

Our Call to Action

Delivering a vision of affordable flood insurance

A stylized illustration of a landscape. At the top, there are grey, scalloped clouds. Below them, a white bird is in flight. The sky is a solid blue. In the center, the word 'FLOODRE' is written in a bold, dark blue font, with a small blue wave icon under the 'RE'. The landscape below features rolling green hills. A winding river flows through the middle. On the left bank, there are three green trees with brown trunks. On the right bank, there is a two-story house with a blue roof and yellow walls, and a single green tree. The bottom of the image shows a dark blue band representing the foreground or water.

FLOODRE



ABOUT THIS DOCUMENT

Flood Re is a partnership between the insurance industry and the UK Government created through The Water Act 2014. The Act specifies that Flood Re will cease to operate in 2039. Section 64 of the Act sets out Flood Re’s primary purposes, one of which is to:

“manage, over the period of operation of the scheme, the transition to risk-reflective pricing of flood insurance for household premises”

(Water Act 2014, Sect 64, (2)(b))

Further details of how this task should be undertaken is contained in The Flood Reinsurance (Scheme Funding and Administration) Regulation 2015. Section 22 of these regulations set out an obligation on Flood Re to “produce and publish a plan relating to the management of the transition” every five years, this plan is to contain the steps Flood Re is taking to manage the transition and

“such other information relating to the Transition Plan as the FR Scheme administrator considers it useful to publish”.¹ This is Flood Re’s third Transition Plan since inception. Previous plans are available on the Flood Re website.

This document sets out Flood Re’s approach to exiting the market and supporting the transition to a market for household flood insurance with risk-reflective pricing.

¹ The Flood Reinsurance (Scheme Funding and Administration) Regulations 2015 (legislation.gov.uk)

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OUR VISION: SECURING A FUTURE OF AFFORDABLE FLOOD INSURANCE

BEFORE

There are **2 million** people across the UK exposed to 'frequent flooding'. They have a greater than 10% chance of being flooded in the next decade

£32k the cost of repairing a flooded home
(Figure based on Storms Ciara and Dennis)

Households with a previous flood claim

9% could get quotes from 2 or more insurers

0% could get quotes from 5 or more insurers

Before Flood Re

DURING

When Flood Re was introduced **4 out of 5** households with a previous flood claim saw a price reduction of more than 50%

266,000 policies written in 2022/23

Households with a previous flood claim

99% can get at least one quote

97% can get quotes from 5 or more insurers

With Flood Re

FLOODRE

AFTER

Reducing the risk of flooding

- Investing in flood risk management and defences
- Development with flood risk in mind
- Adapt to climate change

Reducing the damage and costs of flooding

- Improving flood resilience products
- Increasing the overall flood resilience of the UK's housing
- Improving community flood resilience
- Reducing the cost of reinstatement

Achieving an effective market

- Improving flood modelling
- An orderly Flood Re exit
- Improving consumer information on flooding and the value of insurance
- Active engagement in the market

Limits to affordability

- Continued support for those with unavoidably high level of flood risk
- Minimising the size of the highest risk group

FOREWORD FROM THE CHAIR

As Flood Re's first Chair, I have often explained our unique structure as an industry-Government partnership set up to ensure the availability of affordable flood insurance. Less well understood however is that our statutory remit is twofold: we are charged with both promoting affordable insurance in the present day, and with managing our exit from the insurance market by 2039. This second objective may be less tangible, but it is equally important. Flood Re's vision is that the market transitions effectively such that insurance will remain available and affordable following this exit.

This is a major task. The UK is a country long afflicted with flooding, and climate change will only exacerbate this. Nonetheless, it is a vital ambition. Flooding is much more than an insurance issue. Whilst insurance plays a vital role insulating householders against the worst costs of a flood, insurance cannot prevent the misery and disruption caused, both for individuals and businesses. Flooding destroys homes and valuables; it prevents people going about their normal lives and it brings huge disruption to whole communities.

When I reflect on the progress made to reduce flood risk, it is a case of 'lots done, lots more to do'. There are two clear examples of this. On climate change, our understanding of the threat has transformed: when Flood Re was established, climate change was seen as an issue for the future. It is now understood to be an issue for today. In response we have bold commitments from governments and companies around the world and particularly in the UK. Yet emissions are still rising, and the latest evidence suggests that we will lose the battle to keep global heating below 1.5°C, probably in the next five years.² **There are currently two million people in the UK living at risk of 'frequent flooding' (greater than a 1 in 10 chance of flooding during the next decade). At 2°C of global temperature rises, this figure grows by 40%.**³

This has a direct impact on the second issue I want to highlight- spending on flood defences. In England, flood defence spending is going up 54% in real terms for the period 2021-27.⁴ This is a serious commitment from Government, and- following increased investment in the previous spending round- is protecting hundreds of thousands of homes.⁵ Yet because of climate change the overall flood risk is also increasing.

2 AR6 Synthesis Report: Summary for Policymakers Headline Statements (ipcc.ch)
3 theccc.org.uk/wp-content/uploads/2015/10/CCRA-Future-Flooding-Main-Report-Final-06Oct2015.pdf.pdf
4 Managing flood risk (nao.org.uk)
5 These figures are England only but equivalent investment is being made in all UK nations, see Section 2.

The result is that we are investing record amounts- and will need to spend even more in the future - to keep the overall flood risk static.⁶ But, and I want to be clear on this point, that will not be enough. We need to reduce the aggregate level of risk, not just hold it flat. This will require urgent action by all stakeholders.

