Asset Database by the OPW (R4.a)
- Past Coastal Erosion Database for reporting historic erosion by the OPW (R6.c)
- Coastal Monitoring and Data Collection by the OPW (R3.a)
- Coastal Aerial Imagery and LiDAR Survey (CALs) Programme by the OPW (R3.a)

## IMPLEMENT

- Capital Measures set out in Coastal Change Management Plans by the IDG Coastal Change, and subsequent management and coordination of community works by the OPW (R10)
- Promotion of Promotion of Nature-based Solutions by the IDG Coastal Change (R11)
- Most appropriate measures and mechanisms required to support a managed retreat by the IDG Coastal Change (R15)

## PLAN

- ✔ In vulnerable locations, local authorities and State agencies to engage with local communities to identify the most effective solutions (R8.a)
- ✔ Local authorities, in statutory plans, including the LA Climate Action Plans required under the Climate Act, continue to identify potentially vulnerable locations that could be affected by coastal change (R8.b)
- National Set of Coastal Change Management Plans by the IDG Coastal Change (R9.b)
- Spatial Planning Guidelines by the DHLGH with policy direction to Planning Authorities in coastal areas (R12)



## MAP

- ✔ ICPSS by the OPW
- Shoreline Change Assessment by GSI
- National Coastal Erosion Hazard Mapping by the OPW (R6.a)

## ASSESS

- National Coastal Erosion Risk Assessment by the OPW (R6.a)
- Identify Areas of Potentially Significant Coastal Change Risk by the OPW (R6.e)
- Assess and appraise technical options for Areas of Potentially Significant Coastal Change Risk by the OPW (R7.a)



