



HM Government

Flood and coastal erosion risk management Policy Statement

July 2020

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Foreword from the Secretary of State



As I saw in my first days as Secretary of State in February 2020 during visits to Ironbridge and other affected areas, flooding and coastal erosion can have devastating impacts and cause significant harm and disruption. That is why we will continue to invest and take action to reduce the likelihood and impacts of flooding and coastal erosion to our communities.

This policy statement sets out our policies for the future supported by a range of actions which will drive down risk from every angle. Our record investment in flood defences will reduce flood risk by 11% and better protect 336,000 properties by 2027. We will double the number of government funded projects which include nature based solutions to reduce flood risk – and provide wider benefits for our environment. We will ensure that all homes currently at high risk of flooding are better protected or better prepared for the future.

To bring together action locally, we will transform local flood and coastal erosion risk planning so that every area of England will have a more comprehensive local plan that drives long-term action and investment. Our £200m fund will encourage and support innovative action in 25 local areas to improve resilience to flooding and coastal erosion. We will support our coastal communities by investing in coastal defences and supporting them to implement long-term plans to better manage the impacts of erosion and rising sea levels.

Our long-term approach will ensure that, together, we make smarter decisions about the actions and investments we take which account for future risks in a changing climate. We will develop indicators to monitor the impact of our actions over time to inform these decisions – locally and nationally.

To succeed, we will need to work together – including government and individuals, national and local public bodies, the third and private sectors, local communities and those responsible for key infrastructure. This Statement provides a comprehensive package of actions to encourage and enable greater resilience to flood and erosion risks across the country. Taken together with the Environment Agency's updated National Flood and Coastal Erosion Risk Management Strategy, it will ensure that our country is more resilient in the long term – so that every place can thrive in a changing climate.

George Eustice

Rt Hon George Eustice MP

Secretary of State for Environment, Food and Rural Affairs

Foreword from the Minister for the Environment



The winter of 2019/20 brought significant rainfall with some parts of the country experiencing a month's worth of rain in just 24 hours. Storms Ciara and Dennis brought damage and disruption, some of which I saw first-hand as I visited flood affected areas. I also saw the commitment, hard work and generosity of spirit demonstrated by first responders and local communities who rallied to support those affected.

We have made strong progress in recent times to tackle flooding. We have a world-class forecasting, warning and response capability. We are on track to better protect 300,000 homes by 2021 through our current £2.6 billion investment in nationwide defences and we have pioneered work to support natural flood management and more resilient buildings.

However, the damage and disruption caused by the flooding of the last winter is a stark reminder of the challenges we face. As climate change brings more extreme weather – we must redouble our efforts to build a more resilient nation. This policy statement sets out our plan to do just that – the most significant ramping up of flood policies for a decade – so that we build a country that is better protected and better prepared for the future and taking a more holistic approach to achieve this.

We will increase the pace of progress to tackle flood and erosion risks - with over 40 actions to achieve this. We are announcing £170 million to accelerate the building of 22 flood schemes across the country – on top of our record £5.2 billion investment to build 2,000 new flood defences over the next 6 years.

We will also unlock investment from water companies - who have been permitted to invest up to £469 million to develop strategic water supply management schemes which can also reduce flood risk – and others to bolster the resilience of our homes and buildings. We will boost action to make our buildings more resilient to floods – for example by making changes to the fabric of our buildings through use of more flood resilient materials or raised electrical points.

We will manage our river catchments in a holistic way from source to sea. Our £640 million Nature for Climate Fund and our new Environmental Land Management scheme will help to harness the power of nature in the fight against flooding – from tree planting to the creation of habitats, slowing water flow and restoring peatlands to hold water. We will ensure that homes, businesses and local communities are better prepared – ensuring they have the information and advice they need.

By taking this action we will support our economic recovery, the wellbeing of our communities and the environment we cherish. This statement demonstrates the government's commitment to continue to act now – and for the long-term – to create a thriving and resilient nation which is better protected and better prepared for the future.

A handwritten signature in blue ink, appearing to read 'Rebecca Pow', is centered at the top of the page. The signature is fluid and cursive, with the first name 'Rebecca' written in a larger, more prominent script than the last name 'Pow'.

Rebecca Pow, MP

Minister for the Environment

Executive Summary

This policy statement sets out the government's long-term ambition to create a nation more resilient to future flood and coastal erosion risk. This means we will reduce the risk of harm to people, the environment and the economy.

We will ensure our country is better protected to reduce the likelihood of flooding and coastal erosion. Boosting our resilience will mean that more properties will be protected and communities will be better prepared to reduce the impacts when flooding does happen.

To meet the scale of the challenge ahead we need everyone to play their part – from government to individuals, national and local public bodies, the third and private sectors, local communities and those responsible for key infrastructure. Together we can put in place actions that will build a more resilient future and help to improve health and wellbeing, create economic growth, and enhance our environment.

This Policy Statement forms part of the government's wider commitment to tackle climate change. It has been informed by the Environment Agency's consultation exercise on the updated [National Flood and Coastal Erosion Risk Management Strategy](#), the results of the government's [Call for Evidence](#) in 2019 and advice from the National Infrastructure Commission and the Committee on Climate Change.

Alongside the Policy Statement, the Environment Agency will publish its National Flood and Coastal Erosion Risk Management Strategy for England. This will provide a framework to guide the activities of those involved in flood and coastal erosion risk management. Taken together, this Policy Statement and the National Strategy will ensure that our country is more resilient to flooding and coastal erosion in the long term.

This Policy Statement sets out five policy areas which will drive this ambition. None are mutually exclusive – and all must work together to create a more resilient future.

i. Upgrading and expanding our national flood defences and infrastructure

We will continue to build the new flood defences that the nation needs. This means that we will invest in more permanent, demountable and temporary defences – building on the success of our £2.6 billion investment to better protect 300,000 properties since 2015.

Over the next six years, government will invest a record £5.2 billion in the flood and coastal defence programme in England. We will better protect a further 336,000 properties and [reduce national flood risk](#) by up to 11% by 2027. We will embrace the latest science, technology and innovation to achieve this. We will also ensure that new and existing defences are well maintained so that they continue to be effective in a changing climate.

ii. Managing the flow of water more effectively

We will deliver an integrated approach to managing water. This will not only help to better protect communities from flooding but will provide wider benefits for water resource management and the environment.

We will increase the number of water management schemes within and across catchments to reduce flood risk and help manage drought risk. This will include looking at further opportunities for any nationally strategic infrastructure.

We will promote actions which prevent and better manage the impacts of surface water flood risk including by increasing the provision of sustainable drainage systems.

iii. Harnessing the power of nature to reduce flood and coastal erosion risk and achieve multiple benefits

The power of nature will be part of our solution to tackling flood and coastal erosion risks. We will double the number of government funded projects which include nature-based solutions to reduce flood and coastal erosion risk.

Nature-based solutions provide wider environmental and social benefits including nature recovery – to protect and restore habitats, species and landscapes – and improved water availability. They can also enhance water quality – helping to deliver our 25 Year Environment Plan commitments for clean and plentiful water.

We will continue to strengthen links between natural flood risk management and these benefits and we will explore how we can do more to deliver multiple benefits from a range of interventions working together.

iv. Better preparing our communities

We will ensure that all homes currently at high risk of flooding are better protected or better prepared.

