An introduction to new national flood and coastal erosion risk data

A resource for developers and flood risk assessment consultants

Our aims

- Understand what the new National Flood Risk Assessment (NaFRA2) and new National Coastal Erosion Risk Mapping (NCERM) are
- Understand the different flood risk products
- Be aware of the new and updated tools relevant to spatial planning
- Understand what the new information says about current and future flood risk and coastal change
- Understand additional detail on key topics
- Be aware of further resources available

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Contents

This video is split into several chapters covering:

1. The Environment Agency's role in flood risk management

2. Introduction to our new flood risk and coastal erosion datasets and where they can be accessed

3. Improvements to Flood Map for Planning

4. New coastal erosion risk data we have published and where it is hosted

5. Key topics for planning

6. Resources

7. More technical details for FRA consultants

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Chapter 1

The Environment Agency's role in flood risk management

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Environment Agency strategic overview

Regional flood and coastal committees (RFCCs)

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Strategic
National strategy, reporting and general supervision

Operational
Main rivers, sea flooding, reservoirs

Coast protection authority

Strategic
Input to national and local strategies

Operational
Coastal erosion

Highways authority

Strategic
Input to local strategies

Operational
Highway drainage and roadside ditches

Lead local flood authority (LLFA)

Strategic
Local strategy, flood risk management plans and investigations

Operational
Surface run-off, ground water, ordinary watercourses

Water and sewerage companies

Strategic
Input to national and local strategies, lead on company drainage strategies

Operational
Flooding from surface water and foul or combined sewer systems

District council

Strategic
Input to national and local strategies

Operational
Ordinary watercourses, sea

Internal drainage board (IDB)

Strategic
Input to national and local strategies

Operational
Ordinary watercourses, sea

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Housing delivery and economic growth

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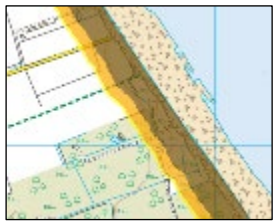
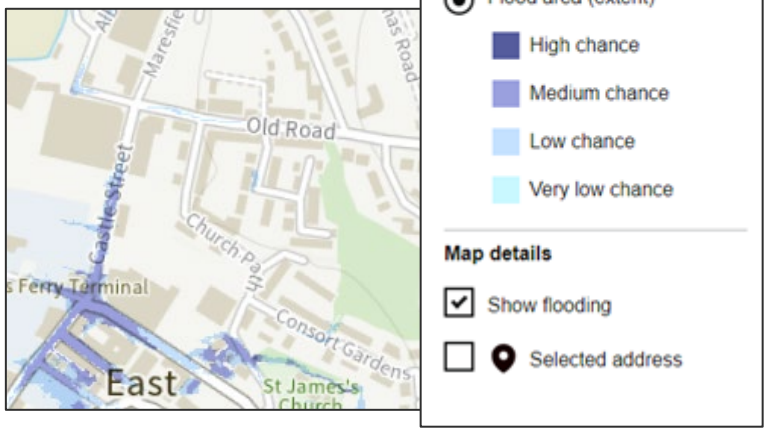
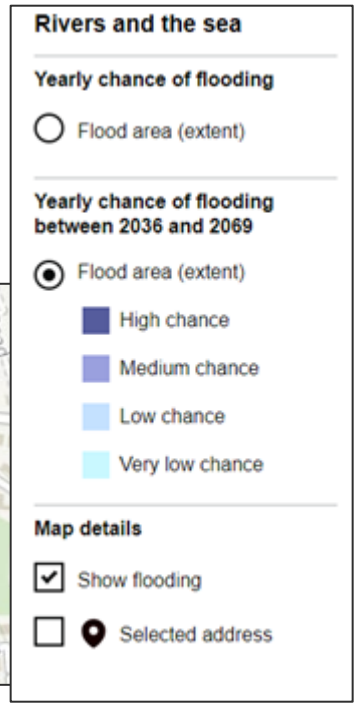
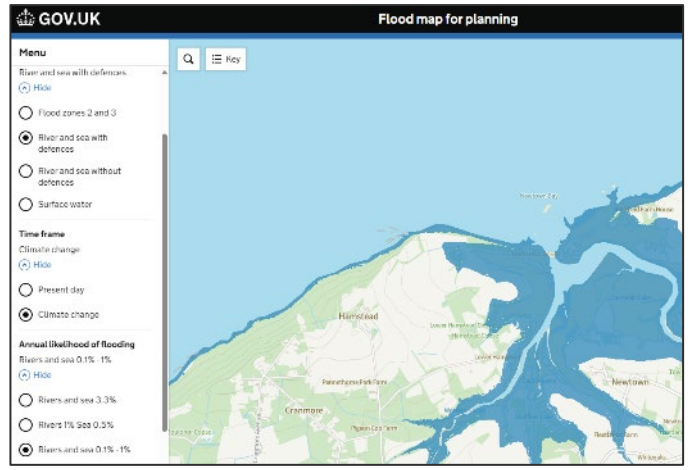
Three new sets of products



Updated National Coastal Erosion Risk Map (NCERM)







We published a report explaining how flood and coastal erosion risk is changing across England and why.