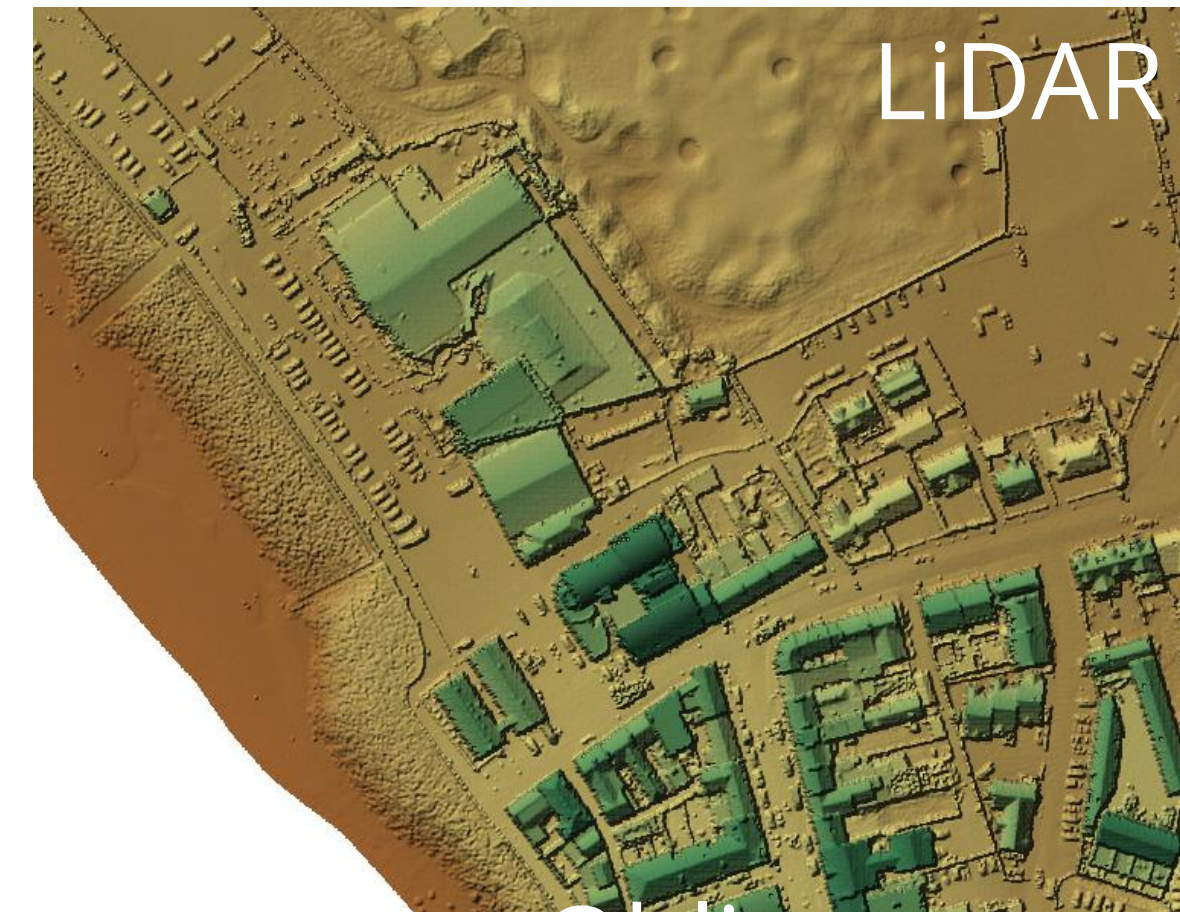
# 2 Coastal Surveys and Monitoring

# Coastal Surveys and Monitoring



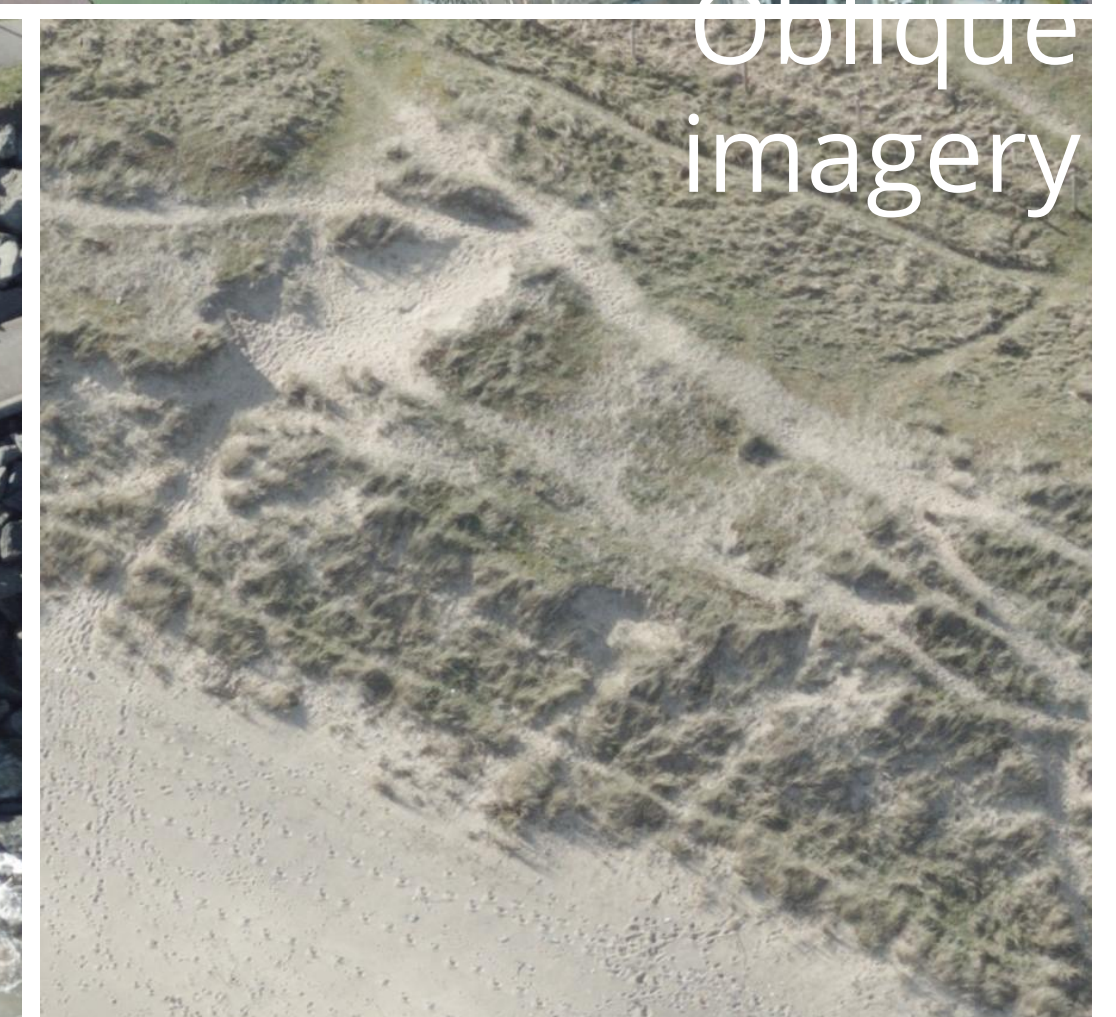
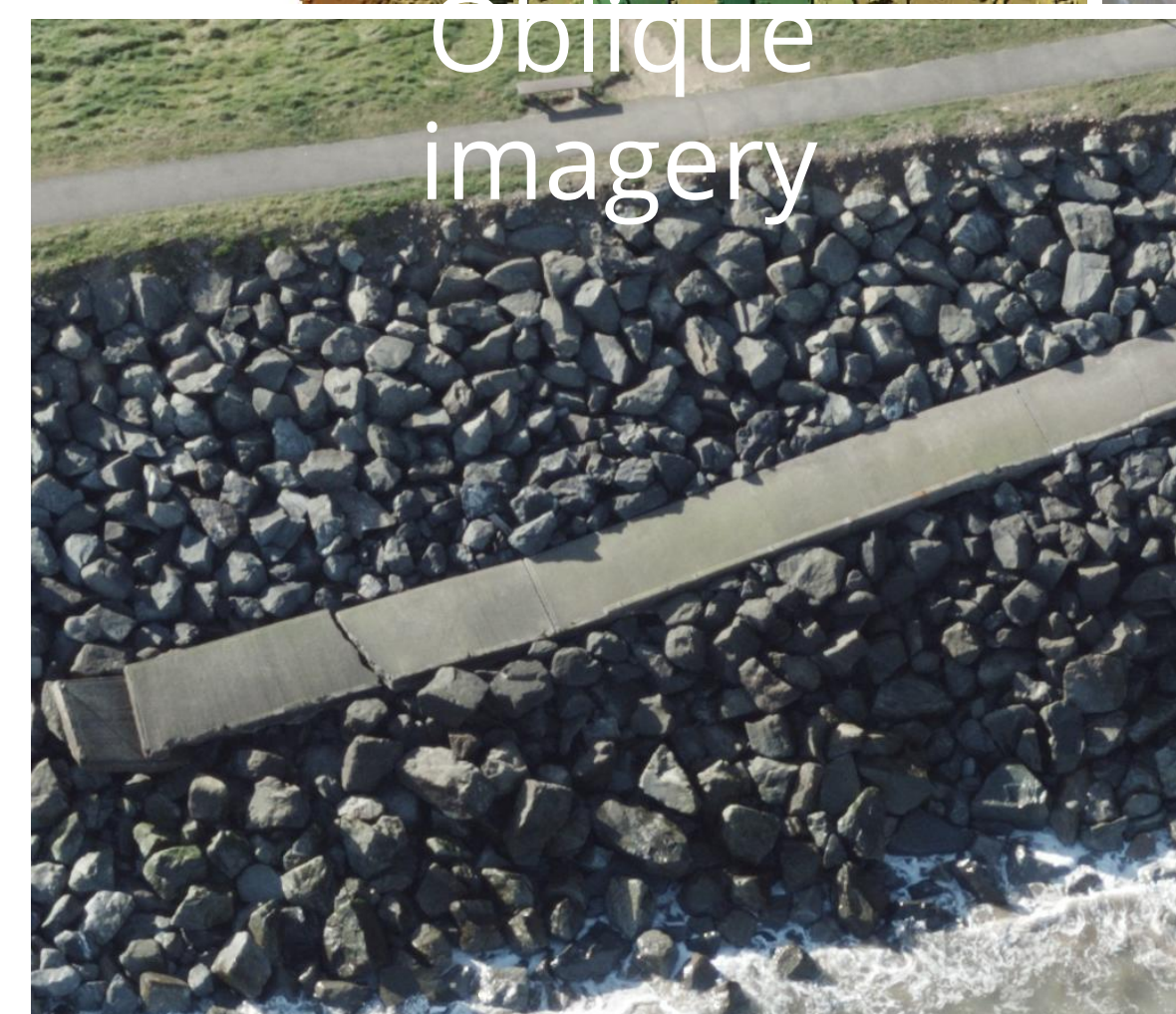
## National Coastal Aerial LiDAR and Imagery Surveys

- High-resolution baseline data of the entire coastline
- Flights complete, data processing ongoing



## National Coastal Oblique Imagery Survey

- Repeat of the 2003 helicopter survey
- Flights planned for 2026 / 2027



# Coastal Defence Asset Database



- All engineered and natural assets
- Manually digitised at a scale larger than 1:1350
- Over 22,000 assets and 6,300km now digitised
- Consultation with LA staff on a county by county basis



Coastal Defence Asset Database Consultation

County Galway consultation

All General Feedback | Display Natural Assets

Wall Details (ID: 90)

Asset ID: --- | Alt. asset ref: --- | Alt. asset ref. description: Not Applicable | Scheme: Not Applicable | Type source: Coastal Aerial LIDAR Survey – South to West Coast Aerial Imagery | Other type source: --- | Primary purpose: Flood Risk Management | All. purpose: Erosion Protection | Protection type: Coastal | Natural/Engineered: Engineered | Wall type: Unknown | Description: --- | Asset start date: --- | Asset start date DQF: DQF 0: Unknown | Asset start date DQF date: 11/03/2025 | Geometry source: Coastal Aerial LIDAR Survey – South to West Coast Aerial Imagery | Other geometry source: --- | Length: 360.7m | Owner: Unknown | Maintainer: Unknown | Photo: No photo added | Comments: ---

Asset Elements

Element	Material	Geometry same as asset	Details
Crest ID:96	Concrete - Reinforcement Unknown - Cast-in-situ/Precast Unknown	✓	Details   Highlight
Exposed Face ID:87	Concrete - Reinforcement Unknown - Cast-in-situ/Precast Unknown	✓	Details   Highlight
Landward Face ID:84	Unknown	✓	Details   Highlight

# National Coastal Monitoring Programme



- Pilot Coastal Monitoring Survey Programme (2020 – Present)
- Potential Monitoring Units (PMUs)
- Screening of PMUs to identify risk (property, infrastructure, etc)
- Monitoring schedule based on risk

County	Monitoring Area	Aerial Photography	LIDAR	Topographic Beach Profile	Bathymetry
Clare	Cloughaninchy	Annual	Annual	-	1 per 5 year cycle
Clare	Doolin	1 per 5 year cycle	-	-	1 per 5 year cycle
Clare	Liscannor Bay	Annual	Annual	-	1 per 5 year cycle
Cork	Youghal	Annual	Annual	-	1 per 5 year cycle
Donegal	Moville	1 per 5 year cycle	-	-	1 per 5 year cycle
Donegal	Rosnowlagh	1 per 5 year cycle	-	-	1 per 5 year cycle
Donegal	Slodden to Binbane Head	Annual	Annual	-	1 per 5 year cycle
Dublin	Dublin Bay North	Annual	Annual	-	1 per 5 year cycle
Dublin	Dublin Bay South	Annual	Annual	-	1 per 5 year cycle
Dublin	Portmarnock	Annual	Annual	-	1 per 5 year cycle
Dublin	Portrane and Rush South	Annual	Annual	-	1 per 5 year cycle
Kerry	Ballyheigue	Annual	Annual	-	1 per 5 year cycle
Sligo	Enniscrone	1 per 5 year cycle	-	-	1 per 5 year cycle
Sligo	Rosses Point	Annual	Annual	-	1 per 5 year cycle
Sligo	Strandhill	Annual	Annual	-	1 per 5 year cycle
Waterford	Ardmore	Annual	Annual	-	1 per 5 year cycle
Waterford	Dungarvan	Annual	Annual	-	1 per 5 year cycle
Waterford	Tramore	Annual	Annual	-	1 per 5 year cycle
Wexford	Rosslare	Annual	Annual	-	1 per 5 year cycle





# 3 Past Coastal Erosion Database

# Past Coastal Erosion Database



## What?

- Accessible online platform to allow quick and easy reporting of coastal erosion
- Single, centralised body of knowledge to support monitoring and management of coastal change

The screenshot shows the home page of the Past Coastal Erosion Database. It features a dark teal sidebar with navigation links: Overview, Past Coastal Erosion Events, Frequently Asked Questions, Submit Past Coastal Erosion Report, and User Profile. The main content area has a header with the title 'Past Coastal Erosion Database' and a subtitle 'National Past Coastal Erosion Database used to identify and assess areas of erosion concern'. Below this is a section titled 'Report of the Inter Departmental Group on National Coastal Change Management Strategy' with a brief description. Further down, there are sections for 'Past Coastal Erosion Database' and 'Submitting a Past Coastal Erosion Report'. At the bottom, there are two buttons: 'Submit Past Coastal Erosion Report' and 'View Past Coastal Erosion Events'.