We will maintain and enhance our planning policies that direct new development away from areas at risk. New properties and infrastructure need to be resilient to flooding and coastal erosion to deliver high quality and affordable homes and thriving communities that the country needs in a changing climate.

We will ensure our communities and businesses have the information they need to take ownership of their resilience. We will provide support to communities to increase awareness and understanding of risk, and share advice on steps which can help to better prepare. Key sectors – such as the insurance, development and property industries – will be encouraged to make their products and services more resilient through innovation and greater use of new technology.

Our policies will help to ensure that buildings, important infrastructure sites and key public services are better prepared to manage flood risk. We will work together to support communities, including when flooding happens and in recovery afterwards.

v. Enabling more resilient places through a catchment-based approach

We will support every place to thrive in a changing climate by adopting and encouraging a catchment-based approach. This means considering the full range of actions that could be taken in an area, upstream and downstream, by a variety of bodies to improve resilience.

To achieve this, we will transform the current approach to local flood and coastal erosion risk planning so that every area of England will have a more strategic and comprehensive plan that drives long-term local action and investment. Local flood and coastal erosion plans will link with wider plans for an area such as water resource plans and local nature recovery strategies to seize opportunities to secure multiple benefits.

In areas facing significant coastal erosion and impacts from sea levels rising, we will provide support to local areas to help them to implement long-term plans to manage risk.

The growing challenges and opportunities for our country

Flooding and coastal erosion can cause significant damage and disruption to infrastructure, properties, health, wellbeing, land and natural habitats. Risks from flooding and coastal change are recognised in the government's UK Climate Change Risk Assessment.

As climate change leads to sea level rise and more extreme rainfall, the number of people at risk from flooding and coastal erosion continues to grow. The UK Climate Projections 2018 show an increased chance of milder, wetter winters and hotter, drier summers, together with an increase in the frequency and intensity of extremes, such as heavy rainfall.

Since 1998, we have seen six of the ten wettest years on record. 2013/14 was the wettest winter for 250 years, with over 13,000 properties flooded. More recently, the winter of 2019/20 saw over 4,000 properties flooded in England and the government acted quickly to provide a major package of support to help those affected. Our determination to better protect homes meant that investment in flood defences helped to protect more than 129,000 properties during winter 2019/20. This compares to 2007, when the nation suffered rainfall of a similar scale and in similar places – yet some 55,000 properties were flooded.

Opportunities for economic prosperity and a clean, resilient economic recovery

Taking action to boost resilience will minimise impacts for people, homes, businesses and services. It will result in lower costs as a result of future flooding – providing savings to households, businesses and the exchequer. It will support local economies and provide businesses and investors with the confidence to invest in a place – in the knowledge that it has a long-term plan to manage the risks of flooding and coastal erosion. This will help to unlock land for development and infrastructure – helping to deliver the clean growth and new homes which are needed to unleash the country's potential.

Government's record £5.2 billion investment in flood and coastal erosion defences from 2021 will lever in wider financial contributions. It will avoid £32 billion in economic damages by 2027 – providing economic benefits to the nation as a whole and supporting job creation.

As we build the new homes we need for the future, development provides opportunities to secure additional flood risk benefits for existing areas and the wider community. For example, by altering drainage routes or adding new transport infrastructure which is less likely to flood.

Opportunities to protect and enhance our environment

Increasing our resilience will also provide benefits for our natural environment, wildlife, ecosystems, and historic environment. Our commitment to embed net gain through

development, as set out in the [25 Year Environment Plan](#), will mean that flood risk management schemes increasingly deliver overall improvements for the environment.

Natural flood management schemes may create new salt marshes and wetlands which provide wildlife-rich habitat for species. These areas can enhance the attractiveness of a place for local residents while enhancing tourist appeal. In some places, planting trees can help slow the flow of water whilst improving air quality and contributing to our ambitions for net zero carbon emissions. Flood management schemes can also help to achieve our objectives for the management of waterways and water supply.

Our Goals

Our ambitious approach to building a more resilient nation

The 25 Year Environment Plan sets out the government's commitment to ensure that all policies, programmes and investment decisions take into account the possible extent of climate change this century. It also sets out the government's commitment to "*reduce the risk of harm to people, the environment and the economy from natural hazards including flooding and coastal erosion*".

This policy statement builds on the approach taken in the 25 Year Plan and in the [National Adaptation Programme](#) and sets out national goals specifically for flooding and coastal erosion.

Our goals

- **To create a nation more resilient** to future flood and coastal erosion risk. In doing so, **reduce the risk of harm to people, the environment and the economy.**
 - We will be better protected **to reduce the likelihood of flooding and coastal erosion.**
 - We will be better prepared to **reduce the impacts when flooding does happen**

Taken together this means that our country will be significantly more **resilient to flooding and coastal erosion** and will ensure that every place can thrive in a changing climate. This statement outlines the actions that will achieve these goals.

This includes actions which **better protect** our country for example building defences and working with the natural landscape to hold back flood water and reduce coastal erosion, avoiding inappropriate development in areas of risk and transferring and storing water away from flood risk areas. It also includes actions which can **better prepare** our country for example by issuing flood warnings, designing and adapting properties and infrastructure so there is less damage and disruption, and creating the right conditions to enable affordable insurance to help with recovery.

Having considered the National Infrastructure Commission's work on resilience, this policy statement sets out an alternative approach, rather than resilience standards, but focused on a similar vision. It will drive progress and maximise the effectiveness of investment by enhancing cost-benefit appraisal techniques, developing new indicators to monitor trends over time, reviewing national reporting of progress and strengthening local flood and coastal erosion plans.

Further detail of our approach is set out in the 'Driving Progress' chapter of this document. The government will provide a formal response to the National Infrastructure Commission's recommendations in due course.

Our policies

We need to go further and faster to meet the scale of the challenge ahead, and we need everyone to play their part. The government's policies will help to strengthen and accelerate action by all parties to build a more resilient nation. This chapter sets out five key policies where we can work together to tackle flood and coastal erosion risk and includes a number of actions to achieve this.

I. Upgrading and expanding our national flood defences and infrastructure

Flood walls, barriers, sea defences and embankments work to better protect people and places from flooding and coastal erosion. We will continue to invest in flood and coastal erosion risk management infrastructure including putting in place more permanent, demountable and temporary defences – and ensure related water management infrastructure is designed to maximise flood risk management opportunities.

Our progress

The government has invested significantly to help build and maintain our national network of flood and coastal erosion defences.

- Between 2015 and 2021, the government has been investing £2.6 billion to better protect the country from flooding and coastal erosion. Working with the Environment Agency and partners, this is delivering over 1,000 flood and coastal defence schemes to better protect 300,000 homes across England – providing better protection for those who live in areas at risk.
- Between 2015 and 2020 the government has invested over £1 billion to maintain flood defences. This is a real terms increase in spending compared to the £812 million spent in the previous five years.

Our vision for the future

We will build the new defences that the nation needs and ensure that all defences are well maintained so that they continue to be effective. We will develop a diverse range of sustainable funding and finance opportunities to achieve this.

The government announced in the March 2020 Budget that, from 2021, it will double the amount it invests in the flood and coastal defence programme in England to £5.2 billion over six years, providing around 2,000 new defence schemes to better protect a further 336,000 properties. This will reduce national flood risk by up to 11% by 2027 helping to avoid £32 billion of wider economic damages – benefitting every region of the country. This exceeds the level of investment [recommended](#) by the National Infrastructure Commission, underlining this government's commitment to create a more resilient nation.