17 December 2024

We have updated and put new data on ‘Check Your Long-Term Flood Risk’ and ‘Check coastal erosion risk for an area in England’ and Shoreline Management Plan Explorer.

28 January 2025

We will publish updated Flood Zones and add other new data to ‘Flood Map for Planning’.

25 March 2025

Headlines: All sources of flooding and coastal erosion (England)

Present day risk

6.3 million properties

are in areas at risk of flooding from at least one of the principal sources: rivers, the sea and surface water (5.5m previously).

3,500 properties

are in areas at risk of coastal erosion over the period to 2055 (2,000 previously).

With climate change

8 million properties

could be in areas at risk of flooding from at least one of the principal sources: rivers, the sea and surface water by mid century.

19,700 properties

could be in areas at risk of coastal erosion by the end of the century.

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Chapter 2

Introduction to our new datasets and where they can be accessed

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Which service for which audience?

GOV.UK **Flood risk information** GOV.UK

GOV.UK **Erosion risk information**

Check Your Long-Term Flood Risk

For residents and businesses to enable them to understand their risk, make decisions and take actions to prepare.

Flood Map for Planning

For planners, developers and those carrying out flood risk assessments. Help inform decisions about the location and design of development.

Check coastal erosion risk for an area in England, and Shoreline Management Plan Explorer

For planners, developers, practitioners and the public to make short- and long-term planning and investment decisions.

Data services platform: Provides open data access for professional users.

Chapter 3

Improvements to Flood Map for Planning

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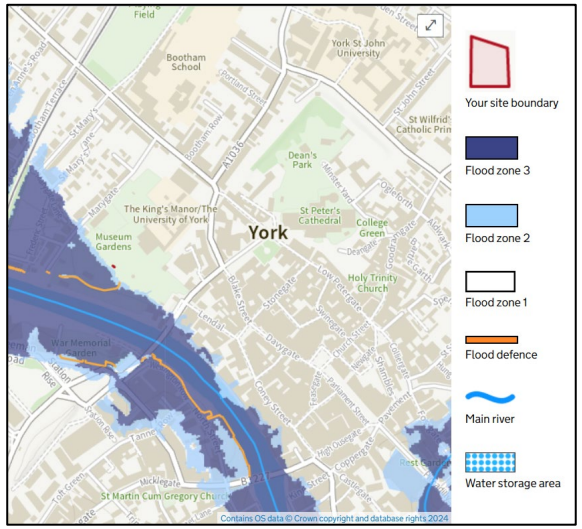
What we will publish on 25 March 2025



- Flood Zones 1, 2, 3
- Present day river/sea
- Ignores benefits of defences

- River/sea with defences
- Present day & climate change
- 1 in 30 river/sea
- 1 in 100 river
- 1 in 200 sea
- 1 in 1,000 river/sea

- River/sea undefended
- Present day and climate change
- 1 in 100 river
- 1 in 200 sea
- 1 in 1,000 river/sea

- Surface water
- Present day
- Annual probabilities:
  - 1 in 30
  - 1 in 100
  - 1 in 1,000

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What will the Flood Map for Planning look like?

Datasets

River and sea with defences

- (•) Hide
- ( ) Flood zones 2 and 3
- (•) River and sea with defences
- ( ) River and sea without defences
- ( ) Surface water

