

This video has been prepared to help developers and Flood Risk Assessment consultants:

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This video is split into several chapters for ease of access:

The Environment Agency's role in flood risk management

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

Improvements to Flood Map for Planning

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

Key topics for planning

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An additional chapter with more technical details for consultants preparing flood risk assessments



This chapter describes the Environment Agency's role in flood risk management and why we produce national flood and coastal erosion risk data.

It sets out our key publishing milestones and summarises some of the headline findings from the new data.



Our principal aim as an organization, set out in the Environment Act of 1995 which created us, is to protect and enhance the environment and support sustainable development.

We have a direct role in managing flood risk from main rivers, the sea and estuaries – building and maintaining defences and other flood risk management infrastructure, and warning and informing people about risk from these sources.

But as this diagram attempts to show, we also have a strategic overview role on <u>all</u> sources of flooding including, producing a national Flood and Coastal Erosion Risk Management Strategy, but crucially, in this context, providing national, publicly available data and information on flooding and coastal change, to inform decisions made by all those risk management authorities in the flood family.

A good understanding of flood and coastal erosion risk is the first step in managing those risks effectively – including through the decisions made on the location and design of new development.

The Environment Agency has been producing national flood risk datasets to support planning decisions makers for over 20 years. Our data has co-evolved with planning policy, starting with a basic approach to managing present-day river and sea risk, progressing to today's more sophisticated approach which considers multiple sources of flooding for both present-day and the long-term. Throughout this period much of our flood risk information has been continuously improved, with Flood Zones updated quarterly and new Lead Local Flood Authorities models added to our surface water maps annually. As a result, the planning system has now become quite accustomed to changes to our understanding of risk.



The Government has outlined growth as one of its core missions, including a target to deliver 1.5 million new sustainable homes across this Parliament. We also know that protecting communities from flood risk remains a priority.

Our new data should help the planning system to consider flood risk in a more certain and predictable way, instilling greater confidence in planners and developers to pursue the right kinds of development in the right places.

Our data should also help to alleviate the current burden on developers and Local Planning Authorities to undertake flood risk assessments, helping to speed and smooth both the local plan preparation process and the development management process, whilst providing more certain outcomes for all.



Our first major publishing milestone of this project was on 17th December 2024 when we published our National assessment of flood and coastal erosion risk in England 2024 report. This gave our explanation and picture of current and future flood and coastal erosion risk in England, using our new flood and coastal erosion risk in England, using our new flood and coastal erosion risk data.

Our next milestone, was on 28th January 2025 when we made the new NaFRA 'Risk of flooding from rivers and sea', 'Risk of flooding from surface water' and new 'national coastal erosion risk' data available on our key digital services.

Looking ahead, our next milestone, and the key one for you is on 25 March, when we will publish additional new flood risk data on the Flood Map for Planning service, including updated Flood Zones.



The headline figures from our national report showed that there are currently 6.3 million properties at risk of flooding from at least one of rivers, sea and surface water, with that figure set to rise to 8 million by mid-century.

3.5 thousand properties are now understood to be at risk of coastal erosion by 2055, but that figure could increase to nearly 20 thousand by the end of the century. This is with Shoreline management plans delivered. This 3.5 thousand figure could rise to 32,800 by 2055 if SMPs were **not** delivered – a 9-fold increase.

Planning plays a crucial role in ensuring we are building a nation resilient to the effects of climate change.



This chapter introduces our different digital services and the audiences they're aimed at.



Our new data is available across several digital platforms. For each platform we have selected those datasets we think best fit the platform's main users.

Our 'Check your Long-Term Flood risk' service is aimed at residents and businesses making short and medium-term decisions about preparing for a flood. Users can search by postcode and see the flood risk in their area of interest.

Our 'Flood Map for Planning' service (as you'll be familiar with) is aimed at planners and developers, and those carrying out flood risk assessments (or "FRAs") - helping to inform the long-term decisions about the location and design of development required by planning policy.

We show our coastal erosion information on Shoreline Management Plan Explorer, which you can also access from the 'Check coastal erosion risk for an area in England' website. These pages are aimed at planners, developers and coastal practitioners, but also members of the public. All the data we publish on all those services are available via the Defra Data Services Platform



This chapter focuses on the improvements we're making to the Flood Map for Planning and summarises how the new data should be used for development planning.