The government recognises that a one size fits all approach to flood and coastal defences will fail to deliver the best outcomes in every place. Our diverse landscape means that we need a variety of solutions – embracing the latest science, technology and innovation. This means considering the full range of flood infrastructure - including permanent defences, demountable barriers and temporary barriers – in places where they can make a difference.

Case study – Exeter Flood Defence project

The Exeter Flood Defence project has reduced flood risk to more than 3,000 homes and businesses in Exeter. The scheme utilises a variety of approaches including flood-proof glass-panels and demountable barriers, raising the level of footpaths and building up walls and embankments on both sides of the river. The £30 million scheme was completed in 2018 with £6m of government growth funding that was set aside to promote economic growth in places affected by flooding.

Demountable barriers differ from temporary defences. They are designed structures specific to a location and are very reliable once deployed. They are a designed solution to provide flood risk reduction in difficult situations where permanent defences are not feasible.

Long term investment decisions should follow an adaptive approach which takes account of climate change and demographic change over time. This will enable local decision makers to identify the best combination of resilience actions and the right time to act and invest – helping to reduce unnecessary expenditure and preventing organisations from being locked into investments that may not provide the best long term solution.

In April 2020, the government [announced](#) changes to the formula for allocating funding for flood and coastal defences across England. The changes will include:

- updated payments to account for inflation and based on new evidence on the overall impacts of flooding, such as mental health and wellbeing;
- increased payments for flood schemes which also create a range of environmental benefits;
- more funding for flood schemes which also protect properties that will later become at risk of flooding due to climate change; and
- a new risk category which will enable schemes that prevent surface water flooding to qualify for more funding.

Later this year we will launch a public consultation to invite views on further potential changes to partnership funding policy, which will take account of any future changes to the Green Book.

The government has committed to creating the UK Shared Prosperity Fund to match domestic priorities with a focus on investing in people. The government's £3.6 billion Towns Fund will drive sustainable economic regeneration of our towns for long-term economic and productivity growth. The Towns Fund will support cost effective interventions which could include flood risk management, provided there is a clear link to economic growth.

Our actions

- We will double the amount we invest in the flood and coastal defence programme in England to £5.2 billion over six years starting in 2021.
- By spring 2021, we will publish further details of what we expect to achieve from the £5.2 billion invested over the next six year programme and how it is to be managed. The Environment Agency will publish an updated programme of flood and coastal defence capital projects annually.
- Later this year, we will consult on further potential changes to partnership funding policy.

Maintenance

We will ensure our existing network of flood and coastal defences are climate resilient and that we continue to maximise the benefits they bring. At the 2020 Budget, the government made £120 million available to the Environment Agency to repair assets damaged by Storms Dennis and Ciara last winter – recognising the importance that maintenance of assets has on ensuring our network of defences are effective in a changing climate.

We expect those responsible for all assets – including risk management authorities, other public and community organisations, the private sector and riparian owners – to invest in ongoing maintenance and ensure timely repairs where necessary. Asset owners will need to strengthen existing defences to ensure they are climate resilient and maintain waterways so that water can flow through catchments appropriately. We will expect those responsible for assets to report regularly on the work undertaken.

Where it is sensible for local bodies to have responsibility for local flood management assets we will encourage the transfer of these assets to the most appropriate organisations, including to local authorities, water companies and Internal Drainage Boards.

Working with the sector, we have acted to strengthen governance and accountability of Internal Drainage Boards. Through the Environment Bill, the government is working to remove a barrier to the creation of new Internal Drainage Boards or the expansion of those currently in place, where proposed and supported locally. We will also ensure that riparian owners are both clear on their responsibilities and better engaged in the protection of their communities.

Our actions

- We will ensure that there is a long-term approach to maintain our network of flood defences across the country, through a combination of investment and action by risk management authorities, government, riparian owners and wider beneficiaries.

- By the end of 2021, we will commence a review of the statutory powers and responsibilities to map, monitor, inspect and maintain all assets. This will aim to ensure that responsibilities are clear and that there are effective powers in place to enable inspection and maintenance to be undertaken.
- We will work with the Local Government Association to ensure local authorities and their appointed members understand the purpose of Internal Drainage Boards and the role of their appointed members.
- We will support the Association of Drainage Authorities to provide guidance for Internal Drainage Boards on environmental responsibilities and duties.
- We will continue to evaluate progress on Internal Drainage Board governance to consider if actions to date have been effective and if further action is needed.

Reservoirs

We also need to ensure that our communities are not put at additional risk from other infrastructure. Reservoirs are an essential and often beautiful part of our landscape, so we will take action to maintain our already excellent safety record for these important assets. The incident at Toddbrook Reservoir in the summer of 2019 highlighted the importance of maintaining their safety. We are implementing the recommendations from the government commissioned [Independent Review](#) of the Toddbrook Reservoir incident.

Our actions

- We have commissioned a second part of the Reservoir Review which will report on current reservoir safety legislation, its interpretation and implementation. The review will report by the end of February 2021.

Funding and finance

While record levels of government investment have helped to better protect hundreds of thousands of properties in recent years, the impacts of climate change mean that we will need to continue to invest significantly in the years ahead. This means that we will need to harness new sources of funding and finance and applies not only to flood and coastal defences and infrastructure, but to the full range of policies set out in this document.

We will create the right conditions to encourage and incentivise a greater range of non-government investment and finance by encouraging new and innovative methods – such as green finance. We will raise awareness of the benefits of investment in flood and coastal erosion risk management in the business and finance community where timely investment can help businesses to avoid or limit future costs from flooding. For example, we will explore ways that commercial skills can help to realise the potential of business improvement districts and community interest companies to improve resilience.

Risk management [authorities](#) will work closely with all partners in local areas, so that all of those who benefit jointly fund new flood schemes to better protect the whole community. This will build on existing examples of collaboration and partnership funding across the country. We will also explore actions which government can take to support the right conditions for local investment where there is appetite to do so.

The government is committed to [reforming](#) the funding framework for local government funding so that it is simpler, more up to date, and more transparent. We will review local government funding for statutory flood and coastal erosion risk management functions, including the way in which it is allocated, to ensure it is fair and matches the needs and resources of local areas – recognising that some places face different risks.

Our actions

- We will consider options to expand and promote the use of local powers which local authorities can access to secure additional funding to manage flood and coastal erosion risk (e.g. business improvement districts).
- We will review current guidance on corporation tax relief on partnership funding contributions that companies make to government flood and coastal erosion schemes in England, to ensure it provides clarity on the scope and availability of the relief.
- We will review local government funding for local statutory flood and coastal erosion risk management functions to ensure it is fair and matches the needs and resources of local areas.

II. Managing the flow of water more effectively

Managing the flow of water through catchments can reduce pollution of rivers and streams; helping to ensure enough availability in times of drought and slow and store water in times of excess. We will deliver an integrated approach to managing water, ensuring that actions to manage both flood risk and water resources provide multiple benefits wherever possible.

Our progress

The government has taken a range of actions to strengthen policies which help to manage the flow of water through catchments and tackle surface water flood risk.