Time frame

Climate change

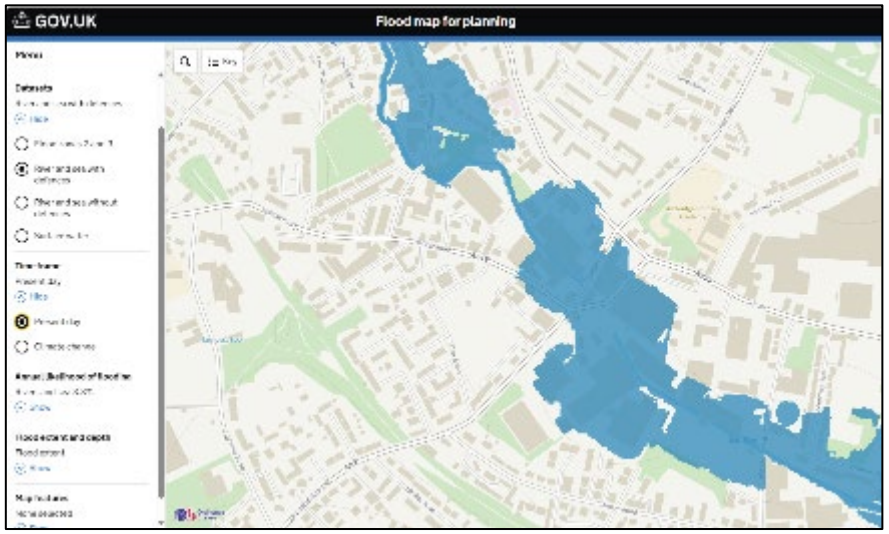
- (•) Hide
- ( ) Present day
- (•) Climate change

Annual likelihood of flooding

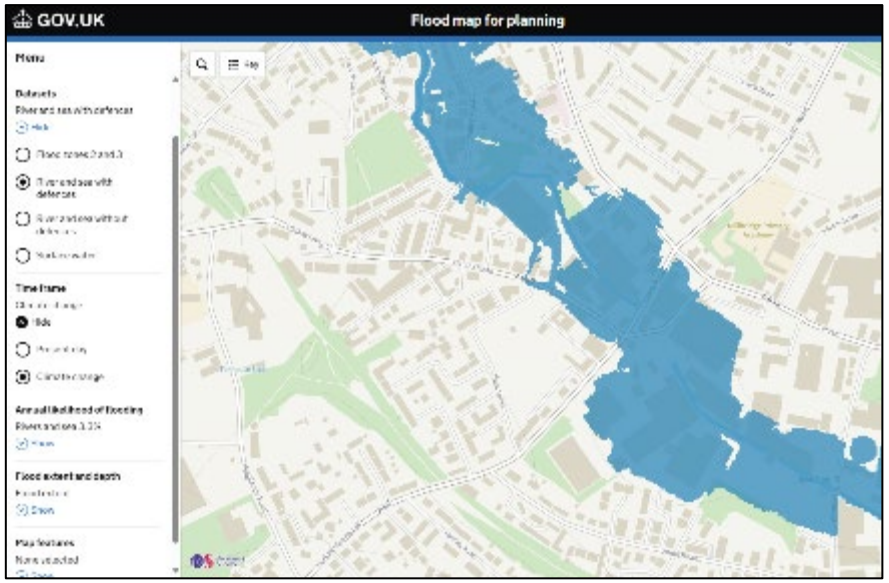
Rivers and sea 3.3%

- (•) Hide
- (•) Rivers and sea 3.3%
- ( ) Rivers 1% Sea 0.5%
- ( ) Rivers and sea 0.1% - 1%

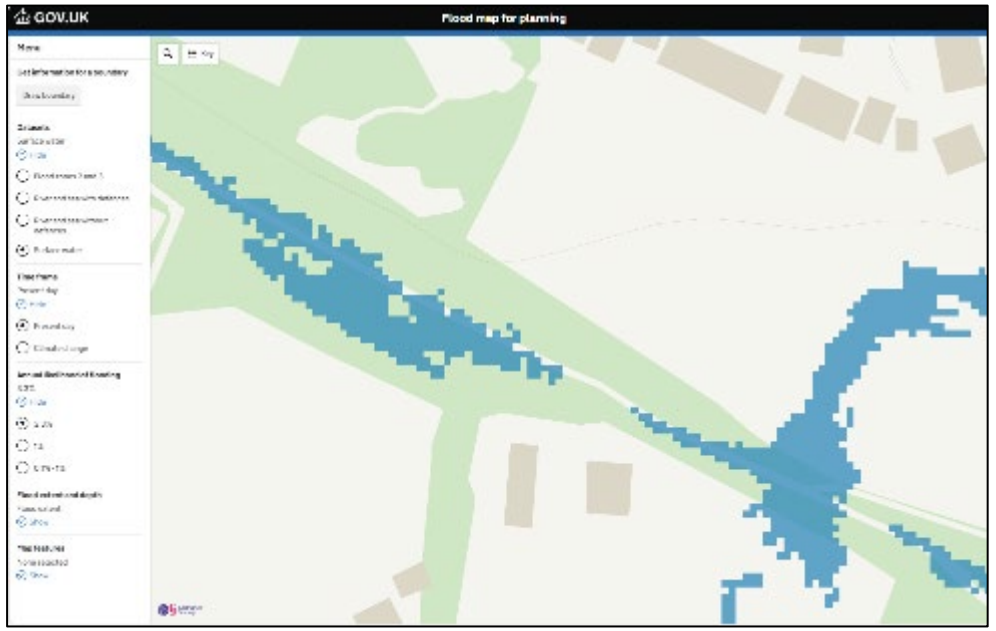
New map key



River/sea defended 1 in 30 present day



River/sea defended 1 in 30 climate change



Surface water 1 in 30 present day

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Flood Map for Planning: Future improvements