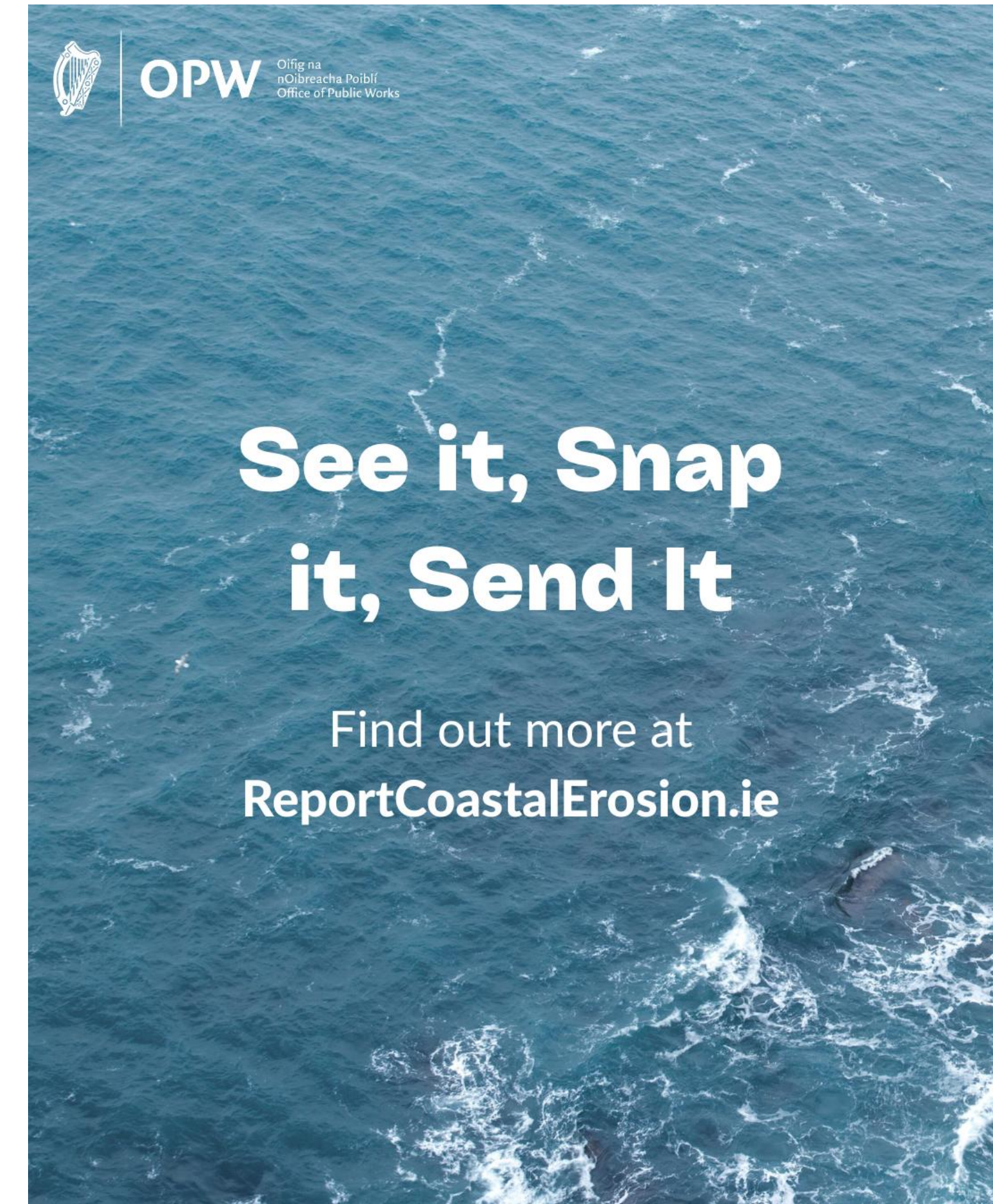
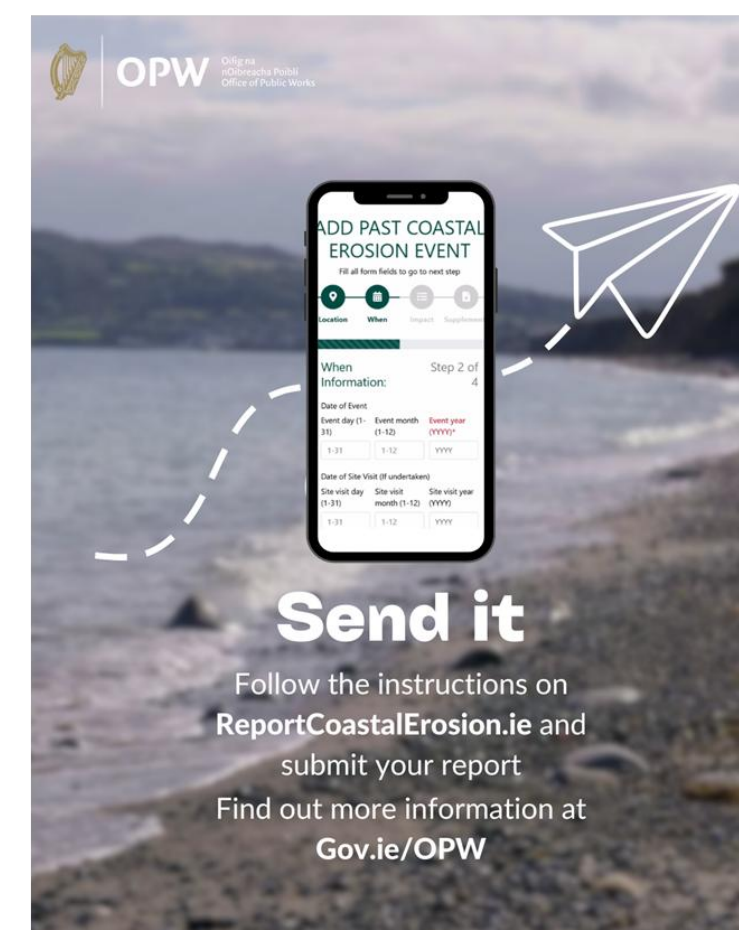
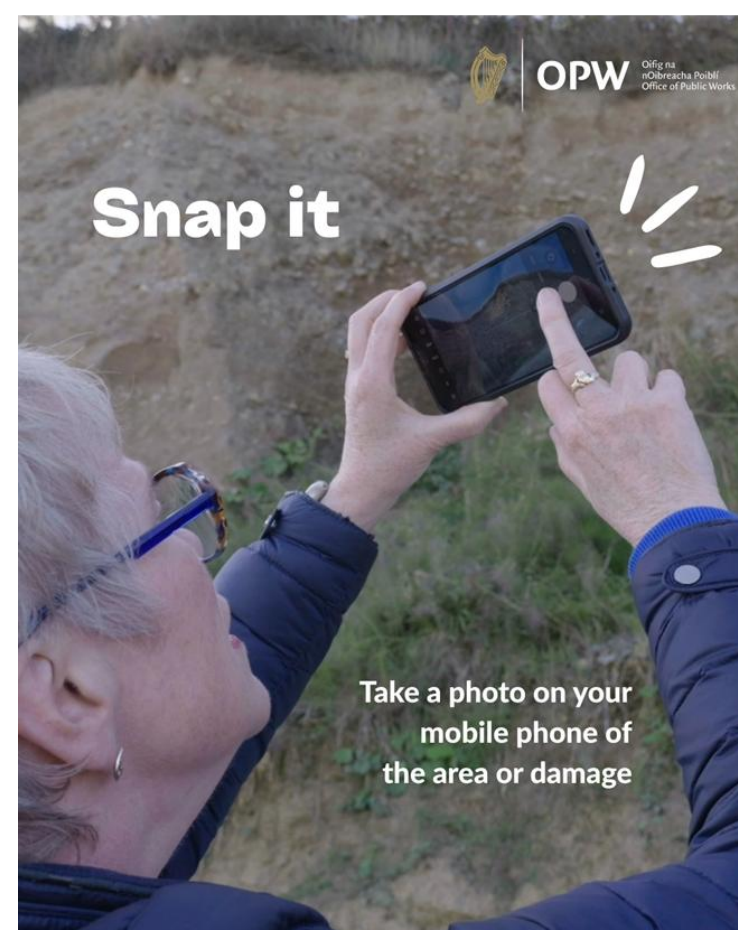
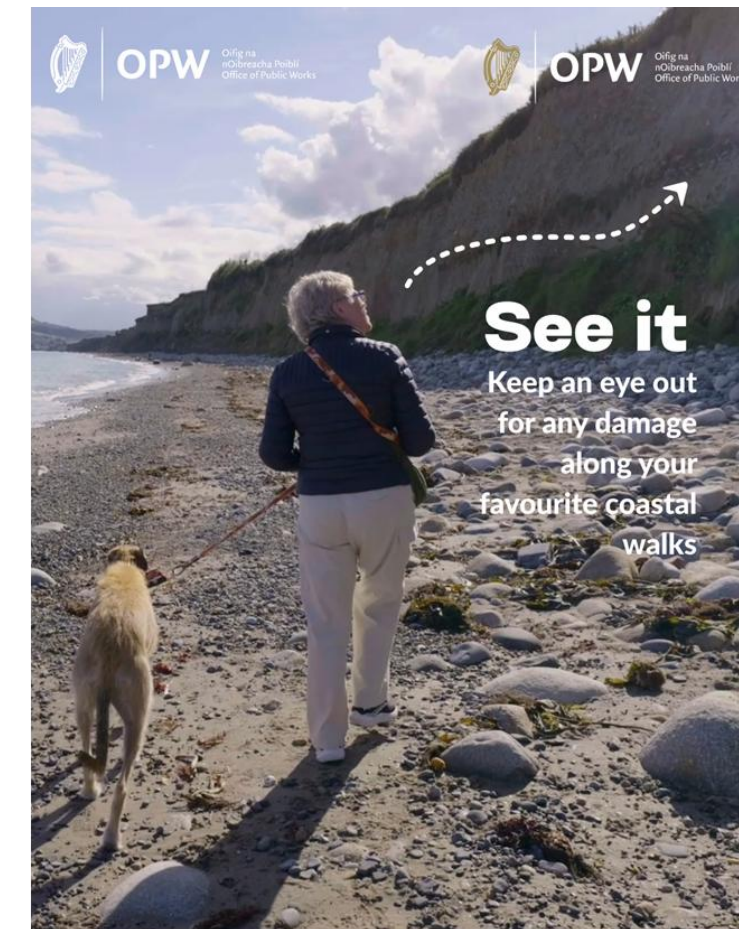
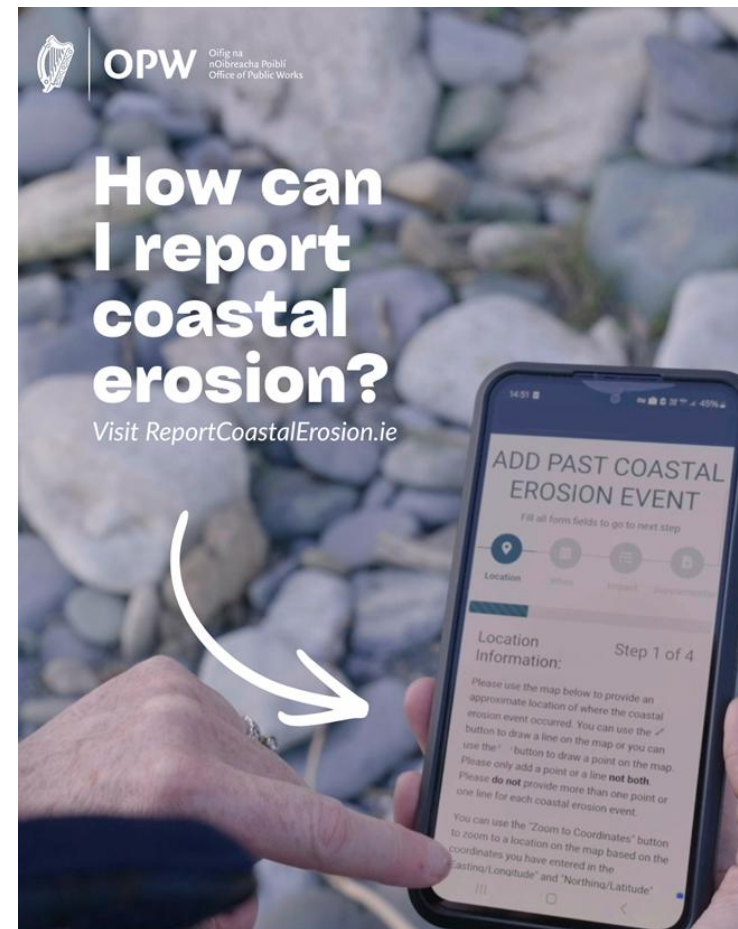
The screenshot shows the 'ADD PAST COASTAL EROSION EVENT' form. It has a progress bar with four steps: Location, When, Impact, and Supplementary. The 'Location' step is currently active. Below the progress bar, there is a section for 'Location Information:' with three input fields: 'Easting/Longitude', 'Northing/Latitude', and 'Lat/Long (GPS)'. A 'Zoom to Coordinates' button is next to the 'Lat/Long (GPS)' field. Below the input fields is a satellite map showing a coastal area. The map has a search bar and a zoom control on the left side. The bottom right corner of the map shows 'Leaflet | National Mapping Division of Taitte Eireann'.