- We included surface water flooding in the [National Risk Register of Civil Emergencies](#) for the first time in 2017.
- In 2018, we published the [Surface Water Management Action Plan](#) to strengthen and improve understanding of surface water risks and we provided £4.7 million to improve surface water mapping and modelling.
- Our 25 Year Environment Plan included specific commitments to strengthen surface water provisions, including putting in place more sustainable drainage systems which can reduce risk of surface water flooding.
- We updated the [National Planning Policy Framework](#) in 2019 to incorporate strengthened policy to ensure sustainable drainage systems are provided in all major developments, unless demonstrated to be inappropriate.
- The government's [Strategic Policy Statement](#) to Ofwat requires that Ofwat ensures that water companies improve planning and investment in wastewater infrastructure to prevent wastewater flooding.
- As a result of the government's Strategic Policy Statement, the 2019 Price Review includes more than £1 billion to reduce the impact of flooding on communities across England and Wales.
- We commissioned an independent review of the responsibilities for surface water and drainage assets which will report later this year.

- Our landmark Environment Bill includes a requirement for sewerage companies to produce a drainage and sewerage management plan at least every five years to improve long-term planning and enable more resilient solutions to managing large volumes of used water and rainfall.
- In 2020, the Environment Agency published the new [National Framework for Water Resources](#) which makes clear that regional water resource management plans must consider wider resilience benefits, including reducing flood risk; and how water assets can help manage flood risk.
- The Catchment Sensitive Farming advice programme has piloted integrated advice to include flood risk management, helping farmers to access local and national funding.

Our vision for the future

A more integrated approach to flood risk and water resources management will step up our progress to achieving a more resilient nation, and boost action to tackle flood risk.

Flood mitigation and water management go hand in hand. Taking a more integrated approach will not only help to better protect communities from flooding but will provide wider benefits for water resource management and the environment. Mechanisms to manage and store water can be part of a holistic approach to both flood and drought risk.

We will increase the number of water management schemes across catchments to reduce flood risk and help manage drought risk. We recognise there may be more untapped opportunities to maximise the temporary and permanent storage of water in places or times when flood risk is highest, and, where possible, capture that water to be used when or where needed. Unlocking this potential means looking across the catchment from source to sea, using a range of small and large scale actions that slow, hold and release water when needed.

In the upper catchment this might include opportunities to slow or divert flow, or taking actions to allow temporary water attenuation. In the middle of catchments it might mean large flood storage areas to better protect communities, smaller scale flood ponds or basins in urban areas and well managed flood plains or washlands. In the lower catchment and low lying areas it could include better links between land drainage and water storage needs.

To achieve this requires both engineered and nature-based solutions. As well as fixed barriers, earth bunds or ponds, it also includes managing the movement of water over time through different locations through pumps, drainage and abstraction. We will need to make appropriate use of existing and new water infrastructure such as reservoirs or water transfers around the country. Everyone has a role to play from individual landowners and riparian owners, to water companies, the Environment Agency and other risk management authorities such as Internal Drainage Boards.

We cannot expect that water resources infrastructure will mitigate the risks of severe flooding alone – the volume of water involved in a major flood would overwhelm water storage capacity or the opportunity provided by transfer schemes – but it can contribute to support other interventions. Equally some flood mitigation schemes could realise additional water resource benefits, so we will expect this to be considered as they are designed.

Case study – East Suffolk water transfer scheme

In East Suffolk a group of stakeholders has come together to trial innovative technologies which will help address freshwater supply for agriculture in coastal areas. Freshwater that has been drained from farmland to enable food production, and reduce risks of flooding in times of wet weather, has traditionally been pumped out to the estuary, damaging valuable saltmarsh habitat along the way. From winter 2020 this valuable resource will be piped inland and stored for future use by farmers in the drier summer months when more traditional sources of water are under pressure. Not only does this mean that flood waters are no longer simply “lost” to sea and are retained for use in food production but also that rare salt marsh habitat is protected and will be restored.

The project brings together UK and international partners, including Felixstowe Hydrocycle - a consortium of farmers, the EA, Suffolk County Council, and the University of East Anglia, alongside partners from the Netherlands and Belgium. The project is partially funded through the European Union’s Interreg 2Seas programme. Assisted by the East Suffolk Internal Drainage Board, these partners are covering the remaining costs of the project to build a pipeline which will transfer water from the base of the Kingsfleet catchment to on-farm storage reservoirs under high flows which will then be used to irrigate crops in the summer.

Up to 150 megalitres of this water will also be diverted to a Managed Aquifer Recharge and Recovery trial which is expected to run over the winter of 2020 to 2021. Under this system freshwater will be applied to trenches and allowed to soak into the ground. It is hoped that this water will then be stored in the underlying aquifers and could be re-abstracted in future years or allowed to slowly percolate into nearby watercourses to support flows during the driest periods of the year.

We need to prioritise solutions which will support flood risk management, public water supply, agricultural needs and environmental improvement wherever possible. By joining up actions for water, floods, the environment and farming we will ensure actions that promote good soil and land management, water storage for farm use, and the restoration of peat, moors and other land are naturally designed to support flood risk management.

We already expect those responsible for the development of water resource schemes and flood mitigation projects to engage with each other to fully explore the opportunities to bring flood risk mitigation and water resource requirements together. In future years we will

go further and will secure these benefits through closer links between statutory plans, key organisations and partnerships as part of wider work to improve local catchments.

The National Framework for Water Resources explicitly requires consideration of flood mitigation benefits when assessing options for water resource schemes. In Price Review 2019, Ofwat made up to £469m available to water companies to further develop the evidence and potential case for 17 strategic water resources schemes. Ofwat established the [Regulators' Alliance for Progressing Infrastructure Development](#) to manage this process and progress these schemes where appropriate. Some of these may have flood mitigation benefits and when assessing the evidence the Regulators' Alliance for Progressing Infrastructure Development will ensure flood risk management opportunities have been considered.

Our actions

- We will increase the number of water management schemes across catchments to reduce flood risk and help manage drought risk.
- We will examine existing domestic and international evidence, and invest in new research to explore the potential of new and innovative opportunities for water management within and across catchments. This will include asking the Regulators' Alliance for Progressing Infrastructure Development to further explore opportunities for any nationally strategic infrastructure. This evidence will be used by government to work with industry and regulators to inform a position statement to clarify opportunities and expectations.
- We will consider ways to encourage and enable farmers to design and build water storage facilities in a way that can also provide additional benefits to support flood management.
- We will review and adapt our water resources licensing regulation and guidance to encourage the capture of high flows and reduce flood risk as well as deliver the [Abstraction Plan's](#) priorities.

Surface water

The government will continue to enhance local understanding of surface water flood risk and promote actions which can help prevent and better manage the potential impacts of surface water flooding.

Ordinary watercourses and drainage assets and features – including drains, ditches, culverts, pipes and gullies can, if blocked or overwhelmed, cause small-scale flooding. We want to ensure that all those who have statutory responsibilities for these assets and features – both existing and those in new developments – are meeting their obligations. We will consider ways to improve clarity and make it easier for those affected to find remedies.

We will continue to promote uptake of sustainable drainage systems which can reduce flood risk, improve our rivers and streams by reducing sewage spills and reduce the amount of pollutants washed directly into waterbodies following heavy rainfall.

The government's Strategic Policy Statement already requires Ofwat to ensure water companies improve planning and investment to prevent wastewater flooding and to improve infrastructure resilience against extreme flood events. For the current price review, water companies must develop Drainage and Sewerage Management Plans that will inform their next price review business plans. These plans provide a framework for organisations to work together, through which joint solutions and approaches can be developed to improve drainage and environmental water quality.