What we will publish on 25 March 2025 River/sea with Surface water Flood Zones 1, 2, 3 River/sea defences Present day undefended Present day Present day & Annual Present day and river/sea probabilities: climate change climate change Ignores benefits of • 1 in 30 1 in 30 river/sea 1 in 100 river defences • 1 in 100 1 in 100 river 1 in 200 sea • 1 in 1,000 1 in 200 sea 1 in 1,000 1 in 1,000 river/sea Environment river/sea Agency

On <mark>25</mark> March 2025.....

Updated Flood Zones - We'll be updating the Flood Zones to reflect both existing local models and the new and improved national model. The Flood Zones are defined by Government planning guidance and will continue to show present-day flood risk from rivers and sea, ignoring the benefits of existing flood defences.

Our analysis suggests the Flood Zones will not change very much at the national scale. Our new, improved modelling does mean that in some areas our understanding of risk *will* change. For some areas the Flood Zones will grow and for others they will shrink. Whilst the total area covered by Flood Zones 2 and 3 combined does not change significantly - in locations where Flood Zone changes correspond with prospective development, this change will need to be accounted for.

River and sea flood extents – We'll also add layers showing river and sea flood extents with existing flood defences in place, for both the present day and a climate change scenario. Among others, this will include a 1 in 30 defended scenario which should help LPAs identify functional floodplain (Flood Zone 3b), in strategic flood risk assessments – more detail on this to follow.

Undefended river and sea flood extents – Undefended river and sea flood extents will also be provided for both the present day and a climate change scenario.

Climate change - To map the possible effects of climate change on future flood risk from rivers and sea, we've followed our own <u>Climate Change</u> <u>Allowances</u> guidance and selected a scenario and time-horizon which will be sufficient for most residential and commercial developments.

Surface water flood risk – And finally, we'll be displaying surface water flood risk extents on the Flood Map for Planning for the first time, further raising the visibility of this important source of flooding to planners and developers. This will just be a 'present day' scenario to start with, <u>but we expect to add a</u> <u>climate change scenario and depth information for surface water flood risk in due course.</u>

As with existing arrangements, the onus will continue to be on the users of the data, such as those undertaking FRAs, to satisfy themselves that the data is fit for their intended use and is used appropriately.



The Flood Map for Planning will look and feel quite different when the new data is published. Users will be able to explore an interactive map, toggling layers on and off for the different scenarios of interest. The combination of our new, improved data with this more user-friendly and more accessible interface, will represent a significant improvement for users, arming them with detailed information to inform decisions about the location and design of development.

As before, users will still be able to draw round a site of interest and request more detailed flood risk data through the service.

We've produced a video to show you what the updated Flood Map for Planning service will look like from 25 March. Details on how to access this are provided later in the video.



25 March 2025 represents just the start of the NaFRA2 information we'll be making available that will help inform decisions on new development.

We expect the first updates start emerging later this year when we'll incorporate more local models – including those where FZ updates were paused during NaFRA2 preparations.

In due course we expect to add more information such as a climate change scenario and depth information for surface water flood risk. And depth information for river and sea flooding.

We expect to provide quarterly updates of the flood risk information on Flood Map for Planning – but during the first year after publication, updates may be more or less frequent as we establish our new processes.

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The updated Flood Zones will need to be used to check if the Environment Agency should be consulted. The Flood Zones should also be used to check if a proposed development type is incompatible with the Flood Zone and whether the Exception Test is needed.

In addition to the Flood Zones, the new climate change scenarios for river and sea flooding, AND the surface water information, will need to be used to inform decisions about:

- Whether development proposals need a Flood Risk Assessment;
- Whether the sequential test is needed; AND
- How they're applied

Please note that we are not publishing new data on residual flood risks such as the consequences of flooding in the event of flood defence breach.

Residual flood risk will still need to be assessed by those undertaking flood risk assessment, as policy requires residual risks to be safely managed.

Please be aware that LPAs are likely to be reviewing their local approach to applying the sequential test to make use of the new data. Do look out for changes to local guidance on the sequential test.