Research from Flood Re estimates that flood defences already save the UK about £1.1bn every year and have reduced the costs of some major floods by more than 75%.⁷ The Environment Agency estimate that without the current levels of investment being sustained over the long term, the economic damage arising from flooding would increase by 250% over the next 50 years.⁸ Climate change related damages cost the UK approximately 1.1% of our GDP at present. This is forecast to rise to 3.3% of GDP by 2050 (for comparison, the UK currently spends 4.6% of GDP on education).⁹

All these figures underline the scale of the challenge we face in managing flood risk well. This is not just a challenge for Government. Flooding affects us all and the extreme weather events we have seen around the world are having a knock-on impact in the UK where costs of reinsurance have risen by nearly 40%.¹⁰ The existence of Flood Re has spared the UK some of the resulting impacts of flooding - such as insurance being withdrawn and its implication on house prices - that we have seen in Australia and the US.¹¹ But Flood Re is a medium-term intervention and if we want to continue to avoid these costs in the long-term we need to reduce flood risk.

Despite this gloomy picture, there are some clear reasons for optimism. The first is that flood defences work. As explained above, **we have record investment, and that investment is delivering. For every £1 invested, £5.60 is saved.**¹²

My second reason for optimism is the potential for the private sector to play a bigger role in managing flood risk. It is well understood that it will take a collective effort to prevent climate change, but much less recognised that it will take the same collective effort to adapt to climate change. Just as private sector innovations (from the electric car to the vegan sausage roll) have made major emission reductions possible, private sector innovation and investment is required to help us reduce the risk and costs of flooding. The UK is, once again, a world leader in this: from flood doors that are almost indistinguishable from standard doors, to apps to engage householders in flood risk, we have the shoots of an exciting and emerging industry. Financial sector partners, including insurers and lenders, need to match this innovation by providing insurance premiums that reflect the actions households take and supporting householders to protect their home over the medium and long term, in order to drive take-up.

I have been the Chair of Flood Re since its inception and this will be the last Transition Plan published during my tenure. During my time I have seen the company evolve to a mature and successful operating model. Flood Re has garnered many insights into flood risk during this time, and I am pleased to see them reflected throughout this document.

With our experience comes the ability to play a more central role in shaping the UK's approach to reducing flood risk and adapting to climate change. This Transition Plan represents a step change in our level of ambition as we look to move from a supporting to a leading role in two key areas where we believe we are best placed to leverage our industry-Government partnership model.

The first area relates to Property Flood Resilience (PFR)- the resilience of an individual property to flooding, either through design or adaptation. There have been huge improvements in the design and testing of PFR adaptations during Flood Re's lifetime and I have met householders who have kept floods at bay for weeks. However, we do not currently have the systems in place to routinely assess the efficacy of PFR or incentivise its take-up. Nor does the insurance industry have widespread ability to reflect PFR in its pricing. Flood Re is pioneering a range of approaches to address this. **Our 'Build Back Better' scheme is already hugely successful in changing the insurance industry's approach to prevention, by ensuring flooded properties are built back resilient to future flooding.** Alongside this, we are making two strong commitments to improve the infrastructure around PFR. The first is to develop and test a comprehensive scoring methodology for PFR efficacy, in order to understand how these adaptations combine with intrinsic features of a property to afford protection. The second commitment is to develop a property-level assessment of flooding resilience. Both of these commitments will enable us to understand and demonstrate PFR efficacy, and unlock public and private funding streams.

The second major area of commitment from Flood Re is around research. Whilst Flood Re has long undertaken, commissioned and disseminated research, we want to develop and formalise our research ambition. The UK is a world leader in flooding and climate research, but this does not mean that we know all we need to, or that those working to limit flood risk can always access the information they require. Flood Re will undertake a detailed study of the UK's flood research capabilities in order to establish a Centre of Excellence for research, analysis and expertise. This will bring together private sector, academic and public sector perspectives on the flood challenges we face and the opportunities for positive change to ensure the UK's knowledge is readily available to those who can utilise it.

Responding to climate change will be the defining challenge of the coming age. Yet I find myself confident that it is a challenge we can meet. I am inspired by the new generation entering the insurance industry, passionate to protect the planet and ensure a sustainable future and I am reassured by the improvements in technology which make mitigation and adaptation possible.

Whilst I am optimistic, we certainly cannot be complacent. My parting message to my colleagues in the insurance industry and in Government is to ask you to not only share our optimism and our vision, but to also share our ambition. Flood risk and its impact can be managed down, but to do so we must all act now before it's too late.

Mark Hoban
Chair

6 Long-term investment scenarios (LTIS) 2019- GOV.UK (www.gov.uk)
7 Inland flood defences save the UK £1.1 billion a year- Flood Re
8 Environment Agency Long Term Investment Scenarios, as above
9 What will climate change cost the UK? Risks, impacts and mitigation for the net-zero transition- Grantham Research Institute on climate

change and the environment (lse.ac.uk) and Annual report on education spending in England: 2022 | Institute for Fiscal Studies (ifs.org.uk)
10 Howden's renewal report at 1.1.2023: The Great Realignment | Howden Broking (howdengroup.com)
11 Bank of England Staff Working Paper No. 995 and Beltran Is flood risk capitalised into property values.pdf (lse.ac.uk)
12 Environment Agency Long Term Investment Scenarios, as above

Executive summary

Section 1 – Flood Re’s Approach to Transition

- Flood Re will cease to operate in 2039 and has a statutory objective to manage the insurance market transition to risk reflective pricing. Flood Re has a vision for insurance to remain affordable and available after its exit.
- Flood Re’s vision is dependent on factors outside its direct control, and the Transition Plan as a whole sets out how Flood Re works to create the conditions for these wider changes to occur. This is underpinned by Flood Re’s Theory of Change of understanding, engaging and leading.
- Section 1 sets out the evolution of Flood Re over the past eight years, including the total number of households who have benefited from the Scheme; the partnership model with the insurance industry and how this shapes the approach to transition. Flood Re has been successful in reducing the cost of the Scheme over its lifetime but continuing to do so will be challenging in light of inflation and climate change.
- A fixed end date for the Scheme is important as it can catalyse efforts to manage flood risk in a long-term sustainable way. Section 1 explains this, and the broader rationale for preventing flooding, rather than responding to it.