Between 2020-25 English water companies will [invest](#) more than £1 billion to protect the environment, homes, business and drinking water from flooding, and have [committed](#) to reducing internal and external sewer flooding incidents by 41% and 21% respectively. Ahead of the next price review, the Environment Agency and Ofwat will develop a joint approach for how water companies should address flood and coastal resilience. The government has [committed](#) to consider if additional outcome measures are required through future Price Reviews.

Our actions

- We will consider if additional outcome measures for water companies are required ahead of the 2024 Price Review, and through future Price Reviews, to address flood and coastal resilience.
- We will continue to take forward the actions in the Surface Water Management Action Plan and we will publish an update on progress made to implement the plan by spring 2021.
- We will consider recommendations from the independent review of surface water responsibilities and respond to the review.

III. Harnessing the power of nature to reduce flood and coastal erosion risk and achieve multiple benefits

Working with natural processes can help to protect and restore the natural functions of catchments, floodplains, rivers and the coast. We will put more emphasis on nature-based solutions to support reduction in flood and coastal risk, including natural flood management, use of flood plains and opportunities for temporary or permanent water storage to manage peak flows.

Our progress

The government has taken action to invest and promote working with natural processes and natural flood management measures.

- The 25 Year Environment Plan sets out the government's commitment to expand the use of natural flood management solutions.
- We have invested £15 million to test natural flood management measures through 33 community led projects and 25 catchment scale projects. This investment, managed by the Environment Agency, will provide vital additional evidence around how natural flood management can help to reduce flood risk.
- Natural flood management measures are also a component of some government flood and coastal defence schemes in the current capital investment programme. The recently announced changes to the formula for allocating funding for flood and coastal defence schemes across England will result in increased payments for flood schemes which also create a range of environmental benefits.

Our vision for the future

Whilst natural flood management measures alone will not mitigate the risks of severe flooding or coastal erosion they do contribute, alongside other actions, when managed together and across catchments.

The power of nature will be part of our solution to tackling flood and coastal erosion risks. We will double the number of government funded projects which include nature-based solutions to reduce flood and coastal erosion risk. Nature-based solutions will be considered and designed into flood and coastal erosion risk management schemes from the start, where they can provide or enhance the protection needed.

Our interventions for flood and coastal erosion risk management must also offer wider benefits to our society and environment. Protection from defences will remain paramount,

but we will design these in way that directly provides and enhances, or where necessary replaces, habitats and protection for our landscape and wildlife.

We expect those responsible for designing and building flood and coastal defences to make best use of new technologies and environmentally friendly building materials. This will ensure the carbon footprint associated with protecting people, buildings and infrastructure is minimised whilst maximising opportunities to contribute to environmental and climate improvements.

Nature recovery can help us to mitigate and adapt to climate change – because our wetlands, forests and grasslands capture carbon and provide other environmental benefits, such as flood management and pollination.

We will increase the use of nature-based solutions on farm which reduce pollution and in turn improve the resilience of the environment to flooding and mitigate long term flood risk. For example, good soil management and planted buffer strips next to water-ways and within fields increase the infiltration of rainwater and keep soil in place.

Case study – Port Clarence and Greatham South Flood Alleviation Scheme

The Teesside flood scheme is a flood risk reduction and habitat creation scheme in the Tees Estuary, North East England. The scheme was developed as part of the Tees Tidal Flood Risk Management Strategy to provide a sustainable, cost effective plan for managing flood risk within the Tees Estuary alongside national and internationally sensitive habitats.

The £16 million scheme was completed in 2018. Combined with flood defences that were completed in 2015, the project reduces the risk of flooding to 350 homes and 32 businesses in Port Clarence and the Seal Sands Industrial Complex.

The project has increased flood protection while also creating new habitat the size of over 90 football pitches for local wildlife. The design is expected to last for 50 years and is constructed to take into account climate change.

Our new Environmental Land Management (ELM) scheme – founded on the principle of “public money for public goods” – will support the creation of habitats, nature recovery, improvement of biodiversity, tree planting, and natural flood management.

Our ambition includes strengthening the links between policies and planning to secure wider flood benefits from environmental projects. To be successful we will need to secure the buy in of those who live and work across all our landscapes. This will ensure that interventions to increase biodiversity, also provide benefits for water quality and water availability – including our 25 Year Environment Plan commitments for Clean and Plentiful water – and offer protection against flood risk.

In the 2020 Budget, we announced £640 million for a Nature for Climate Fund which will kick-start a step-change in tree planting and peatland restoration in England. Through

delivery of our Peat Strategy, we will drive forward restoration of peatlands so they hold water and contribute to natural flood management outcomes.

Our £25 million Nature Recovery Fund will bring together businesses, landowners and local communities to protect and restore habitats, species and landscapes to allow nature to thrive everywhere. These two funds will work closely together to deliver a wide range of environmental benefits, which could include flood attenuation.

Our Environment Bill will drive progress on many of our environmental goals, including establishing Local Nature Recovery Strategies which will identify where and how actions taken to recover nature can contribute to environmental objectives, including using nature-based solutions to reduce flood risk.

We will explore how we can do more to deliver multiple benefits from a range of interventions working together. We will reinforce this approach through the guidance that we provide for plan making for Flood Risk Management Plans and River Basin Management Plans, and where possible we will ensure that government funding offers sufficient flexibility to support projects which provide multiple benefits.

In many cases, projects which harness the power of nature to achieve multiple benefits include features which engage with more than one regulator – for example, the Environment Agency, Marine Management Organisation and Natural England. Enabling these types of projects requires these regulators to work effectively in concert, reaching a common understanding about any environmental implications and making timely decisions together on any necessary consents.

Our actions

- We will double the number of government funded projects which include nature-based solutions to reduce flood and coastal erosion risk.
- We will examine ways that our £640m Nature for Climate Fund can secure secondary benefits for flood risk management.
- Our future Environmental Land Management scheme will support landowners to manage land and water in a way that reduces flood risk to local communities.
- We will also join up our plans for trees, peat, soil and nature to secure multiple benefits including for flood risk, carbon sequestration and net gain.

IV. Better preparing communities

We will ensure our communities and business have the information they need to manage and prepare for their flood risk.

Our progress

We have taken a range of actions in recent years to better prepare communities.

- In 2019, the government acted to further strengthen flood protections in [national planning policy](#).
- Since 2018 we have been investing £5.4 million to further expand the Environment Agency flood warning service to cover all communities in England at the highest risk of flooding from rivers and the sea.
- We have taken steps to improve local and national response to flooding through the establishment of the National Flood Response Centre and improved weather and flood forecasting capabilities.
- We have a world leading Flood Forecasting Centre – run by the Environment Agency and the Met Office – which continues to improve the accuracy and communication of advanced warning information.
- Following the [Multi Agency Flood Plan Review](#) in 2018 we have taken action to support Local Resilience Forums and ensure they have robust plans in place to respond to flooding incidents in their respective areas.
- In the 2018 Budget, the government provided £2.9 million to boost action to make homes and buildings more resilient through property flood resilience.
- As a result of the [National Flood Resilience Review](#) in 2016, the level of flood protection for important utilities – such as energy, water and telecommunications sites – was increased.
- Following the 2019/20 winter floods we set up [recovery schemes](#) to help those affected, including the Farming Recovery Fund and the Property Flood Resilience Recovery Support Scheme.
- The joint industry and government initiative, Flood Re, was launched in 2016 to improve the availability and affordability of flood insurance for households at high flood risk. Over 300,000 properties have benefitted since the scheme's launch.