This chapter introduces our new coastal erosion risk data.



We've now released our new National Coastal Erosion Risk Map (NCERM). Our new information provides an up-to-date picture of coastal erosion risk which includes the possible effects of climate change and provides a more comprehensive assessment of property types. By hosting the new NCERM on SMP explorer, it is much more accessible than before.

Our previous National Coastal Erosion Risk Map was produced back in 2012 and only received minor updates in 2015 and 2017.

The new NCERM has 3 variables which, when combined, form NCERMs erosion risk scenarios:

Firstly, the management scenario as taken from the shoreline management plans – users can either assume the SMP will be implemented, or assume there will be no future intervention.

Secondly, The climate change scenario – users can select a present day climate where current rates of erosion are projected into the future, or two climate change scenarios of varying levels of precaution.

Finally, the time horizon, the user can select either the medium term to 2055 and/or the longer term to 2105. Both of these time periods are taken directly from the Shoreline Management Plans.



Here we can see a visualisation of what the project has achieved by going from the image on the left to the one on the right.

The new NCERM will better inform developer decisions about the location and design of development which could be affected by coastal erosion or which could exacerbate it.

Areas potentially at risk of coastal erosion are now much easier to identify. And because this information is presented alongside Shoreline Management Plan information about the intended approach to manage coastal erosion risk in the area, you will more easily be able to understand any reliance on these future interventions.

In most cases developers will need to consider the potential effects of climate change on coastal erosion for the long-term 2105 scenario, but further assessment may be required for developments with lifetimes significantly beyond this.

You should also check the Local Plan for any Coastal Change Management

Area (or CCMAs) designations and any other relevant local policies. These may place restrictions on the type and permanence of development that may be considered acceptable in erosion risk areas.

The new NCERM is likely to be key evidence for local planning authorities to designate new and amend existing CCMAs, but does not itself represent a CCMA designation.

Coastal Change Vulnerability Assessments are likely to be required with planning applications for development proposed in CCMAs. They may also be required for development outside CCMAs but where NCERM indicates there is a coastal erosion risk.

We are looking into the potential of producing additional supporting information for those considering development in areas at risk of coastal erosion, including advice on how to access and use available tools.



In this chapter we're going to run through some of the key topics likely to be relevant to our new data and its implications for development planning.

Key topics for planning

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

Statutory consultation arrangements – Although the Environment Agency is releasing new data, including climate change scenarios, consultation arrangements are not changing. The EA continues to be a statutory consultee on Flood Zone 2 and 3. Flood Zones do not account for climate change and LPAs will continue to apply the standing advice process on gov.uk to determine if the EA should be consulted. We're also making clear that we're not asking LPAs to consult with LLFAs beyond existing statutory consultation arrangements for major developments.

Strategic Flood Risk Assessments – We know that many LPAs are considering the implications of recent NPPF revisions, and may be planning local plan reviews and updates to SFRAs as a consequence. Our hope is that our new data arrives at a helpful time to support this work. We're confident our new data will improve both the quality AND the coverage of SFRAs, whilst making them cheaper and easier for LPAs to prepare and maintain.

Live applications – Planning decisions will need to account for the new data as soon as it's published. Local planning authorities will need to use the new data to re-screen all new and existing live applications to check whether flood

risk has been properly accounted for, including checking whether the EA needs to be consulted. If the new data results in a significant change to our understanding of flood risk, local planning authorities may need to ask applicants to provide new, or to update existing flood risk information. We're providing support to local planning authorities to help them deal with live cases.

Live appeals - Our new data also has the potential to affect a small number of **live appeals**. We've briefed the Planning Inspectorate that new data is coming. They will need to consider the implications of the new data for relevant cases and decide whether further assessment or changes to proposed developments are needed.

NSIPs - Acknowledging the potential impact of the new data on live Nationally Significant Infrastructure Projects, we're writing to the applicants of all live cases to highlight the new data and to provide advice on how it should be accounted for.



This chapter summarises some of the key resources available to help you understand and use our new data.



We've added links to all the places you can view our new flood risk and coastal erosion risk data and information.