Section 2 – Determinants of availability and affordability

The availability and affordability of flood insurance in a market without Flood Re will depend on a range of transition factors. Flood Re groups these into three groupings or 'buckets', each composed of a set of specific indicators:

1. **Bucket 1** is about reducing flood risk in the UK, which in turn is dependent on investment in flood defences, whether new developments contribute to flood risk and global efforts to mitigate climate change.
2. **Bucket 2** is about reducing the damage and cost of flooding. A number of factors contribute to this, including whether households have, or are able, to make adaptations to make their homes more resilient.
3. **Bucket 3** is about achieving an effective market in insurance for flooding. This requires better flood modelling and insurance industry engagement with flood mitigation measures.

Section 3 – Call to Action: Rising to the challenge of climate change adaptation

While Section 2 outlined the challenges ahead in improving the management of flood risk, Section 3 provides a pathway to achieve this.

- Flood Re is clear that flooding is much more than an insurance issue, particularly in the context of rising risk because of climate change. Understanding the wider consequences of failing to manage flood risk provides a powerful imperative to act.
- There are clear, well-evidenced and economically viable routes to reducing flood risk, and Section 3.3 sets these out, including what individual households can do. The public sector, private sector and individual households all have a role to play in addressing flood risk. Flood Re is clear that 'flooding is everyone's business', and that is because there are clear benefits for the public and private sector, as well as individual householders if flooding is well managed.
- Achieving action across a system with so many actors is difficult to achieve. Section 3 sets out Flood Re's pathway to a system-wide response and the key priorities for the next five years across each of Flood Re's three buckets.

Section 4 – Flood Re's commitments

Section 4 outlines the commitments Flood Re is making to support its vision for transition.

- Flood Re has a set of 'Transition Principles' to identify where its resources can be utilised to have the greatest affect. These principles have been combined with Flood Re's Theory of Change to underpin an ambitious set of commitments for the next five-year period.
- The first set of commitments are around 'Understanding' of flood risk and how to mitigate it. This includes Flood Re's commitment to develop a comprehensive scoring methodology for the efficacy of Property-level Flood Resilience (PFR) adaptations. The second major commitment in this area is around the creation of a Centre of Excellence, to fill gaps in UK knowledge infrastructure. The final commitment in this section are around Flood Re's support for the development of Natural Flood Management (NFM) techniques.
- The second set of commitments are about 'Engaging' with partners in order to galvanise a system-wide response to flooding. This includes Flood Re's commitments to increase awareness of flood risk amongst householders and communities, as well as commitments to increase capacity to manage flood risk within the planning system.
- The final set of commitments are areas where Flood Re will be 'Leading' in delivering innovation in responding to flooding. These include commitments to bring to the market a 'Flood Performance Certificate' which will enable assessments to be undertaken of property-level resilience to flooding. The final commitment is to continue to support Flood Re's already successful Build Back Better scheme into maturity.



Section 1

Flood Re's approach to transition

1.1 Section overview

This section explains Flood Re's approach to transition. It sets out Flood Re's operating model, explains how its success to date has been achieved through partnership with the insurance industry and Government. It explains the importance of a fixed end date and how climate change may mean the model is unsustainable beyond this date. Finally, it sets out Flood Re's Theory of Change, and how Flood Re uses its position to act as a wider catalyst of change in order to achieve its transition vision.

1.2: Flood Re's operating success and the company vision for post-2039 market

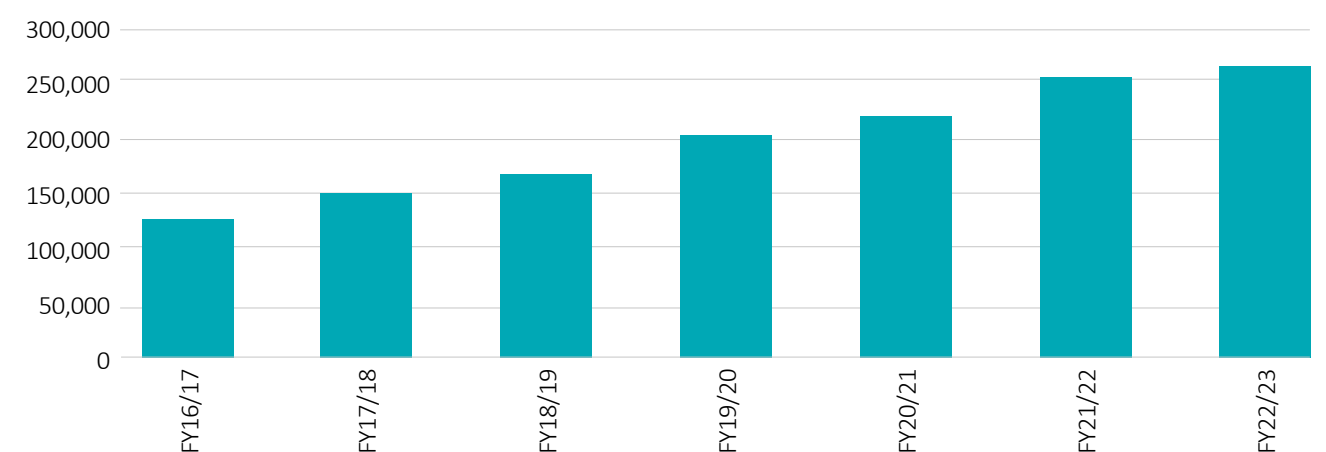
Since its launch seven years ago, Flood Re has developed a mature and successful operating model. It is a world first example of the insurance industry and Government working together to support the affordability of insurance for households at high risk of flooding and addressing the risk and costs of flooding in the medium term.