Later in 2025

- Improving data in priority locations
- Focus on areas where older data is retained or ‘data flags' are in place

To follow…

- Surface water depths
- Surface water climate change extents
- River/sea depths
- Establish cycle of quarterly updates
- Replacements for retained areas

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Preparing to use the new information

Use new Flood Zones to check if:

- EA will be consulted
- Development is incompatible
- Exception Test applies

Use Flood Zones plus other new data to check:

- Need for Flood risk assessment
- Need for Sequential test

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Chapter 4

The new coastal erosion risk data we have published and where it is hosted

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NCERM2 - Erosion Scenarios

Management Scenario

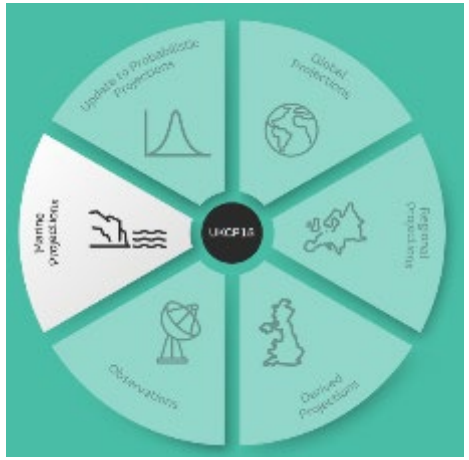
Shoreline Management Plan (SMPs)

2 Management Scenarios:

- With SMPs delivered
- No future intervention

Climate Scenario

UK Climate Projections 2018



3 Climates:

- Present Day Climate
- Climate change higher central (UKCP18 RCP8.5 70th)
- Climate change upper end (UKCP18 RCP8.5 95th)

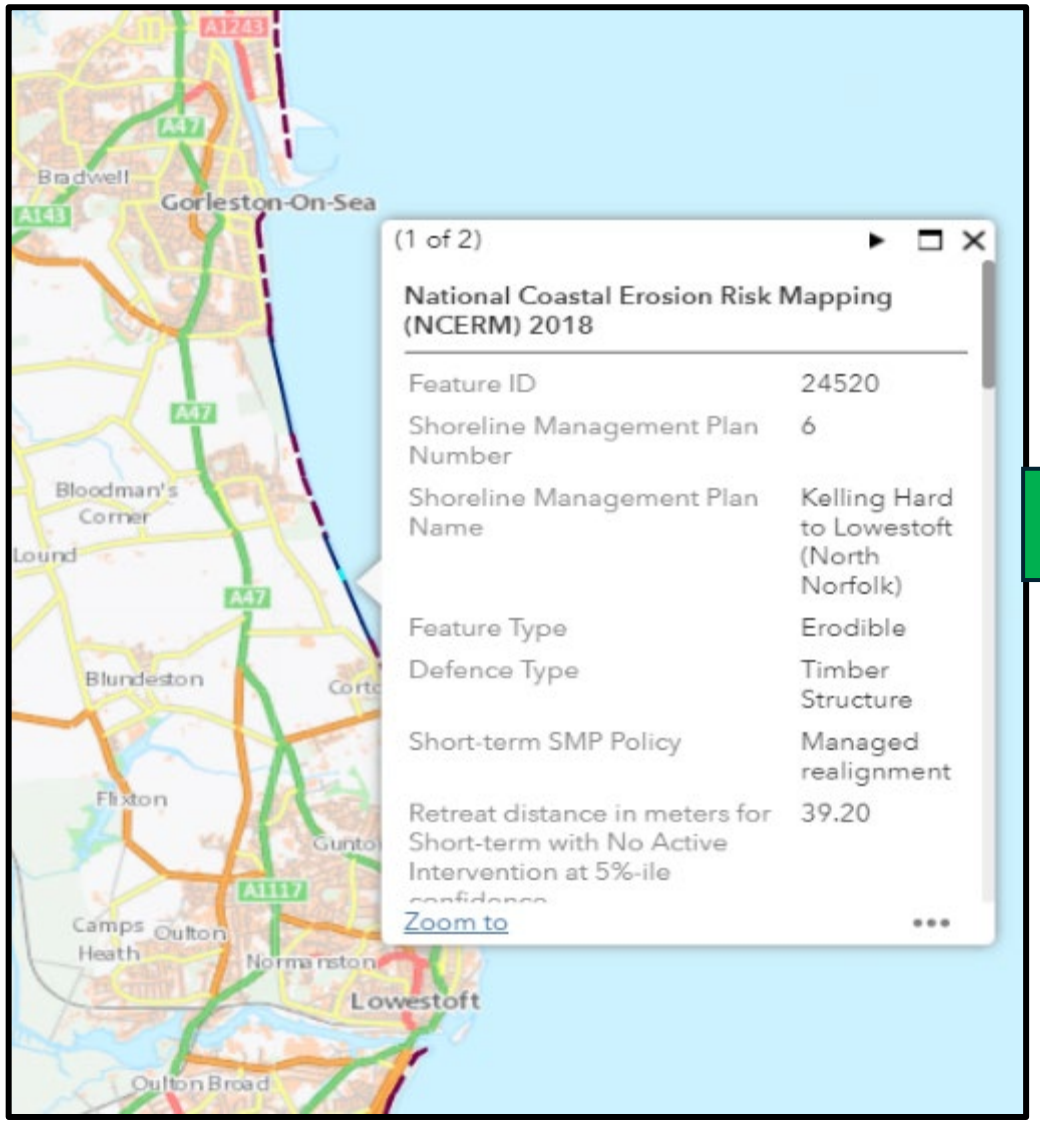
Output Years (Epoch)