- We announced a [review](#) into flood insurance to examine the level of insurance cover held by those affected by the November 2019 flooding in Doncaster, the barriers they may have faced in obtaining cover and whether there are any systemic issues in the provision of flood insurance.

Our vision for the future

Where flood risk exists, further action is needed to ensure that homes, communities and businesses are prepared so that they can respond and recover more quickly if flooding does happen. Taking action will help to limit the damage and disruption which flooding can cause. This requires a holistic approach in each local area to reduce the risk of harm to our communities, as well as providing the support and information needed for the people who live and work there. We will ensure that all homes currently at high risk of flooding are better protected or better prepared. We will achieve this through our policies to:

- i. Guide the design and location of new development
- ii. Ensure buildings, important infrastructure sites and key public services are better prepared to manage flood risk
- iii. Support communities, including when flooding happens and in recovery afterwards

i) Guide the design and location of new development

As our country grows and we build the high-quality homes and infrastructure we need for the future we must ensure that we build the right properties in the right places. Flood risk is an important consideration in the planning system and there are strong safeguards in place. The Environment Agency has a key role in the planning process as a statutory consultation body for the preparation of local and neighbourhood plans and must be consulted on planning applications in flood risk zones 2 and 3.¹

We will maintain and enhance existing robust planning policies that direct new development away from areas at risk of flooding and help ensure that new properties and infrastructure are resilient to flooding and coastal erosion.

The government has committed to publish an ambitious Planning White Paper which will offer creative solutions to establish a planning system that works into the next century. We want a planning system that supports beautiful design; and, meets the challenges of climate change as well as building the homes this country needs.

In March 2020, the government [committed](#) to review policy for building in areas at flood risk to ensure that communities across the country know that future development will be safe from floods. As part of this, the government will assess whether current protections in

¹ In 2018/19, 99% of new homes granted permission had planning outcomes in line with Environment Agency flood risk advice.

the National Planning Policy Framework are enough and consider options for further reform.

We will ensure that planning policy is being appropriately applied and effectively implemented on a consistent basis across the country. Local Planning Authorities must seek and receive appropriate flood risk and other advice from relevant consultees when considering development proposals. This will help ensure that properties which could be at risk at any point in their lifetime are consistently built to ensure resilience to flood risk from the outset.

We will foster a common approach to using flood risk information in spatial planning within and between local authorities to encourage a flexible, easily adaptable system to get the right kind of sustainable growth in the right places. This will ensure that planning decisions in flood risk areas are well informed and make best use of alternative sites both locally and in neighbouring local authorities or boroughs.

Where areas are at risk of surface water flooding, effective drainage or capture of surface water will help to reduce the impacts of flooding. National and local requirements for sustainable drainage systems already exist, and it is important they are constructed to appropriate design standards suitable for the particular circumstances of the area.

We will have a more holistic approach to the management of surface water in new development which includes natural flood management techniques, multi-functional sustainable drainage systems and green infrastructure. The government will take action to encourage more beautiful design and we will take forward many of the Building Better, Building Beautiful Commission report's recommendations and ensure local authorities have the support they need to demand higher design standards.

We must also ensure that buildings are able to keep water out and limit damage when water does get in. Flood resilient design can be integral to the development of high quality homes and can do more than just avoid increasing flood risk but improve the wider environment.

Developers need to make arrangements to meet the cost of flood resilience measures for the lifetime of new developments, and the infrastructure supporting new developments must be flood resilient for the whole of its lifetime – no matter who owns it.

Our actions

- As part of the review of policy for building in areas at flood risk, we will assess whether current protections in the National Planning Policy Framework are enough and consider options for further reform.
- We will consider ways to boost transparency, data collection and reporting where Environment Agency or Lead Local Flood Authority advice is given.
- We will work with the Environment Agency to support all Local Planning Authorities' in receiving and understanding the appropriate expert advice on all sources of flood risk so that they can make the right decisions.

- We will identify what more could be done in cases where the Environment Agency's flood risk advice on planning applications is not followed to ensure that flood risk considerations are addressed during the planning stages so that all developments are safe and resilient to future risk.
- We will review the current approach to flood resilient design to consider how to ensure quality, safe housing for all, as part of our wider commitment to support the development of high quality buildings.
- We will consider ways to support the effective use of contributions from developers which support flood infrastructure and resilience measures. For example we will publish non-statutory guidance by the end of 2021 to help local authorities identify how developer contributions can be used for flood resilience.
- We will review the effectiveness of existing planning policy on Coastal Change Management Areas.
- We will assess whether updating the non-statutory technical standards for sustainable drainage systems could help provide for multi-functional benefit sustainable drainage systems, by summer 2021. We will consider how the findings of this research could inform future approaches to boost uptake of effective sustainable drainage systems and support the aims of the National Planning Policy Framework.

ii) Ensure buildings, important infrastructure sites and key public services are better prepared to manage flood risk

Property flood resilience enables householders and businesses to manage the impact of flooding if it occurs – so that people can get back into their properties quicker after an event. For example, by making changes to properties to stop water entering or by making adaptations that reduce the level of damage if water gets in. We need to see an increase in the uptake of property flood resilience to limit the damage and disruption flooding can cause. This is particularly important for homes at high risk of flooding or small groups of properties which are unlikely to benefit from large scale defences.

The buildings industry, insurance industry and experts in building materials all need to play their part – and are collaborating through the Property flood resilience Roundtable. Property owners, occupiers, the insurance industry and councils need to be confident about the potential measures and the benefits. By generating greater reassurance and confidence in property flood resilience, we will stimulate wider action by all to act on their flood risk and complement public investment at a community level. We want to:

- Encourage a faster transition of the market place for property flood resilience -related advice, products and incentives;

- Drive greater awareness of the actions people can take proactively before any flooding and ensure that practical advice for property owners and occupiers is available at the right time when making decisions about their properties. This requires suitably trained advisors in all parts of the market – including the property and insurance sectors – so that they consider and apply the benefits of property flood resilience in their work;
- Ensure the right incentives and financial products are available to encourage property flood resilience installation. This includes strengthening links between property flood resilience and the cost of flood insurance for those at high risk. This will require that robust data about the value of resilience measures within properties is collected and made available to insurers, businesses and householders;
- Consider options to further remove barriers to the uptake of property flood resilience in homes through the operation of the Flood Re scheme. This will include further encouraging insurers to price their policies to reflect reductions in risk as a result of property flood resilience – for example by enabling discounted premiums to be available to households which have been fitted with flood resilience measures. It will also include enabling the scheme to support pay-outs which cover the installation of more resilient repairs – so that properties are less likely to flood in future and damages are less severe; and
- To further speed up resilient homes we will work with Flood Re and the insurance industry to explore whether it would be beneficial for insurers to share more information with customers about their flood risk – encouraging everyone to take responsibility to encourage greater uptake. As part of this we will also explore whether there's more that the Flood Re scheme could do to accelerate uptake of PFR, which could include using the scheme's currently available funding. We will also pursue some technical changes to deliver better value for money.