We're producing briefing materials for developers and FRA consultants to help them understand the new data and how it should be used.

We'll be sharing these materials in several ways:

- We'll be providing them to local authorities so they can use them in local developer forums and to help answer any questions they may receive
- We'll be sharing them on a dedicated section on the Town and Country Planning Association's website [See slide]
- We'll also be distributing them to local contacts via our area teams

Thank you for taking time to learn about our new flood and coastal erosion risk data.

The next and final chapter, chapter 7, is an optional chapter containing more technical information aimed at flood risk assessment consultants.



This final optional chapter provides some more detailed content, likely to be suitable for those producing flood risk assessments.



To produce our new flood risk data we've used a powerful new system which combines our growing stock of high-quality local flood risk models with our best ever, national flood risk modelling.

Our new approach allows us to take account of the possible effects of climate change at a national scale for the first time.

It also delivers several significant improvements over our previous approach, including:

- A significantly higher modelling resolution offering greater precision and accuracy
- A much more consistent approach where multiple sources of information are available; and
- Much more flexibility, making it easier to update to reflect new data as it emerges and to fill data gaps where they exist



Our Flood Zones will be updated using a combination of the New National Model alongside local detailed models. The decision of which model to use is based on the quality of the data.

We will continue to follow government guidance which defines the Flood Zones and establishes the precautionary spirit with which they're produced. Our approach to defining the Flood Zones aims to ensure no significantly incorrect planning decisions are made as a consequence of our data.

The Flood Zones are a composite dataset, which combines defended and undefended model runs, with recorded flood outlines, and in exceptional circumstances data produced by developers or LPAs accepted by the EA as representing a better understanding of risk.

In some locations we have retained our existing Flood Zones while we make important improvements to the new data before it is finalised. Other new datasets like climate change and modelled extents will still be available here.

To aid preparations for NaFRA2, we paused Flood Zone updates for a period.

Where new Flood Zone data has been produced during this period, arrangements are already in place to ensure LPAs use the best available information –including that the Flood Map for Planning service highlights where this is the case. These outstanding updates will be incorporated into the Flood Zones published in March, or in the first significant update expected later this year.

We're also improving the way we make our flood risk data available to customers through the Flood Map for Planning and the flood products customers can access through that service.

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.

From 25 March we will be able to provide the new Flood Zone maps in Product 4s. However, the new height/depth information from NaFRA2 will not be available initially.

It will take us some time to migrate the data and amend the system to make this possible, and it is currently difficult to provide a timescale for this work.

In locations where old Flood Zones were created from local detailed models but will be replaced by new Flood Zones, we will continue to include depth/level information from local models in the Product 4 report as it continues to represent our best available information on flood depth. This is a temporary measure until the new depth data can be made available instead.

The Product 4 report will include standard text describing the status of these superseded local models and urging caution in their use.

Where there is doubt about whether the data we hold is suitable for the use in flood risk assessments, we encourage applicants to seek pre-planning chargeable advice so we can discuss this in further detail.

Environment Agency

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

When considering sites for potential development and producing Flood Risk Assessments, some of the available flood risk datasets remain unchanged.

Main rivers: Main rivers remain those designated and shown on the Flood Map for Planning. Applications for development in proximity to main rivers will still require consultation with the Environment Agency. Watercourses not designated as main rivers are classified as ordinary watercourses. It is important to note that when considering the risk of flooding from rivers and the sea, this includes risk from both main rivers and ordinary watercourses.

Flood defences: These include raised walls and embankments, and pumping stations. The information we show on the Flood Map for Planning includes both Environment Agency and 3rd party flood defences. Where development is proposed in proximity to main river or sea flood defences the Environment Agency will also take a position on whether a Flood Risk Activity Permit is likely to be required. Although these permits are regulated separately to planning, if a development is unlikely to obtain a permit where one is required, we may request changes to the development at planning stage. Other permits and consents may be required if development may affect ordinary

Environment Agency watercourses, for example from the Lead Local Flood Authority or Internal Drainage Board.