- Since its inception, **Flood Re has backed insurance for more than 526,000 households.**
- **Flood Re has transformed the availability of flood insurance to householders.** Before Flood Re, no-one with a recent flood claim could get quotes from five insurers on price comparison sites, now more than 95% can.¹³ Flood Re has kept excesses at £250 to reduce costs to householders who are flooded.

Flood Re's work towards exiting the insurance market is underpinned by this operational success and informed by insights from these operations.

The current success of the scheme also informs Flood Re's vision for the future. Flood Re's exit is not conditional on any criteria being met (see below). Nonetheless, the company is committed to working towards a situation where flood insurance remains both affordable and widely available once the market has transitioned to risk reflective pricing. This vision is at the heart of this plan. Below we outline the wider changes required for this vision to be realised and how Flood Re will work towards this.

Figure 1.2.1 The number of properties ceded to Flood Re has grown steadily since the scheme was established



¹³ Flood Re undertakes regular market analysis to monitor the availability of insurance products for households at risk of flooding.

1.3 The Flood Re model is one of partnership with the insurance industry to provide flood insurance to householders

Flood Re works with the insurance industry to provide flood insurance. But Flood Re is not an alternative to market-insurance, rather Flood Re works with commercial insurers to ensure availability.

- **Flood Re is directly funded by the insurance industry through a levy system.** This levy enables Flood Re to cap the cost of the flood element of home insurance for properties at high risk of flooding and offer a fixed excess for the flood peril element.
- **Flood Re is designed to be equally accessible to all insurers, big and small,** and the levy reflects this. In this way Flood Re supports an open and competitive market.
- **Individual insurers choose which properties to cede to Flood Re,** sets pricing and maintains the relationship with the customer.
- **In practice, whilst some householders exposed to flood risk might not be ceded to Flood Re,** they have the same insurance availability as other householders through a well-functioning market and can exercise the same choice to find a policy that suits them.
- **Insurers do not cede all at risk properties to Flood Re.** Their approach to ceding differs based on their underwriting appetite, overall portfolio and risk exposure.

After seven years of operating, Flood Re has supported a dynamic and competitive insurance market, where at risk householders can and do exercise choice as to their insurance provider and insurers chose which properties to cede to Flood Re to manage their risk. Central to the success of Flood Re is that householders do not need to know if their property is ceded, they will get the same service. There are properties which Flood Re has covered through different insurers and other properties which have come in and out of the scheme while the householder has stayed with the same insurer.

The result of this movement within the insurance market is that there are about **260,000 properties currently ceded to Flood Re, but more than 500,000 who have been ceded to Flood Re at some point since the Scheme's launch.** Even this is not the totality of at risk households in the UK because there are properties at risk of flooding that obtain flood insurance without Flood Re support. The willingness of insurers to offer insurance to these properties is aided by their ability to pool some of their other risks through Flood Re. The scheme is set-up in such a way that it is possible to have two properties on the same street, obtaining their insurance through the same company, at equivalent prices, but one property to be ceded to Flood Re and the other not.

This insight into the insurance market underpins Flood Re's approach to exiting the market. The market transition will not just be about the properties ceded to Flood Re at the point of exiting the market, rather the market transition will be about how the insurance market responds to the overall level of risk for UK domestic property. For this reason, Flood Re's Transition Plan looks at all households with flood risk, not just those ceded to Flood Re.

1.4 The costs of operating the Flood Re scheme

Section 64 of the Water Act 2014 states that Flood Re's primary purpose is to promote the availability and affordability of flood insurance for at risk properties "while minimising the costs of doing so". Flood Re is proud to have managed to repeatedly bring down the cost of the scheme, for both insured properties and the wider insurance industry (and ultimately all householders with insurance):

- **Flood Re has consistently maintained premiums in nominal terms or offered below-inflation premium increases.**
- **In 2019 Flood Re reduced the premiums charged to ceded properties by 12.5%** for buildings and 33% for contents cover. These charges were then held static in nominal terms until April 2023 when Flood Re introduced below-inflation increases in premium charges of 3.4%.
- **In 2022 Flood Re reduced 'Levy 1'** (which is funded by the wider domestic insurance industry) from £180m to £135.¹⁴ The Levy will be next set in 2025.

During the next transition period (2023-28) the scheme is likely to face increasing cost pressures for two reasons:

- 1) Inflation both in the costs of insurance claims and the wider economy.** Flood Re has up to now managed to insulate households from this through below-inflation premium rises.
- 2) Increases in the costs of reinsurance** due to high costs to insurers of climate-related flooding across the world in recent years. Worldwide reinsurance costs have risen by about 40% as a result of inflation and climate-related extreme weather.¹⁵

Flood Re will continue to seek to minimise the costs of operating the scheme and will seek innovative ways to mitigate against the rising costs outlined. However, ultimately this is an illustration of the costs of climate change that will be imposed across society

and the economy unless we limit greenhouse gas admissions and adapt to the levels of climate change which are already inevitable. This document lays out Flood Re's approach to supporting changes that will improve the UK's management of flood risk, in ways that will reduce pressures on the scheme.



¹⁴ Solvency and Financial Condition Report for the year ended 31 March 2022 (floodre.co.uk)

¹⁵ Howden's renewal report at 1.1.2023: The Great Realignment | Howden Broking (howdengroup.com)

1.5 Flood Re was always intended to be a time-limited market intervention

Parliament and the insurance industry always intended Flood Re to be a time-limited scheme, and so it will cease to exist in 2039. The intention was to give both Government and the insurance industry time to better manage flood risk; thereby reducing the cost of providing household flood insurance and removing the need for Flood Re.