Appropriate insurance is an important tool in supporting recovery from flooding and helping people to get back to normal more quickly. We want to ensure that flood insurance is both accessible and affordable for people in flood risk areas.

All buildings in flood risk areas can improve their preparedness to reduce costs and disruption to key public services when a flood happens. Our record £5.2 billion investment in flood defences between 2021 and 2027 will better protect around 46,000 non-residential properties – including schools, hospitals, transport links and utility sites.

Where infrastructure is not better protected as part of a wider community scale flood defence scheme, those who own and run these sites – whether in public or private hands – will be expected to take action to keep water out, minimise the damage if water gets in through flood-resilient materials, and reduce the disruption caused. This includes effective contingency planning to mitigate the impacts of flooding on the delivery of important services.

The government works with industry partners to manage multiple risks to the transport sector including those caused by flooding. The government will continue to take climate change into account to ensure infrastructure networks are secure and resilient to any risks including current and future extreme weather events. The Department for Transport will

continue to work closely with delivery bodies and operators to increase climate resilience in the planning and design of transport infrastructure.

Critical national infrastructure must already have high levels of resilience including for flooding. The government commissioned the National Infrastructure Commission to examine how the resilience of all infrastructure to a range of risks can be improved. The study was [published](#) in May 2020 and we will consider its recommendations carefully.

To limit future impacts, we want businesses to understand the risks of damage and disruption to their employees, assets and supply chains and take responsibility for taking action to limit potential impacts. We will work closely with risk management authorities, including the Environment Agency, to make sure that infrastructure owners, businesses and homeowners are aware of the risks to them and clearly understand what to do, before, during and after a flood. This approach will need to be locally tailored, with advice specific to the risk people face in their community.

Our actions

- We will build on our Property Flood Resilience Pathfinder [projects](#), to further boost uptake of property flood resilience in homes and businesses across the country – including through our new £200 million innovative resilience programme. We will publish further details later this year.
- We will explore ways to provide greater clarity about the use and effectiveness of property flood resilience measures for homes and businesses at high risk of flooding, including how the benefits can be recorded.
- Later this year we will consult on some specific changes to the Flood Re scheme. These changes aim to improve the efficiency and effectiveness of the scheme and encourage greater uptake of Property Flood Resilience among households at high risk of flooding across the UK.
- We will encourage and strengthen the preparedness of key local businesses and key public services in areas of flood risk.
- We will set out further detail about our plans to ensure that infrastructure is resilient for the future, including to flooding, in our response to the National Infrastructure Committee’s recent resilience study.

iii) Support communities, including when flooding happens and in recovery afterwards

We will continue to build our world class response capabilities and ensure that all communities are able to respond quickly and effectively when necessary. Over 1.4 million people are already signed up to the government’s free flood warning service, and we will go further.

We have committed £1.2 billion for a state-of-the-art supercomputer to improve severe weather and climate forecasting, adopting the latest supercomputing technology and unleashing the full potential of weather and climate data. Data will be used to help more accurately predict storms and select the most appropriate locations for flood defences. Forecasting improvements will also help us to better predict the likelihood of rain that might lead to flooding from surface water.

All organisations will have a clear understanding of who should be doing what and when, in the event of a flood. Building on our response to the Multi-Agency Flood Plan Review in 2018, Local Resilience Forums will strengthen their Multi-Agency Flood Plans so that all responding agencies and authorities have a robust approach to responding to a flood. The Environment Agency will perform a health-check on these plans once every three years to help ensure there is a consistent approach across the country.

The government values and supports community resilience to flooding, including the role of flood volunteers, groups and community flood plans. In April 2019, government published updated guidance for Local Resilience Forums on Multi-Agency Flood Plans and this indicated that they should include links to community plans where they are available.

The government co-ordinates the Communities Prepared National Group, which supports the development and local implementation of community resilience policy across England. The Communities Prepared National Group aims to increase the number of strategies for community resilience at local resilience forum level, and enable greater coordination and collaboration amongst practitioners across the country. The Environment Agency will continue to work with flood volunteers as part of delivering the ambition in the updated national strategy, of a nation ready to respond and adapt to flooding and coastal change.

Through our National Flood Response Centre and by deploying national assets, government will support local responding authorities during a flood event. These will be tested through national exercising with a preference for holding a national (tier 1) exercise once every 5 years.

We will support people and communities to repair damages, restore local economies and better manage the impacts of flooding and coastal erosion on mental health and wellbeing throughout the recovery process. We are committed to ensuring that lessons identified during severe weather and flooding incidents are acted upon.

We will undertake a full review of the Flood Recovery Framework to improve its effectiveness and ensure that it continues to best meet the needs of flood hit communities. We will explore whether greater consistency and sharing of best practice is needed across local recovery activity, the balance between central government and local support, and how to involve the expertise available in civil society to provide the practical and emotional advice and support needed to homes, communities and businesses after a flood.

Our actions

- We will support the voluntary sector to improve their capacity and capability to help local communities in the event of a flood.

- We will undertake a full review of the Flood Recovery Framework to improve its effectiveness.
- We will evaluate the impact, administration and timescales of the most recent Property Flood Resilience Recovery Support Scheme. As part of this, we will review the criteria to ensure that future applications of the scheme encourage the installation of the most cost effective resilience measures new to market.

V. Enabling more resilient places through a catchment based approach

The diversity of our places means that they face different challenges to manage risks from flooding and coastal erosion. We will support every place to thrive in a changing climate, ensuring that we have robust and meaningful flood and coastal erosion risk planning which enables local areas to take long term action on an informed basis.

Our progress

The government's policies require local areas to plan for future flood and coastal erosion risk. We have also taken action to provide further support to local areas.

- We are investing £1.2 billion in schemes to better protect 170,000 properties from coastal flooding between 2015 and 2021.
- We have supported local flood action groups to develop locally agreed plans and actions following flood events, including in Cumbria, Calderdale and Somerset.
- Flood Risk Management Plans brought together, for the first time, information about all sources of flooding in a catchment and the measures being considered to manage the risk in one place. They set out how organisations, stakeholders and communities work together to manage flood risk.

Our vision for the future

We will adopt and encourage a catchment-based approach which considers the full range of actions which could be taken in an area, upstream and downstream by a variety of bodies. This means having the right combination of actions and funding sources, to both better protect and prepare people and places – not only thinking about individual flood defences or properties but looking at the whole of an area from source to sea.

To achieve this, we will transform the current approach to local flood and coastal erosion risk planning so that every area of England will have a more strategic and comprehensive plan that drives long-term local action and investment. We will consult on changes to ensure that future plans will be clearer and more ambitious – taking account of current and future risks – and will provide a framework for action and investment in local areas.

Local plans will be central to long term investment decisions which should follow an adaptive approach - taking account of climate change and demographic changes. This will enable local decision makers to identify the best combination of resilience actions and the right time to act and invest.

They will encourage better collaboration across local bodies, including business and communities, and reflect county and river catchment boundaries to drive action across a whole place. They will link with wider plans for an area such as water resource plans, further development plans and local nature recovery strategies.

Our approach to local flood and coast planning will recognise that local areas face different geographical challenges – and that catchment sizes vary across the country. We also recognise the vital role communities play in better protecting and better preparing their local areas. Communities should be involved in plan making – utilising the skills and local knowledge they hold. This is especially important where significant changes need to be made over the long-term.