Water storage areas: These include locations where floodwater is designed or required to be stored in times of flood to alleviate flooding. In most cases Water Storage Areas will fall within Flood Zones 2 or 3. In our SFRA Guidance we recommend that Water Storage Areas should normally form part of local planning authority functional floodplain designations in strategic flood risk assessments. This means that most development is unlikely to be suitable in water storage areas. The location and extent of Water Storage Areas is unchanged by NaFRA2. It is important to note that Water Storage Area capacity and function can be exceeded, so in some cases the flood extents may extend beyond their designated extents.

Reservoir flood extents are not shown on the Flood Map for Planning but are included on Check Your Long Term Flood Risk. The Reservoir Flood Maps and details of how these were produced can also be found on the DEFRA Data Services Platform. For new development, it continues to be important to consider the impact of reservoir flood risk on proposed development and the implications of proposed development on reservoirs. The PPG also offers more guidance on how to consider this form of flood risk.

Some previously available datasets have also been removed as they are no longer considered the best available information, including:

- Areas Benefitting from Defences
- Reduction in Risk of Flooding from Rivers and Sea Due to Defences (this dataset has been temporarily discontinued but we expect to produce a new version in due course)

Finally, the National Coastal Erosion Risk Map was not previously available on the Flood Map for Planning service. It can be accessed through Shoreline Management Plan Explorer.



The Flood Map for Planning will not map Flood Zone 3b – functional floodplain.

Responsibility for doing so remains with Local Planning Authorities in their Strategic Flood Risk Assessments.

The new data will however, help LPAs map functional floodplain, as it will allow them to do so more comprehensively – rather than just in locations where we have detailed models – and will help them to keep designations more up-todate.

If a SFRA is out-of-date or it doesn't contain any data mapping functional floodplain in a location of interest, the 1 in 30 defended scenario and water storage areas could help inform flood risk assessments to identify the likely presence or absence of functional floodplain – or a level or risk commensurate with it. In such cases, the onus will be on the applicant to undertake their own assessment of functional floodplain, with reference to our data.



Feedback has told us that users would like more clarity about which of our new data sets are suitable for use in planning.

In due course we want to make the Flood Map for Planning service more of a one-stop-shop with all relevant information in a single location.

Until this time, relevant data is available across several digital services.

We have produced a diagram, reproduced on the slide, which aims to provide greater clarity. It uses a traffic light system to set out which datasets are:

- always suitable
- never suitable
- Or may be suitable with additional information and assessment usually needed

The diagram has been made available on the TCPA's website, you will find the link on the resources chapter.

Climate change scenarios

- We've chosen CC allowances in line with existing gov.uk guidance <u>Flood risk assessments: climate</u> <u>change allowances</u>
- 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.

Environment Agency

Both the new NaFRA and National Coastal Erosion Risk Mapping use climate change allowances in-line with existing gov.uk guidance. The Flood risk assessments: climate change allowances are based on the current UKCP18 climate science. We've selected a climate change scenario and time horizon likely to be suitable for most common residential and commercial development types. However, some developments may need to carry out further assessment of the impact of climate change.

For example:

- Nationally Significant Infrastructure Projects or NSIPs, may need to consider a credible maximum scenario
- Developments with significantly longer or shorter lifetimes than the time horizons we've used



All datasets shown on the Flood Map for Planning will be available from the Defra Data Services Platform, allowing users to use data feeds or to download the data. We recommend that the data feeds are used which allow for more efficient updates when future updates take place. Flood Zones 2 and 3 will no longer overlap, with clear attribution between the Flood Zones. This is different to how the data is currently displayed, where Flood Zone 2 includes areas that are in Flood Zone 3.

An existing Data Services Platform Announcement explains the datasets that will be available on the Flood Map for Planning from March 2025. This will be updated ahead of launch to include a summary of 'How the Flood Zones are produced' by the Environment Agency.

The existing Flood Zone data feeds will be turned off on 25 March. The older Flood Zones will continue to be available for 1 month, but will be marked as retired. We recommend that those who may need to refer to the old Flood Zones download a copy of these before they are removed.

It is important to remember that it is your responsibility to check that the data

available from the Environment Agency is suitable for your intended purpose. Additional technical guidance is available for those using flood models or who may be considering producing new flood models to support planning decisions. Much of the guidance is very technical and will require expert advice from consultants.