If this is to happen, the challenge is to significantly reduce flood risk and its associated costs in the UK by 2039. As this document sets out, this is an important aim even for households that have insurance without the assistance of Flood Re, as it provides a range of benefits across the economy and society into the future. While insurance helps people to manage the financial risks of flooding, this does not mean a flood is a neutral event. It is highly disruptive and comes with a very high emotional toll.

- **Flooding causes personal misery and high levels of disruption for individuals, families and communities.** Having insurance reduces costs but does not eliminate them, nor does it eliminate the trauma and mental and physical health impacts often associated with flooding. Public Health England data shows that people experience high rates of anxiety, depression and post-traumatic stress disorder after a flood.¹⁶
- **There is a strong macroeconomic case to invest in flood defences,** regardless of the availability of insurance. The UK Government estimates that every £1 invested in flood defences saves £5 in property damages alone, and the £5.2bn investment in flood defences in England during the 2021-27 period will **prevent £32bn in economic damage caused by flooding.**¹⁷ Research commissioned by Flood Re found that investment in inland flood defences alone saved the UK £1.1bn a year.¹⁸ The research found that Storm Desmond would have caused damage worth three-and-a-half times as much without river water defences - £2.8bn rather than £0.6bn. Despite the benefits provided by the Scheme, there are good reasons why Parliament was right to make Flood Re a time-limited scheme.
- **Catalysing action:** A commitment to exit the market in 2039 ensures that Government, the insurance industry, lenders and householders are focussed and incentivised to take action to reduce the risk and cost of flooding.
- **Reducing market distortion:** While Flood Re is a successful model, its existence inhibits some of the market mechanisms which would signal flood risk, incentivise action to mitigate this risk and innovate to provide new solutions. In the long-term the aim should be to manage flood risk effectively so that Flood Re is not needed.

16 Mental health costs of flooding and erosion- GOV.UK (www.gov.uk)
17 Environment Agency – National Flood and Coastal Erosion Risk Management Strategy for England (publishing.service.gov.uk) There is similar investment in the devolved nations, see Section 2.
18 Inland flood defences save the UK £1.1 billion a year- Flood Re

1.6 Climate change means that the status quo is not an option

As understanding of climate change and its likely effects improves, the context in which Flood Re operates has been transformed. The Flood Re model of pooling risk will not necessarily be sustainable if these growing risks are not addressed. Since Flood Re was first conceived, climate change has gone from being considered a future phenomenon, to something increasingly impacting on our present climate. There is now an emerging consensus that global warming of 1.5°C is inevitable.¹⁹ The latest findings from the Intergovernmental Panel on Climate Change show that the world is on track for 1.5°C warming in all likely scenarios, with a 50% reduction in greenhouse gas emissions by 2050 required for there to be any hope of limiting temperature rises to 1.5°C.²⁰ Climate change makes severe weather events more likely and more severe, thus more expensive.

The impacts are already being felt now and are likely to get more significant. Extreme weather events around the globe are impacting insurers around the world, and this has a secondary impact in the UK by making reinsurance more expensive.



2022 saw devastating flooding in Australia and Pakistan which took the lives of more than 1,700 people and cost over \$30 billion in damages and economic costs.²¹ This, combined with a range of other climate-related extreme weather events (including summer hailstorms in France) have contributed to a significant increase in reinsurance costs, of nearly 40%.²²



New data shows that over the past 20-years the UK has generally become significantly wetter (particularly during summer) and is experiencing rapidly rising sea levels. All this contributes to the risk of flooding.²³



There is a strong social and economic case to invest in climate change adaptations now, to limit the impact of climate change on our economy and our communities. **The total cost of climate change damages to the UK are projected to increase from 1.1% of GDP at present to 3.3% by 2050.**²⁴



19 Global warming set to reach 1.5C in the near-term, UN reports | Financial Times (ft.com)
20 AR6 Synthesis Report: Summary for Policymakers Headline Statements (ipcc.ch)
21 Pakistan: Flood Damages and Economic Losses Over USD 30 billion and Reconstruction Needs Over USD 16 billion- New Assessment (worldbank.org)
22 Howden's renewal report at 1.1.2023: The Great Realignment | Howden Broking (howdengroup.com)
23 WEB-Progress-in-adapting-to-climate-change-2023-Report-to-Parliament.pdf (theccc.org.uk)
24 What will climate change cost the UK? Risks, impacts and mitigation for the net-zero transition- Grantham Research Institute on climate change and the environment (lse.ac.uk)

1.7 How Flood Re will approach transition in 2039

Until 2039 Flood Re will continue to deliver on its public purpose, as set out in the Water Act 2014 to “promote the availability and affordability of flood insurance for household premises”.²⁵ In delivering on this statutory objective, Flood Re will be guided by a Public Purpose Assessment (PPA).