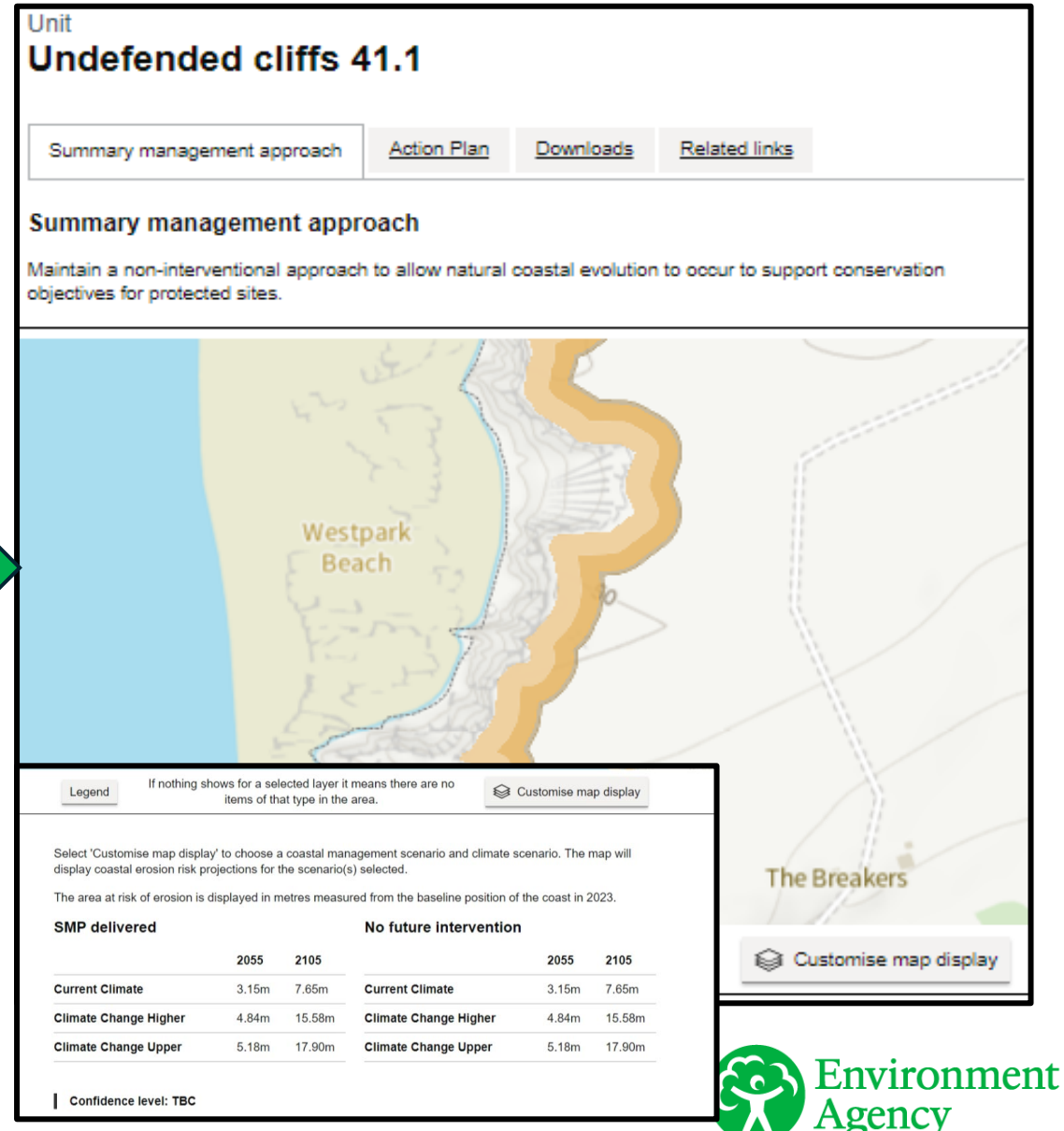
Shoreline Management Plan

2 Output Years:

- Medium term: Today to 2055
- Long Term: Today to 2105

From 2012 NCERM to 2025 NCERM





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Chapter 5

Key topics for planning

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Key topics for planning