# Past Coastal Erosion Database



## Why?

- ✓ Improve knowledge sharing
- ✓ Standardised and consistent information
- ✓ Identify areas of risk and manage coastal change
- ✓ Verify predictions of future coastal change
- ✓ Evidence-base to support funding applications
- ✓ Inform risk-based coastal survey monitoring programmes



# Past Coastal Erosion Database



## Phase 1: Local Authorities

- Launched on 7<sup>th</sup> April 2026
- Majority of coastal LAs registered
- Over 50 reports already received
- All reports reviewed within one week

## Phase 2: General Public

- Planned for June 2026
- Tutorial and promotional videos available
- Social media, NGOs, and other channels

**Past Coastal Erosion Events**

Event ID	County	Event Type	Event Start	Event End	Reported	
ev-000009	Wexford	Recurring	28 March 2025		1	📍
ev-000030	Dublin	Isolated	27 January 2026		1	📍
ev-000005	Cork	Unknown	2019		1	📍
ev-000031	Wexford	Unknown	25 March 2025		3	📍
ev-000006	Cork	Recurring	26 January 2025		1	📍
ev-000007	Cork	Recurring	1 December 2017		1	📍
ev-000008	Cork	Unknown	18 October 2023		1	📍
ev-000010	Wexford	Recurring	26 March 2025		1	📍
ev-000011	Wexford	Recurring	26 March 2025		1	📍
ev-000012	Wexford	Recurring	26 March 2025		1	📍

Showing 1 to 10 of 38 entries

**Past Coastal Erosion Event**

Event ID: ev-000007  
County: Cork  
Event Type: Recurring  
Event Start Year: 2017  
Reported: 1  
Associated photos: 6  
Associated files: 0

[VIEW ASSOCIATED INFORMATION](#)