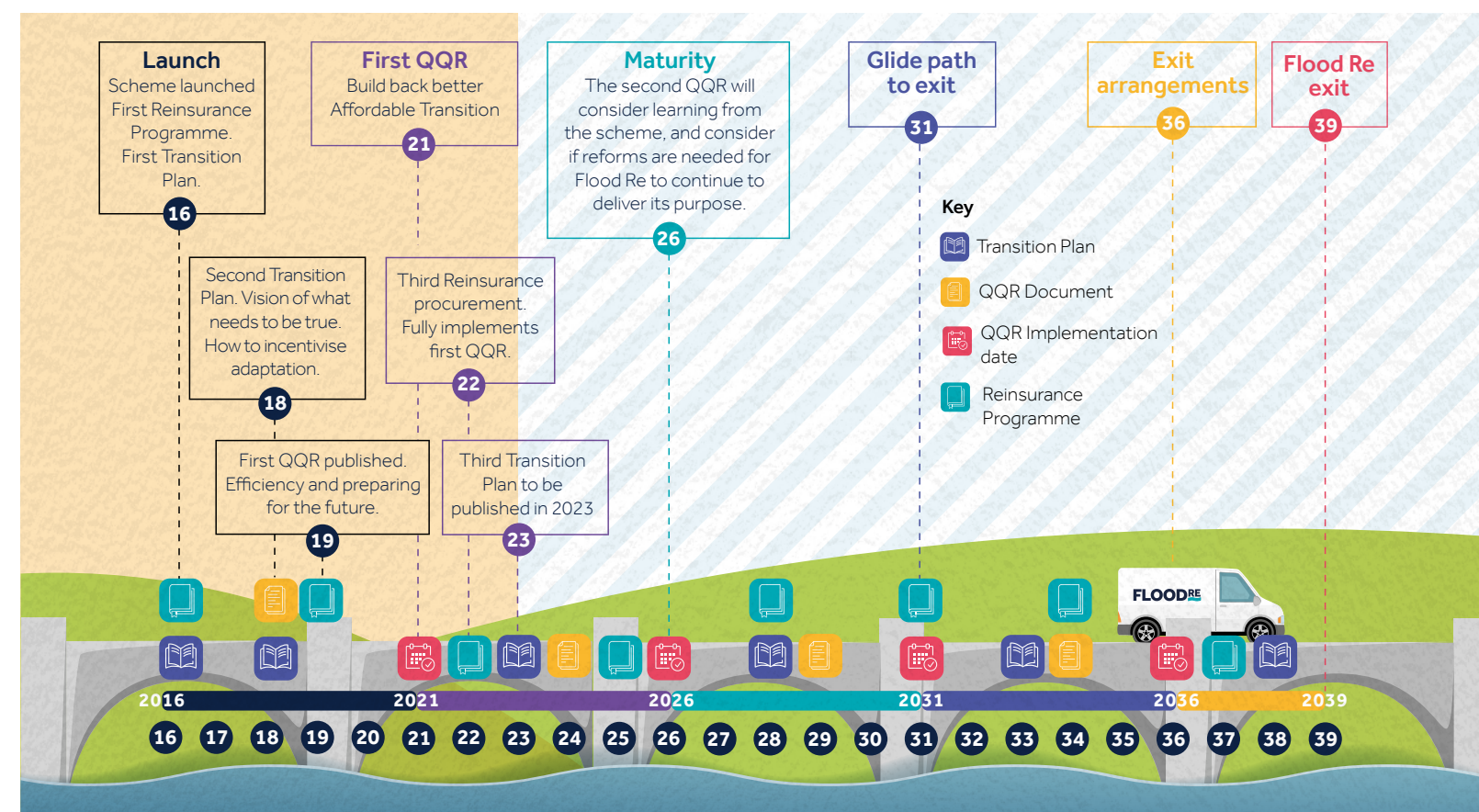
- 1. Affordable and available until 2039:** Flood Re will continue to work to ensure that those householders and communities at high risk of flooding are able to access and afford the insurance they need, up to the point at which it exits the market in 2039.
- 2. Promoting an effective market.** Flood Re was always designed to work through an open market. Consumer choice is a key part of the model and its success. Flood Re will continue to support an open and competitive market, and in the approach to 2039 will model and describe what a post 2039 market will look like.
- 3. Risk-reflective pricing** is the cost attached to flood risk by an open and competitive market. For this to remain affordable flood risk must be adequately managed.
- 4. A trusted custodian of public money.** Flood Re will continue to ensure the scheme remains viable and stable while continuing to minimise the cost of delivering the statutory purpose.

The conditions in which Flood Re operates are constantly evolving, not least because of climate change. In response Flood Re adopts an adaptive planning approach, based around three cycles:

- **Flood Re publishes a Transition Plan every five years.** This is an outward-looking plan which assesses the wider conditions impacting on the transition vision and engages partners to address shared challenges.
- **Flood Re undertakes a Quinquennial (every five years) Review of the Scheme's operations.** This review is focused on Flood Re's internal operations.
- **Flood Re buys reinsurance,** sets the liability limit (the level of protection required from its outwards insurance programme) and Levy 1 (the charge levied on the wider insurance industry) every three years.

Between now and Flood Re's exit from the insurance market, there will be several review points set out opposite:

Figure 1.7.1 Flood Re's roadmap to exiting the insurance market



Flood Re is a unique collaboration between the insurance industry and the Government. After Flood Re's exit in 2039, the ongoing governance and operation of the flood insurance market will be an issue for the insurance industry and the Government.

As administrators of the Scheme, Flood Re has a responsibility and a duty to help its partners in this task. The insights and expertise gathered by Flood Re during its operation will help inform consideration of the future state. As we get closer to 2039, Flood Re will seek to describe the potential market post-exit, explore options for future consideration and convene discussion between the core parties.

To allow sufficient time for any necessary legislative or regulatory changes Flood Re will begin this scoping in earnest in the Transition plan published in 2033. This document outlines the work Flood Re has done in this regard to date, and the issues that will need to be considered.

25 Water Act 2014 (legislation.gov.uk)

1.8 Flood Re’s Theory of Change

Flood Re’s vision is for affordable, risk-reflective pricing to be widely available when it exits the market. This is not a vision Flood Re can achieve on its own, and is dependent on a wider set of conditions being met across three core areas, or “buckets”.



While many of these wider determinants are outside the direct control of Flood Re, the unique industry/Government partnership model enables change to be achieved across a wider sphere. Flood Re has achieved an impact greater than its size in the past and has even greater ambitions for the next period. This is how Flood Re seeks to bring about change:

- Understand** Flood Re increases the knowledge base effectively addressing flood risk. This is achieved by undertaking and supporting cutting edge research into different approaches and sharing insights from our own operations. For example, the funding of research to unlock new approaches to mitigating flood risk, including how to assess Property-level Flood Resilience.
- Engage** Flood Re’s unique position between Government and industry enables it to facilitate high-level dialogue and the sharing of insights. Flood Re works in partnership to support wider initiatives and develop broader coalitions able to deliver meaningful change.
- Lead** Flood Re pioneers new approaches and structures that it directly controls. The creation of Flood Re was an innovative way to pool climate-related risk, and innovation remains in its DNA. The 'Build Back Better' model (households who suffer flooding will be supported to have their home restored with flood-resilient adaptations) has led the way in changing how the insurance industry and householders respond to flood claims.