- Consultation arrangements
- Strategic flood risk assessments / local plans
- Live applications/appeals
- Nationally Significant Infrastructure Projects (NSIPs)

Chapter 6

Resources

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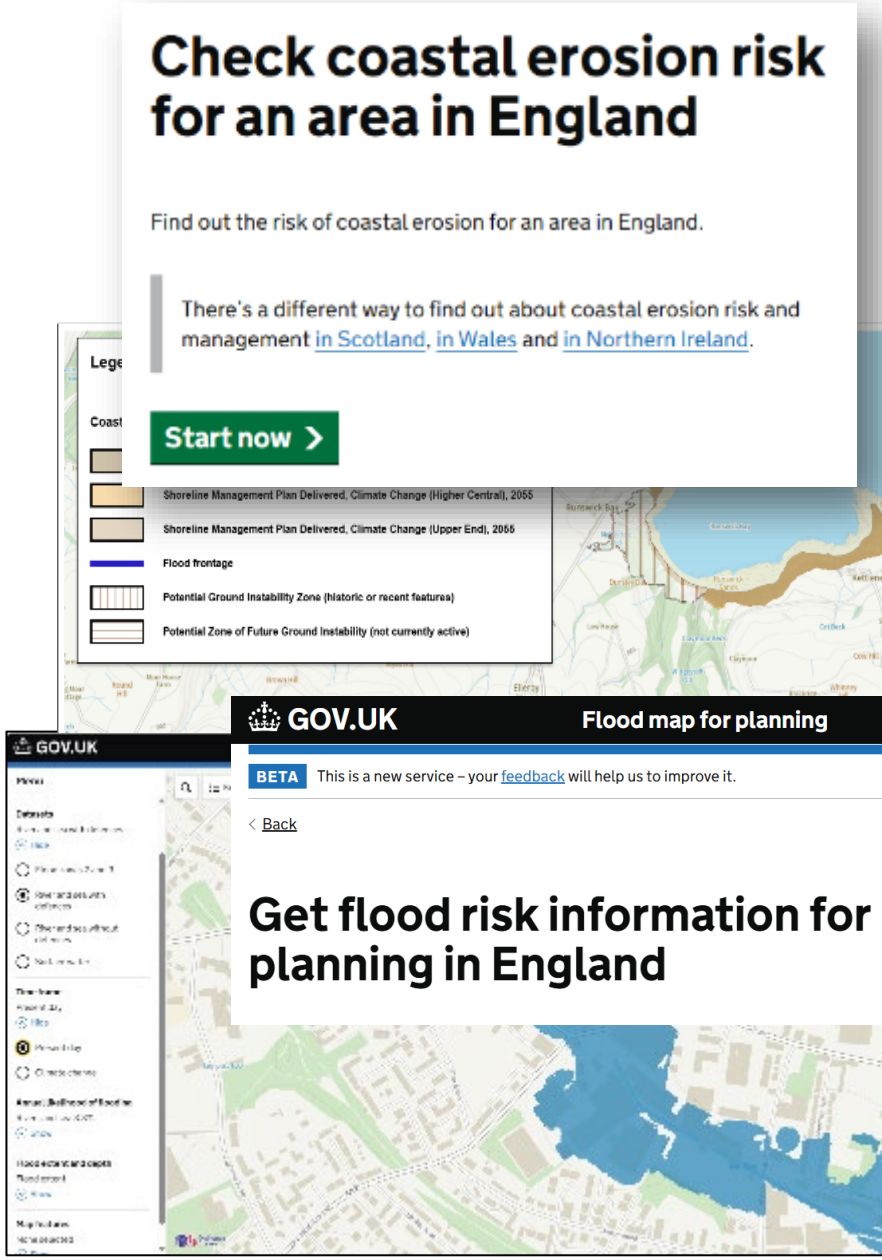
Where you can find further resources