**Erosion Event ev-000007**

Photos: 6 files | 791.5 KB

Past Coastal Erosion Events



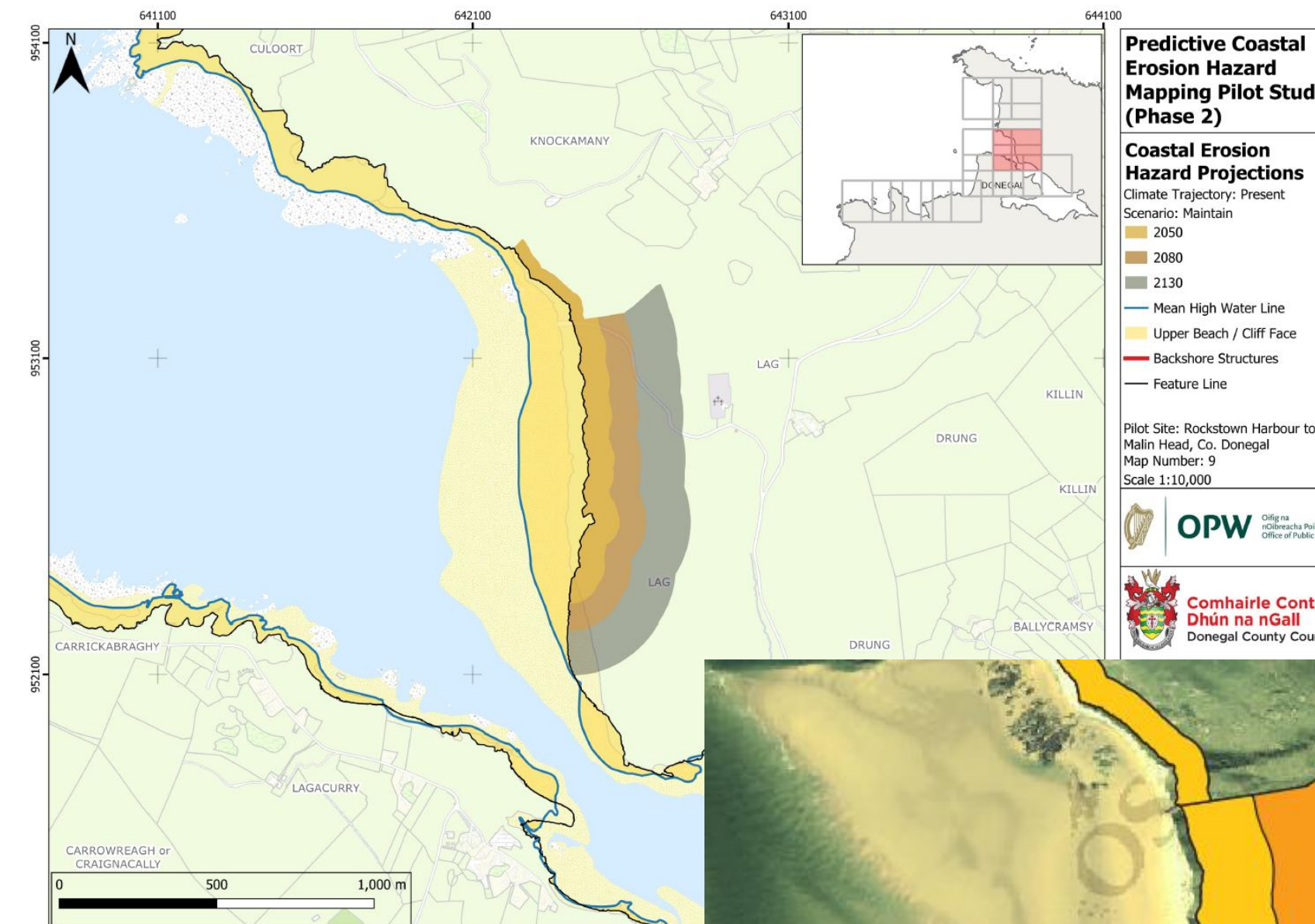
# 4

# National Coastal Erosion Hazard Mapping

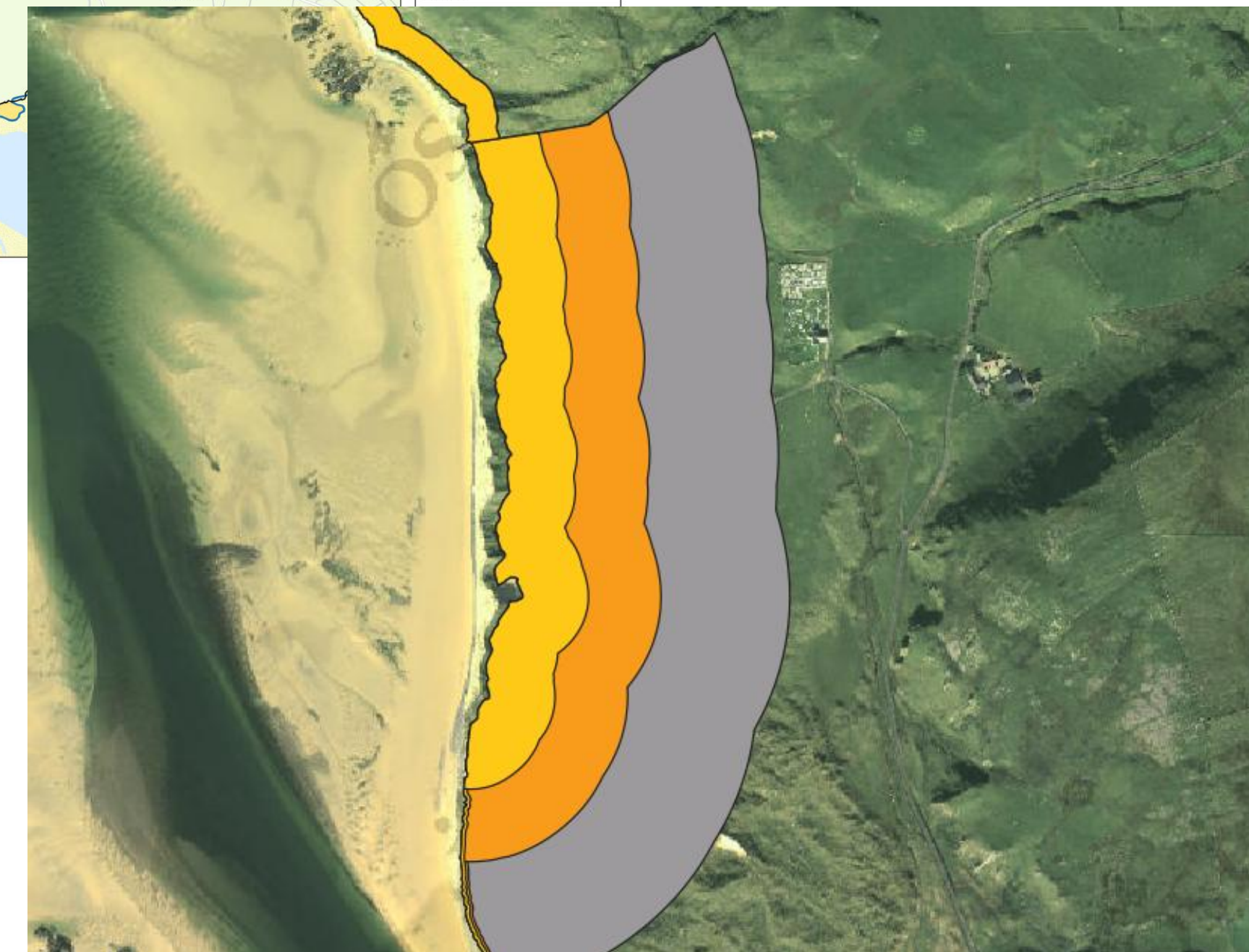
# What is Coastal Erosion Hazard Mapping?



- A map showing areas where coastal erosion may occur in the future
- The maps show the location and the potential extent of coastal erosion
- Maps should consider different:
  - ✓ *Time periods*
  - ✓ *Management approaches*
  - ✓ *Climate change trajectories*
- Very similar to flood mapping, but for coastal erosion
- National Coastal Erosion Hazard Mapping (NCEHM) Programme



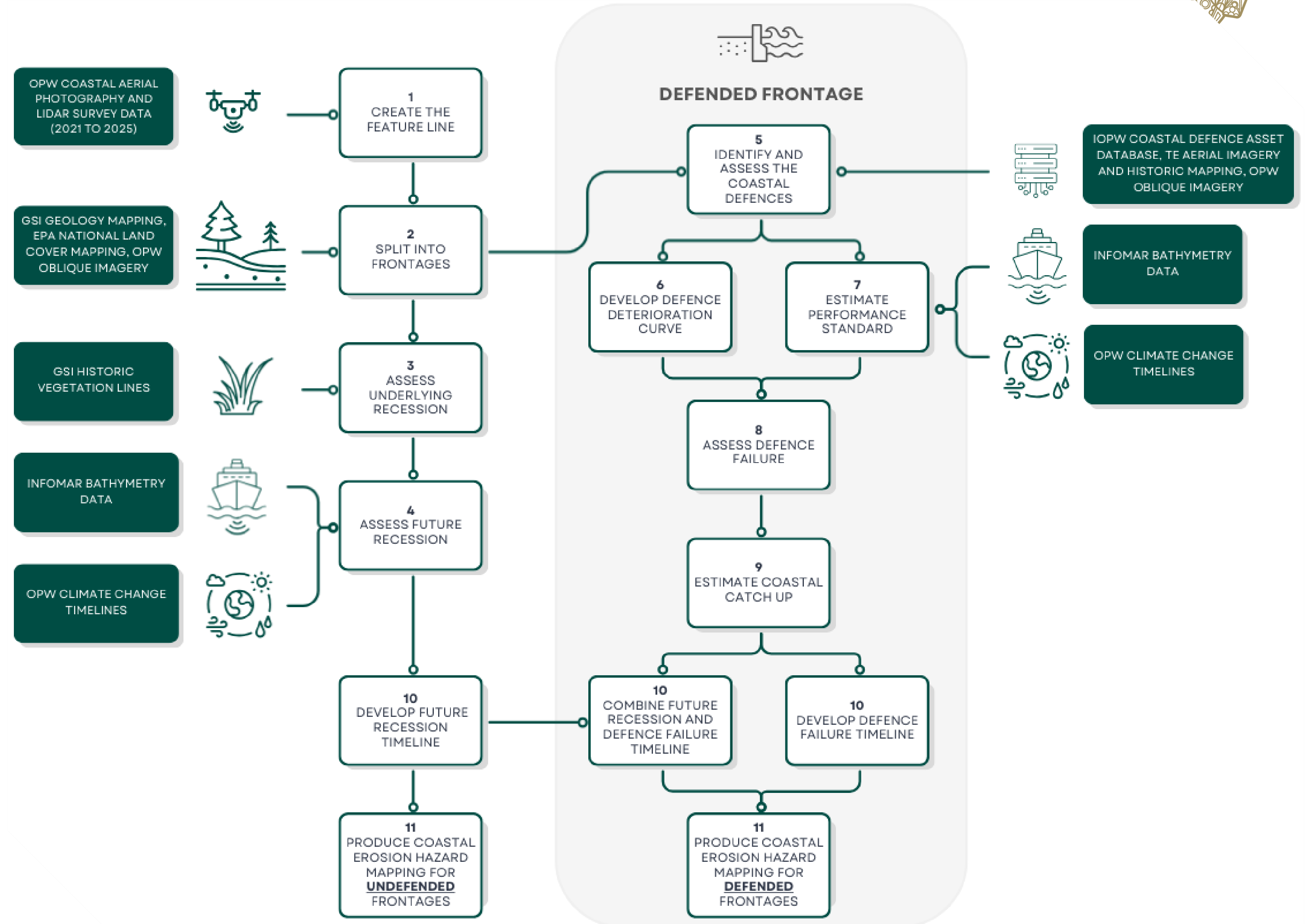
Sample Coastal Erosion Hazard Mapping from OPW pilot study completed in 2025