To strengthen collaboration, we will encourage flood and coastal erosion risk management activities across local authority boundaries and explore options to join up flood resilience with other responsibilities held by Mayors or Combined Authorities. The government will set out its vision for the future in the Devolution White Paper.

To help achieve our vision and drive action locally the government has committed to invest £200 million over the next six years to support 25 local areas, from the North, the Midlands and the South, to test innovative actions to improve resilience to flooding and coastal erosion. The programme will aim to boost wider innovative action in local places across the country which face significant flood and coastal erosion challenges covering coastal communities, cities and rural areas.

It will deliver immediate benefits in the places chosen as well as secure valuable evidence to further improve resilience everywhere. Funding will be awarded to places to work at a strategic scale (reflecting county and river catchment boundaries), including those that contain communities which have repeatedly flooded.

As part of our reforms to local flood planning, we will consider responsibilities for producing and implementing plans. This will include the provision of technical expertise, co-ordination with other plans and wider local services and sectors, funding and delivering different types of action. This will aim to ensure strong local leadership and clear accountability. We will also ensure these responsibilities are clear to communities and that there is greater transparency and appropriate oversight and scrutiny of plans.

While the existing statutory responsibilities for managing flood and coastal erosion risk are set out in legislation, there are further opportunities to strengthen national oversight of bodies which hold responsibilities to ensure that they are meeting their obligations. Enhancing the transparency of information about how duties have been met, the actions taken and the investments made – will help to identify poor performance, share best practice and strengthen accountability.

Our actions

- By 2026 we will reform local flood and coastal erosion risk planning so that every area of England will have a more strategic and comprehensive plan that drives long-term local action and investment.
- Between 2021 and 2027, we will invest £200 million to support 25 local areas – urban, rural and coastal – to test innovative actions to improve resilience to flooding and coastal erosion.
- We will consider how best to encourage flood risk management activities across local authority boundaries including how flood resilience joins up with the functions of Mayoral Combined Authorities.
- We will consider opportunities to strengthen national oversight of bodies which hold formal responsibilities for managing flood and coastal erosion risk.

Our places

Our towns, cities, coastal and rural areas are geographically, physically and socially diverse – from rural farmlands and picturesque coastlines to bustling urban cities.

In our rural communities, we will harness the opportunities rural landscapes bring to increase resilience for people living and working in rural areas and further downstream. We will ensure our countryside is resilient to flooding so that our sustainable food industry can flourish, and our farming and agricultural sectors can thrive. To achieve this, risk management authorities will work with landowners to maximise good land and soil management and to implement natural flood management solutions.

Our towns and cities are the powerhouses of our regional economies. They are home to vibrant communities and a significant proportion of our properties, businesses and infrastructure. Urban areas are often at a greater risk of surface water flooding compared to other places. We will ensure that households, businesses and local decision makers are properly informed about all flood risks, including those from surface water, so that they can increase resilience; for example, through the use of sustainable drainage systems such as green roofs and rain gardens.

The English coast has enormous potential and the government is determined to see it thrive all year round. Our coastal communities support a range of sectors including tourism, fishing and renewable energy. We will support coastal communities to unlock barriers to their development and growth, and to strengthen their appeal as places to live, work and visit. As the risk of flooding and coastal erosion increases, we must work together to support coastal communities to increase their resilience.

Addressing the risks from coastal erosion

Rising sea levels can cause both coastal flooding and coastal erosion. Although coastal erosion affects fewer communities it can result in a complete loss of property and land. Around 1,800km of the English coastline is at risk of erosion. We are committed to defending the coastline where this is sustainable and affordable to do so, and to let it function naturally in areas where it is not.

Local people, communities and businesses should be at the heart of decision making to ensure that local plans work effectively for all and have support. To achieve this, affected communities need to understand the level of risk and the potential impacts. The Environment Agency's £23 million five year programme to boost regional coastal monitoring and better understand the risks that climate change will bring will provide this evidence.

In areas facing significant coastal erosion and impacts from rising sea levels, to limit impacts and unlock the advantages our coastline brings, local areas may determine that a managed transition away from high risk areas is the most effective and practical response. The government is committed to enabling this transition by supporting local areas to help them to implement long-term plans.

Our actions

- Informed by the Environment Agency's current refresh of technical evidence supporting Shoreline Management Plans, we will review national policy for Shoreline Management Plans to ensure local plans are transparent, continuously review outcomes and enable local authorities to make robust decisions for their areas.
- We will review the current mechanisms – including legal powers – which coastal erosion risk management authorities can use to manage the coast.
- We will explore the availability and role of financial products or services that can help people or businesses to achieve a managed transition of property and infrastructure away from areas at very high risk of coastal erosion.

Driving Progress

Our approach to government investment will have significant impacts on the decisions which others make to manage risk. The government will drive forward progress and monitor trends both locally and nationally. This will ensure that actions taken work for the benefit of our communities to build resilience everywhere.

Nationally

We will continue to use cost-benefit approaches to prioritise and target flood and coastal erosion funding for maximum benefit. We have already strengthened flood-risk cost-benefit appraisal to take account of new evidence about the benefits to mental health and the environment.

We will further develop and improve our approach to assessing costs and benefits to target funding for maximum benefit. This will improve the way in which the full range of actions to better prepare and better protect from flooding and erosion are assessed, individually and in combination in a place. This will also improve the assessment of costs and benefits for actions that tackle surface water flooding and the way in which investment decisions should take greater account of future climate impacts where there is uncertainty.

We will develop a national set of indicators to monitor trends over time. This will enable us to measure and demonstrate progress. It will enable a better understanding of the impacts of our policies to inform future action. As part of this, we will review the indicators proposed in the 25 Year Environment Plan which were intended to track disruption and to show changes in the resilience of communities at risk from flooding or coastal erosion.

We will improve the reporting of progress towards our goals so that it is more transparent. We will consider how the existing arrangements (including the Environment Agency's statutory reporting duty and strategic overview role; and data provided by local authorities) can be improved without creating unnecessary burdens. We will continue to engage with experts including the Environment Agency and the National Infrastructure Commission to inform future policies and actions.

Locally

Flood risk varies across the country because of physical characteristics and local demographics. There are significant variations between local areas in terms of the potential for action to manage risk and the vulnerability of the communities living and working there. Evidence shows a strong correlation² between areas with lower performing local economies and those with higher flood and coastal erosion risk.

We can improve resilience everywhere. We will boost opportunities for wider investment in historically disadvantaged local economies to lower their flood and coast risks. We will encourage investment from all parties in a wide range of actions to better prepare as well as better protect these places – including nature-based solutions and whole catchment

² We have used business birth rate, [published by the ONS](#), as a proxy for economic performance and we have considered the proportion of [properties at risk of flooding from the rivers and the sea](#), both by local authority.

approaches where these can be effective. These investments will, in turn, help to support and grow these local economies and reduce the associated economic and social disparities.

Local flood and coastal erosion plans should set out objectives to improve local resilience and find the range of solutions which work. Our indicators and reporting will therefore include the local picture – making sure we have the information we need to drive progress at a local level, recognising the different challenges faced.

Our actions

- We will develop and improve our approach to assessing costs and benefits to target funding for maximum benefit.
- By spring 2022, we will develop a national set of indicators to monitor trends over time to better understand the impact of our policies.
- By spring 2022, we will strengthen reporting of progress towards our goals so it is clearer and more accessible, and will consider how the existing arrangements can be improved.



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