- Flood Map for Planning
- ‘Check coastal erosion risk for an area in England’
- Shoreline Management Plan Explorer
- Data.gov.uk
- Defra Data Services Platform announcement
- Town and Country Planning Association resources
- New national flood and coastal erosion risk information guidance
- National assessment of flood and coastal erosion risk in England 2024 report
- Climate change allowances



If you have any questions, please email fcrm_risk_assessment@environment-agency.gov.uk

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Chapter 7 (Optional)

Additional technical detail for FRA consultants

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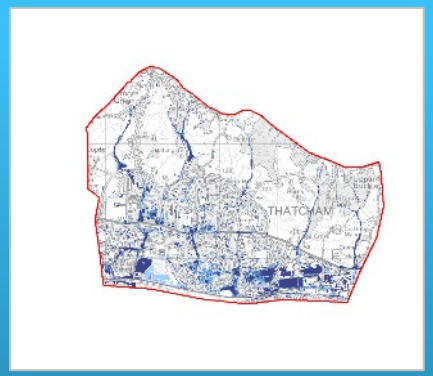
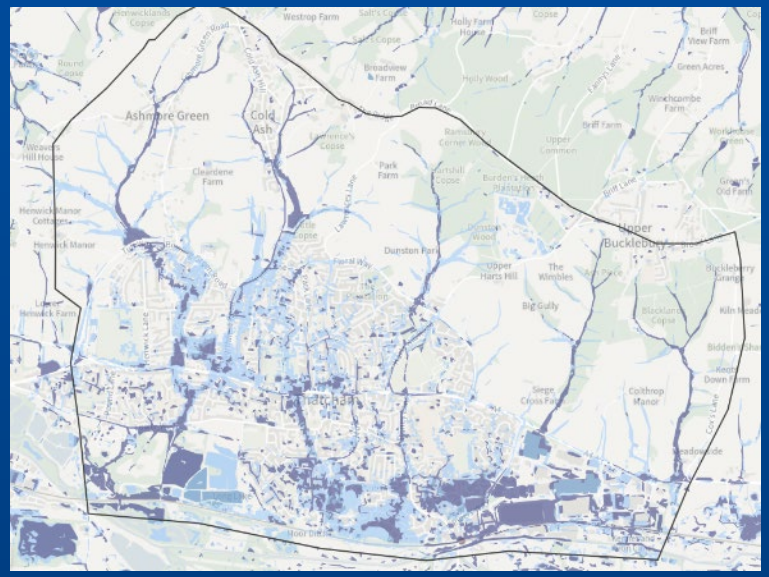
New national flood risk assessment (NaFRA2)

Local modelling outputs



New national modelling outputs

NaFRA2 System



NaFRA2 selects the best available modelling and also uses tools to create new outputs

Our published products (Risk of flooding from rivers and sea, Risk of flooding from surface water, Flood Zones)

Wider range of outputs

- Richer data (e.g. Climate Change)
- More flexible

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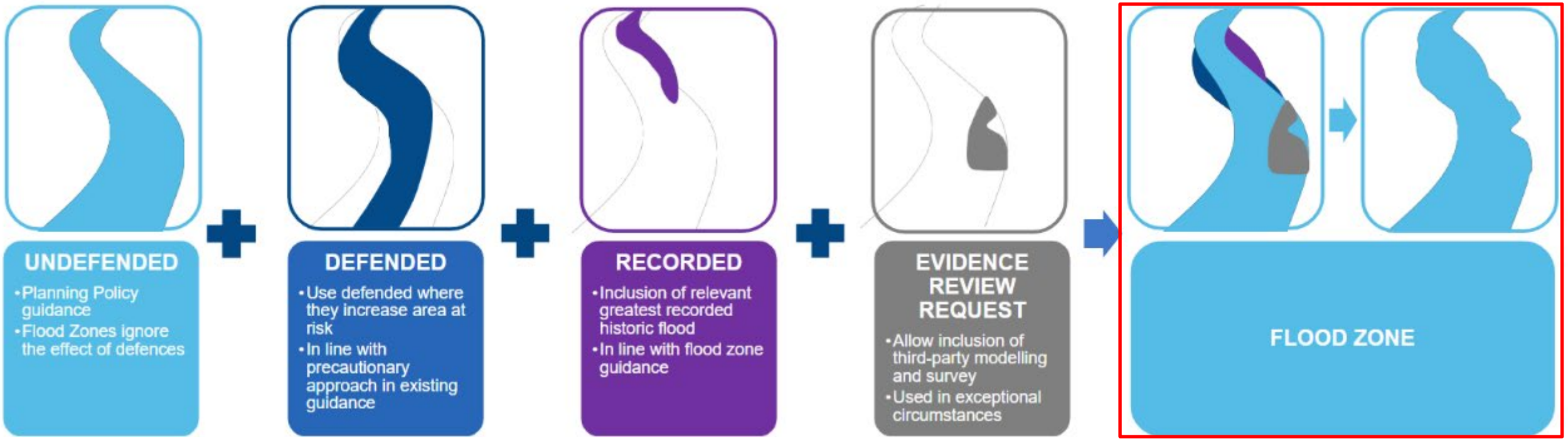
Changes to Flood Zones