# National Coastal Erosion Hazard Mapping



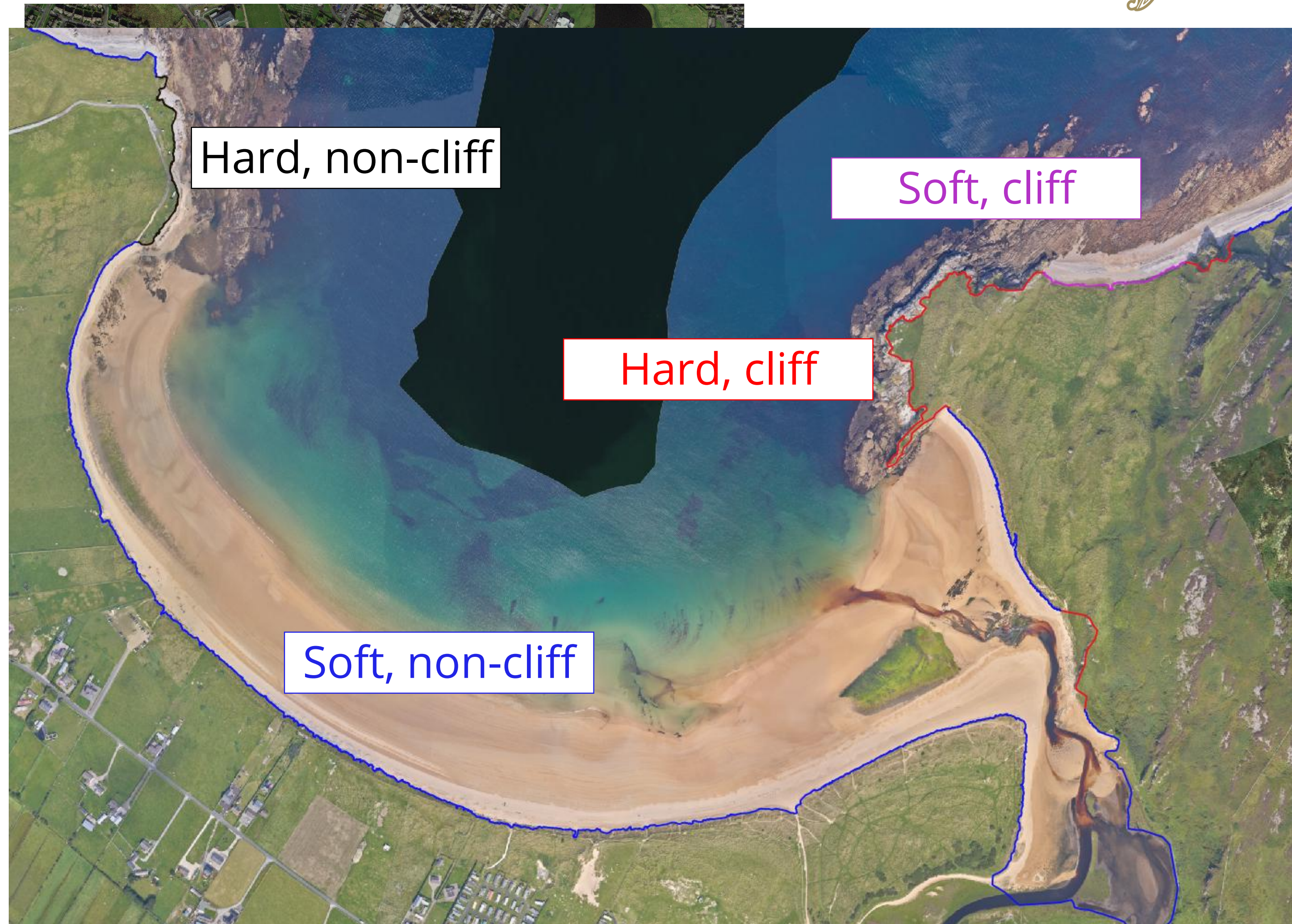
1. Coastal Feature Line and Frontages
2. Historic Coastal Change Assessment
3. Future Coastal Change Assessment
4. Manmade Coastal Defence Assessment
5. Future Coastal Change Timeline