Section 2

The determinants of availability and affordability

2.1 Overview of this section

Flood Re's vision is for a market where householders at risk of flooding can obtain affordable home insurance without the existence of Flood Re from 2039. Realising this vision is dependent on a wide range of factors, mostly outside of Flood Re's direct control. Since 2020, to track progress across the issues impacting on flood insurance availability, Flood Re has created a set of indicators for each of the three transition 'buckets' outlined below. Flood Re's Annual Report includes a dashboard to assess progress for each bucket, as part of our wider commitment to be transparent about the inherent challenges involved in Flood Re's exit from the market.

This section explains progress against each of these indicators in greater detail, as well as the work Flood Re has undertaken to support progress in each area.

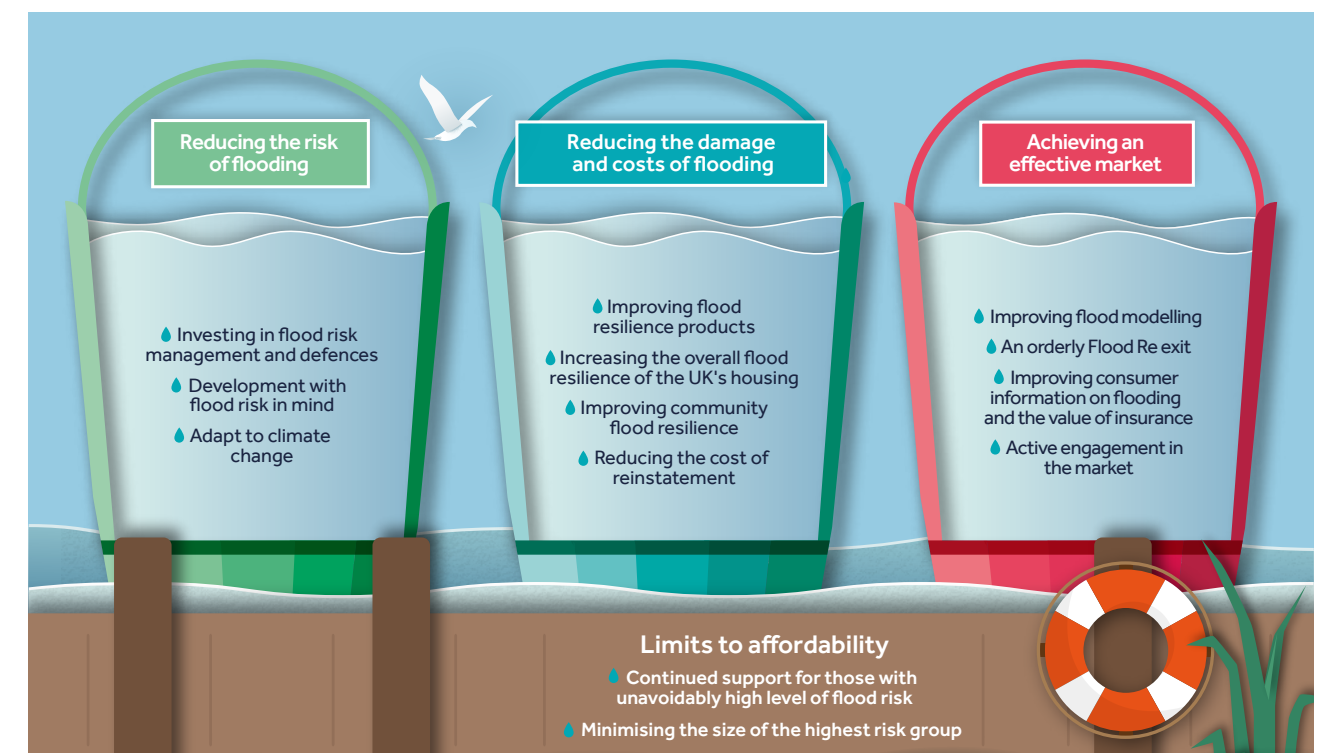


Figure 2.1 Flood Re's three transition buckets

Flood Re assesses progress against each indicator according to two criteria in order to form an indicative judgement:

1. The scale of progress required to meet Flood Re's vision for each indicator (set out in the following pages)
2. Recent progress towards that vision

2.2 Bucket 1: Reducing the risk of flooding

Summary

The availability and affordability of flood insurance is dependent on the overall risk of flooding. The first bucket represents macro-level factors contributing to overall flood risk, which include public policy on investment in flood defences, environmental management and planning, as well as evolving risks arising from climate change. The Government has been active in its spending and policy development to address flood risk. However, risks are growing, and despite UK leadership in reducing emissions, there is much more to do. Action to reduce greenhouse gases emissions remains urgent, and a similar focus is now needed on adapting to climate change. To prevent risks rising further, action is also needed to ensure new housing development does not increase the overall flood risk assessment profile of the UK.

2.2.1 Indicator 1 - Investing in flood risk management and defences

Flood Re vision

National and local governments continue to invest in improved flood risk management strategies and flood defences. This should include the maintenance and further development of existing flood defences to ensure that, where economically justified, at risk properties are adequately protected.