- New National Modelling used alongside local detailed models
- A composite dataset
- Flood Zones not expected to change much at a national scale

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Flood risk data information (Product 4)

- From 25 March we will have the new Flood Zone maps in Product 4
- We will NOT have access to NaFRA2 height/depth tables initially
- Data migration will start in the coming weeks
- Depth info from superseded local models will still be provided
- Standard text will describe status
- Applicants and consultants can contact us for chargeable advice.

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Datasets that haven't changed

Several datasets remain fundamentally unchanged on Flood Map for Planning and Check Your Long Term Flood Risk, including:

- Main river lines
- Flood defences
- Water storage areas
- Reservoir risk areas

Some previously available datasets have been removed

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Functional Floodplain

- Flood Map for Planning will NOT map functional floodplain
- LPAs responsible for mapping Flood Zone 3b in Strategic Flood Risk Assessments (SFRAs)
- New NaFRA will help LPAs map 3b more comprehensively, more consistently AND to keep designations up-to-date
- If SFRA data absent or out-of-date, NaFRA2 1 in 30 defended scenario could help inform assessments of 3b

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Suitability of datasets for development planning

- Likelihood of defence failure unsuitable
- Depth info does not provide the design flood depth needed for planning

- Time horizon too short for most development types
- Climate change scenario insufficiently precautionary
- Depth info does not provide the design flood depth needed for planning

- Planning policy requires consideration of climate change

Check Long Term Flood Risk

- Risk of flooding from rivers and sea – extent and depth information for present day
- Risk of flooding from rivers and sea – extent and depth information with climate change
- Risk of flooding from surface water – depth information for present day
- Risk of flooding from surface water – extent information with climate change
- Risk of flooding from surface water – depth information with climate change
- Risk of flooding from surface water – extent information for present day *
- Reservoir flood risk – extents for dry day and wet day

Flood Map for Planning

- Flood Zones 2 and 3
- Rivers and sea flood risk with defences for present day and climate change
- Rivers and sea flood risk undefended for present day and climate change
- Risk of flooding from surface water extent information for present day *
- Water Storage Areas
- Flood defences

Check Coastal Erosion Risk for an Area in England / SMP Explorer

- Erosion risk areas to 2055 and 2105 for current climate
- Erosion risk areas to 2055 with climate change with and without SMP delivered
- Erosion risk areas to 2105 with climate change with and without SMP delivered

- Planning policy requires consideration of climate change

- Time horizon too short for most development types

- Flood Zones form the basis of Flood Risk Standing Advice for LPAs

- Sites at future risk can be treated as Flood Zone 2 when applying Flood Risk Standing Advice for LPAs

Key

- Unsuitable for use
- May be relevant to inform assessments but additional information usually needed
- Suitable for use

*These datasets are identical

Diagram is applicable from 25 March 2025 until surface water climate change and depth information is added to Flood Map for Planning

Diagram v1.0 February 2025

Climate change scenarios

- We've chosen CC allowances in line with existing gov.uk guidance Flood risk assessments: climate change allowances
- We've selected a scenario and time horizon likely to be suitable for most common development types
- The 'Central' allowance for the 2080s epoch (2070-2125) for risk of flooding from rivers.
- The 'Upper End' allowance for risk of flooding from the sea, accounting for cumulative sea level rise to 2125.
- For some developments, additional scenarios/time periods not shown, may still need to be assessed.

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Where you can find further technical resources

- All datasets shown on the Flood Map for Planning will be available through the Defra Data Services Platform
- The Defra Data Services Platform announcement contains further information on the datasets available
- Existing Flood Zone data feeds will be turned off on 25 March
- The older Flood Zones will be available for download until 25 April, marked as ‘retired’
- Check our guidance when modelling is required to support a Flood Risk Assessment.

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