# Coastal Feature Line and Frontages



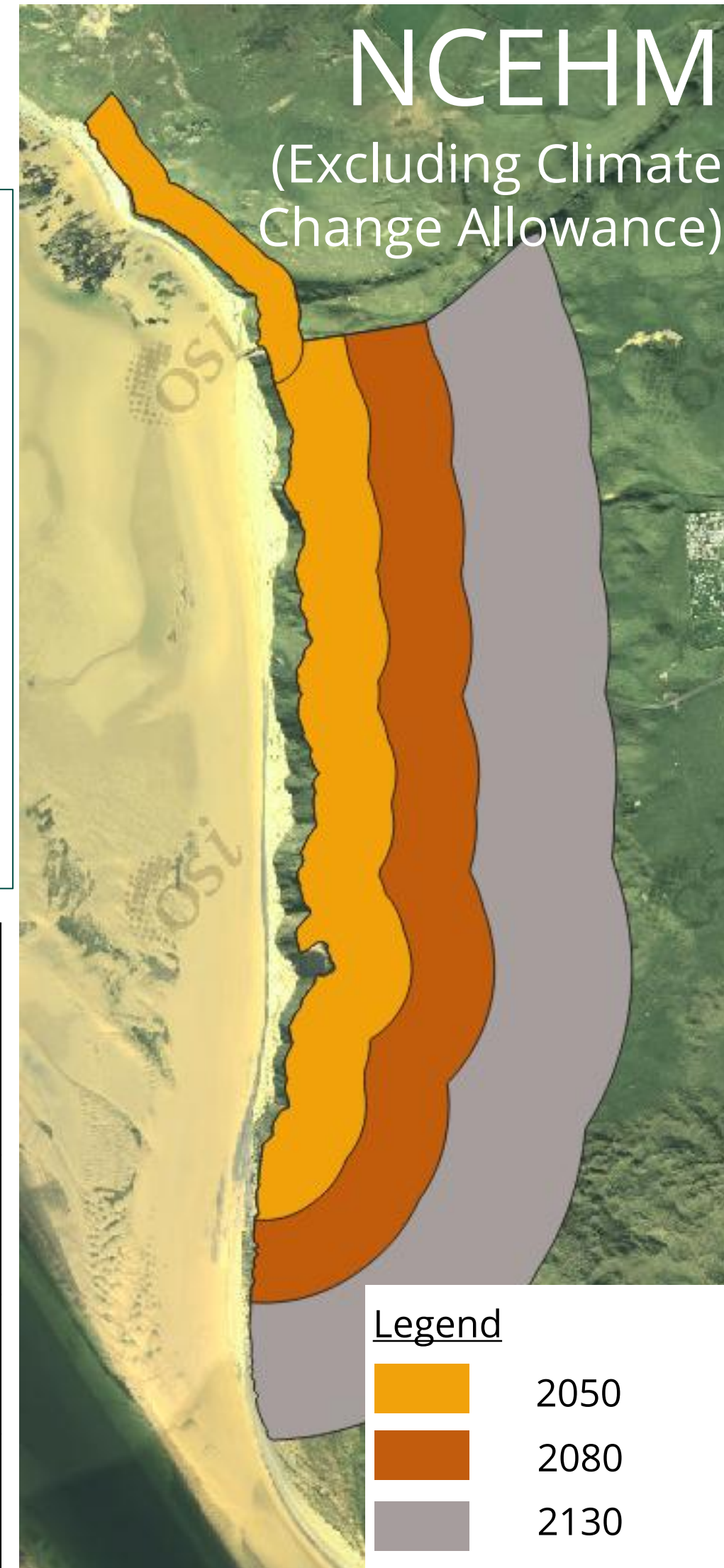
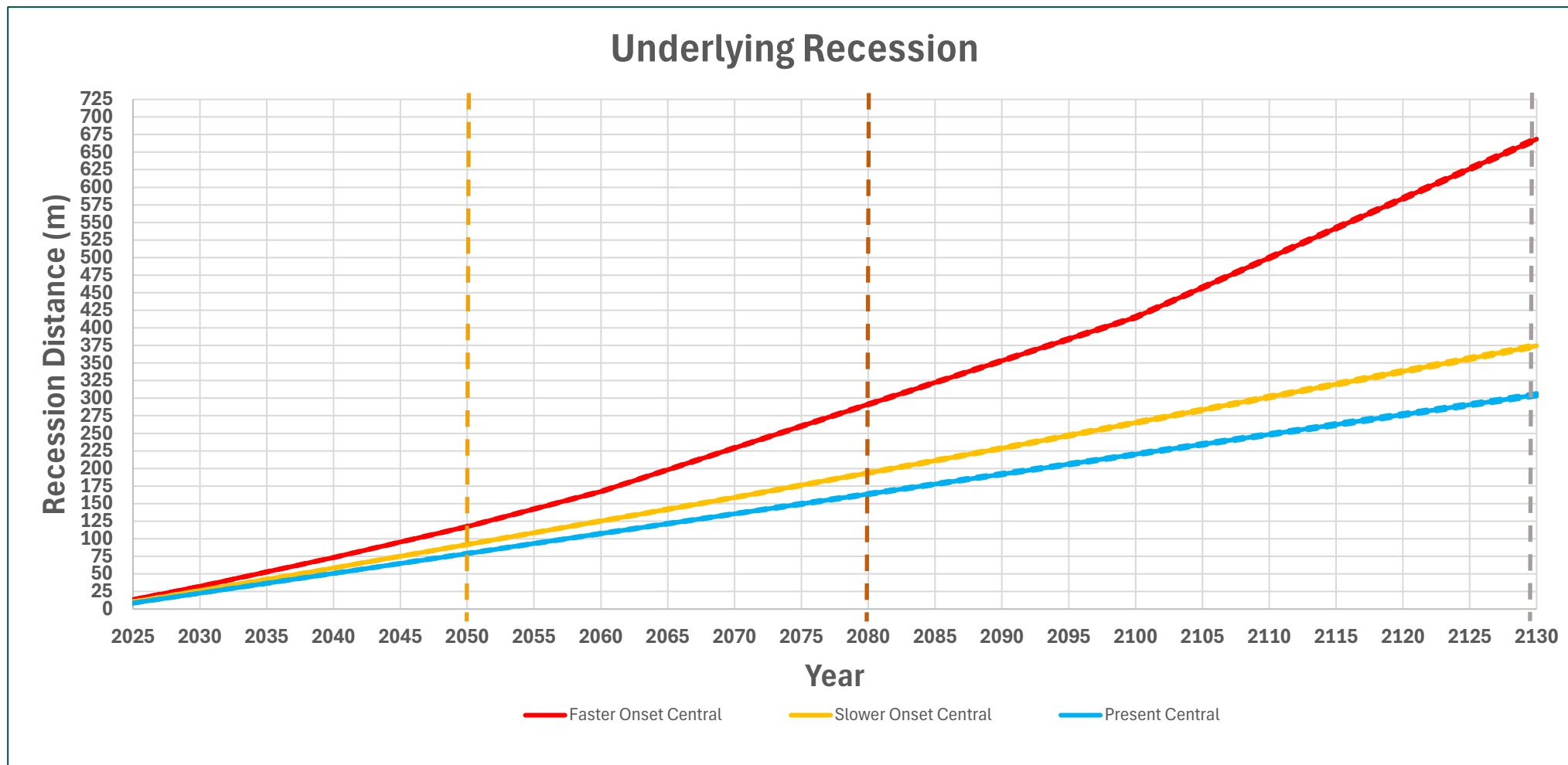
- Coastal 'feature' used as a proxy against which to measure coastal change
- 'Feature' varies depending on whether it is a cliff or non-cliff
- Split Coastal Feature Line into 'frontages' based on topography, hardness, orientation, and historic behaviour
- Each 'frontage' would be expected to behave in a similar way, so is assessed as one



# NCEHM Outputs



Sample outputs for Five Finger Strand, Co. Donegal, from OPW pilot study completed in 2025



## For each 'frontage':

- Current location
- Historic and future erosion rates / timelines
- Hazard mapping

## Manmade Defences:

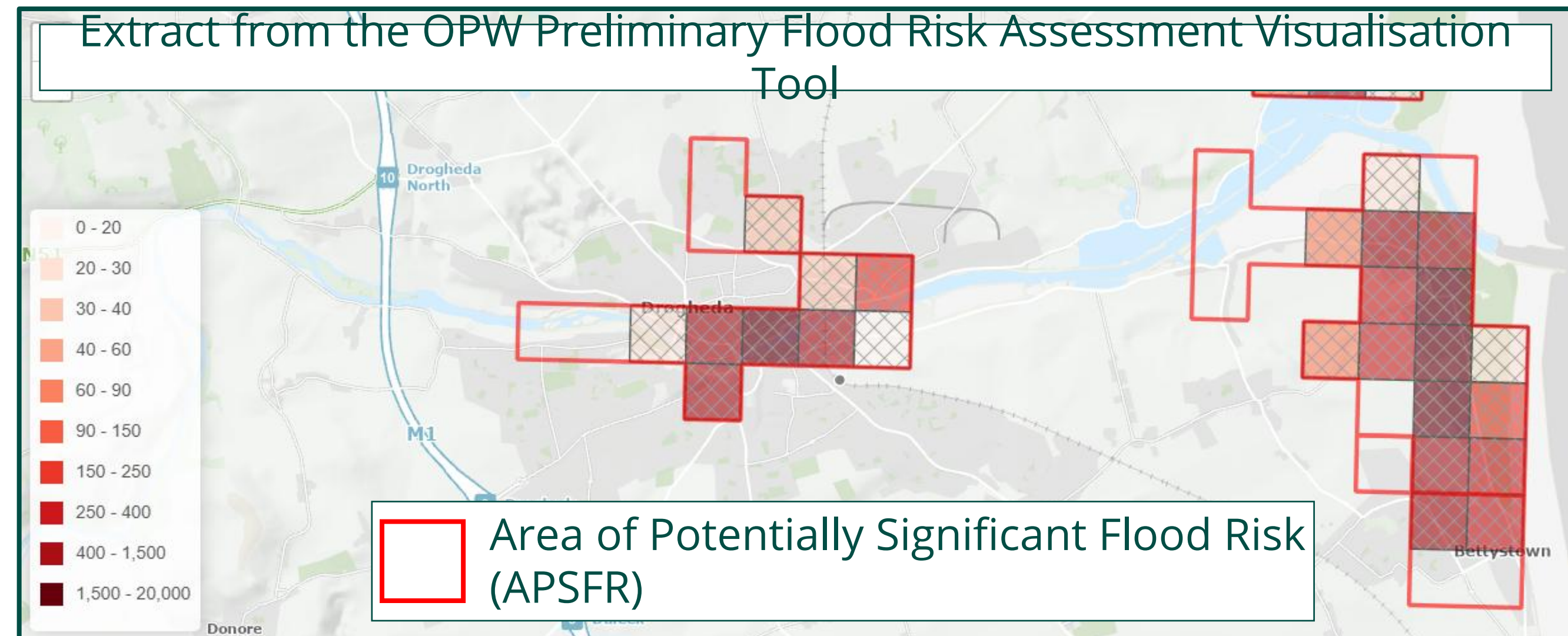
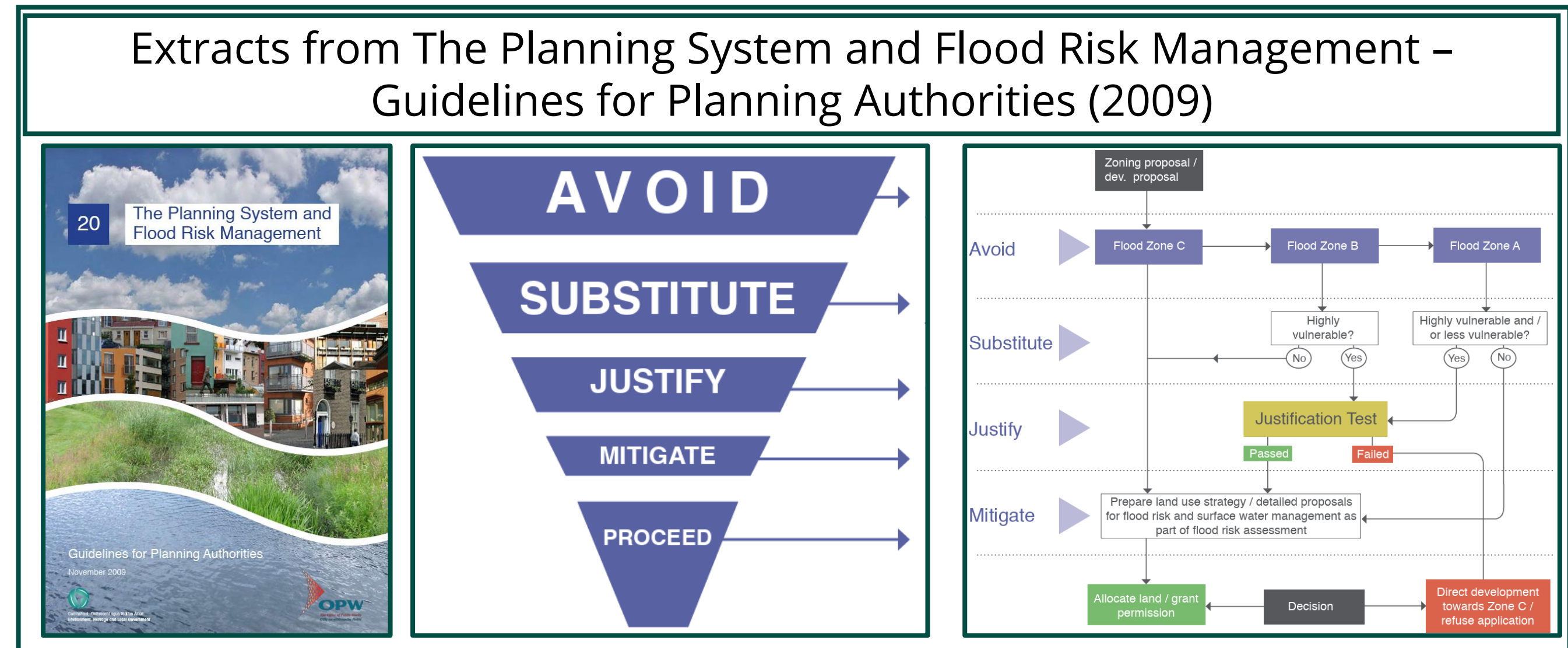
- Asset Condition
- Performance Standard
- Failure Timelines

	Present Day (PD)	Slower Onset	% increase relative to PD	Faster Onset	% increase relative to PD
2050	79.0m	91.7m	16%	117.2m	48%
2080	163.6m	193.6m	18%	291.1m	78%
2130	304.6m	374.3m	23%	668.3m	119%

# What is it used for?



1. *Enables a National Coastal Erosion Risk Assessment and the associated identification of Areas at Potentially Significant Coastal Erosion Risk*
2. *Provides an evidence base to inform Coastal Change Management Plans*
3. *Underpins the preparation of spatial planning guidelines for areas at risk of coastal erosion*

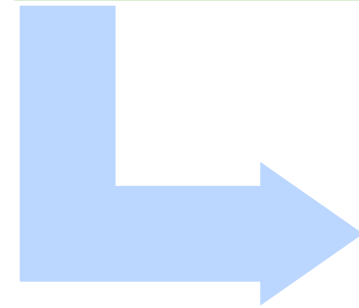


# National Coastal Erosion Hazard Mapping



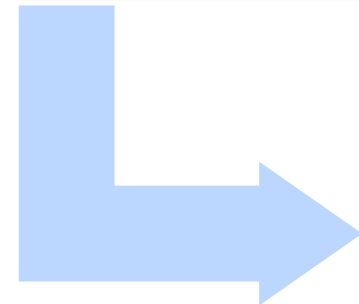
Available and readily derivable data

- Aerial imagery and historic mapping
- Current LiDAR and bathymetry
- GSI Vegetation Lines (ongoing)



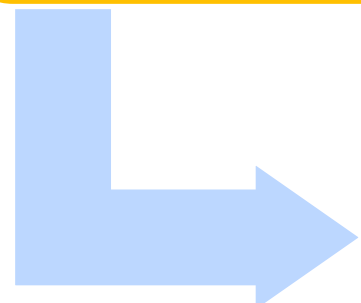
PCEHM Pilot Study

- Test and develop mapping methodology
- Programme and cost considerations for NCEHM



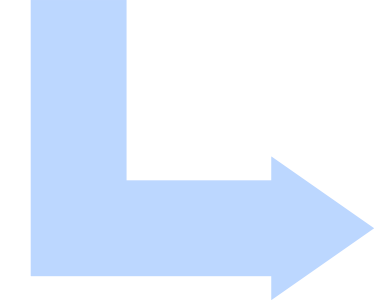
Formalise mapping methodology for NCEHM

- Technical Methodology
- Standardised approach



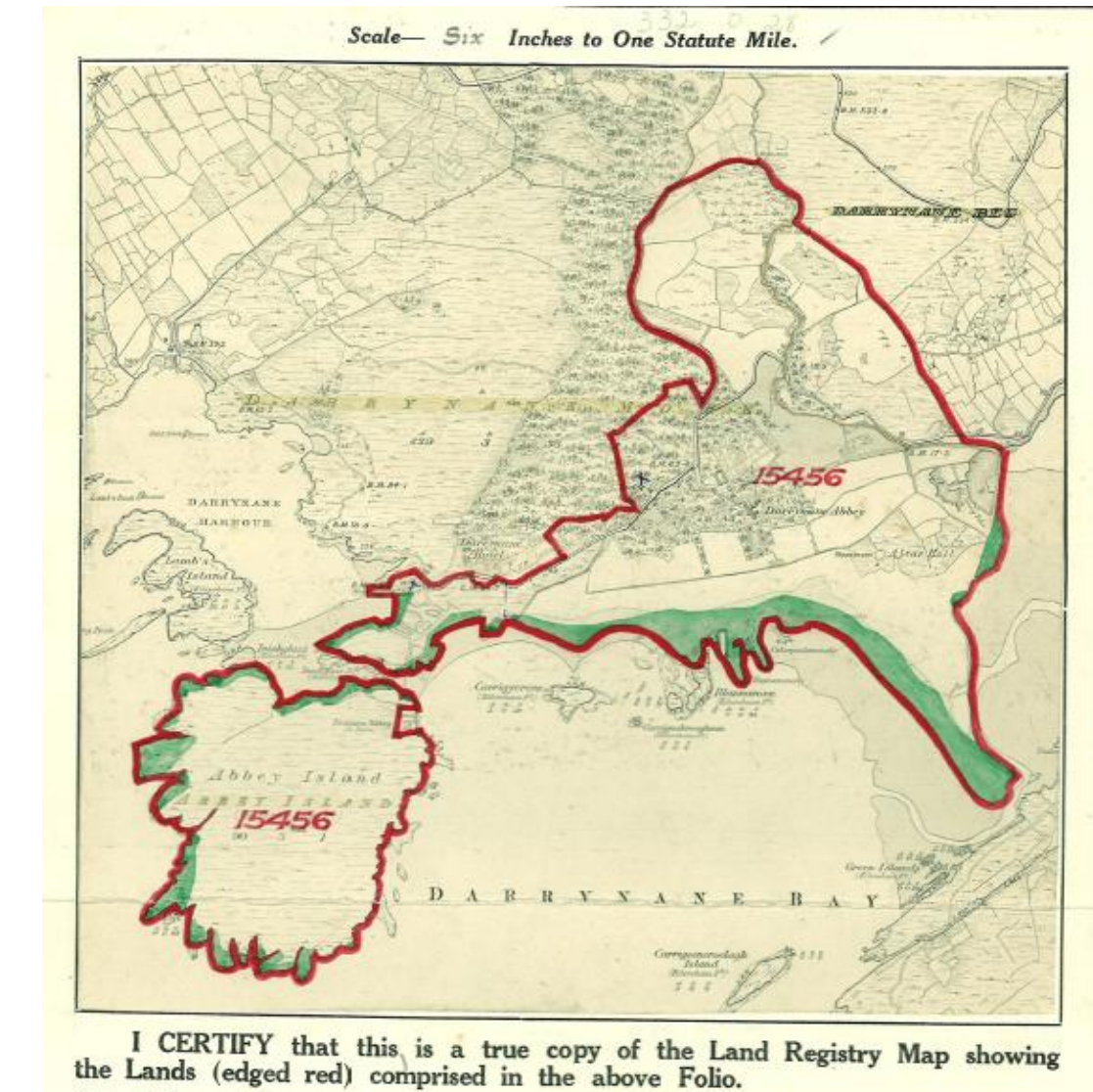
National programme

- Starting in 2026
- Approximately 6,300km coast included
- All coast types



Follow on works

- National risk assessment
- Spatial planning guidelines
- Management Plans
- Next cycle of mapping





Thank You