²⁶ <https://www.gov.uk/government/publications/barnett-consequential-and-the-barnett-guarantee/barnett-consequential-and-the-barnett-guarantee>

This makes a major increase in spending, of 54% in real terms.²⁷ This means defences are now being upgraded to keep pace with growing risk from climate change. This represents major progress compared to previous years where spending was not keeping pace with growing risks. However, the Committee on Climate Change's flooding risk assessment highlights that a level of no net increase will still mean continued high risk.²⁸

Maintenance of flood defences and drainage systems are as important as flood defences. With climate change leading to more volatile and unpredictable weather, there is a clear risk that surface water flood risk will increase between now and Flood Re's exit from the market in 2039. **If global warming is not kept below 2°C, the risk from surface water flooding will increase significantly, a 2°C rise is expected to increase surface water flooding risk by 59% by 2050 and by 83% by 2080.**²⁹ The National Infrastructure Committee (NIC) has recommended Government set out a long-term target for reducing levels of surface water flood risk. Indicative modelling by the NIC has found that investment, mostly by Government

and water companies, of £12bn over 30 years could reduce the number of properties at surface water flood risk by 60%.³⁰ The NIC has also raised concerns about the number of properties at risk because of poor maintenance of flood defences. **Their data indicates that in 2019-20, 190,000 properties in England were at risk of flooding due to flood defence assets being below required condition;** pointing to the need for continued action to maintain existing defences, though overall 94% of flood defence assets in the most critical settings are in at least adequate condition.³¹

Natural Flood Management (NFM) and Nature Based Solution (NBS) also have important roles to play. Flood defences have traditionally focused on hard (engineered) defences, but NFM has become an increasingly important component. Catchment-scale NFM projects have the potential to reduce flood risk by increasing the capacity of land to hold water and reduce run off, alongside co-benefits such as carbon sequestration or biodiversity net gain.³²

What has Flood Re done?

Flood Re has worked with the UK Government and the Environment Agency to inform policy in the area of Flood and Coastal Erosion Risk Management (FCERM), including the EA's FCERM strategy. Flood Re has commissioned pieces of independent research into the benefits of flood defence spending and maintenance, which made the economic case for continued and increased investment in flood defences.

Flood Re is one of the founding partners in the Wyre Valley NFM Pilot.³³ The pilot went live in March 2022 and is testing an innovative structure to attract private sector investment and payment for biodiversity, carbon sequestration, and flood management benefits through NFM. The initial phase of the project will run until 2031, with Flood Re acting as a research partner supporting the measurement of the year-over-year effectiveness of the NFM interventions.

²⁷ NAO, as above.

²⁸ WEB-Progress-in-adapting-to-climate-change-2023-Report-to-Parliament.pdf

²⁹ <https://www.theccc.org.uk/wp-content/uploads/2021/06/Progress-in-adapting-to-climate-change-2021-Report-to-Parliament.pdf>

³⁰ Surface water flooding- NIC

³¹ AIMS Spatial Flood Defences (inc. standardised attributes)- data.gov.uk

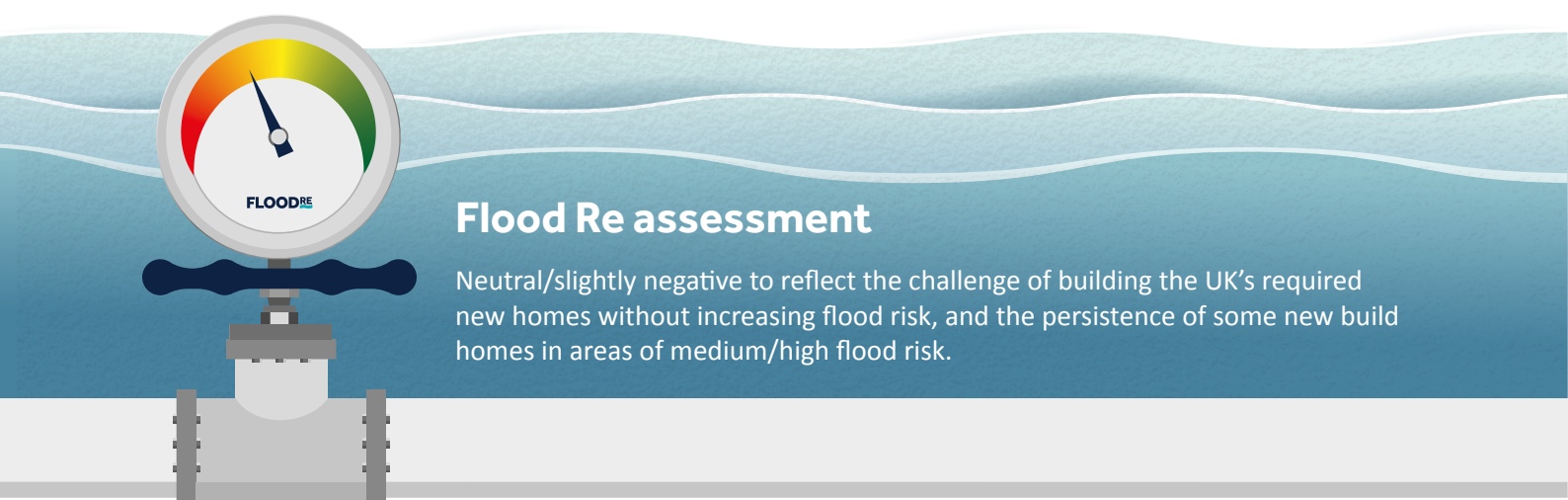
³² These projects all fall under the heading of Nature-Based Solutions

³³ <https://www.greenfinanceinstitute.co.uk/gfihive/case-studies/the-wyre-river-natural-flood-management-project/>

2.2.2 Indicator 2 - Extent of housing development in areas at flood risk

Flood Re vision

New developments do not raise the risk of flooding for communities and the nation as a whole. Where appropriate, properties built in at risk areas are developed in such a way that current and future risk is managed.

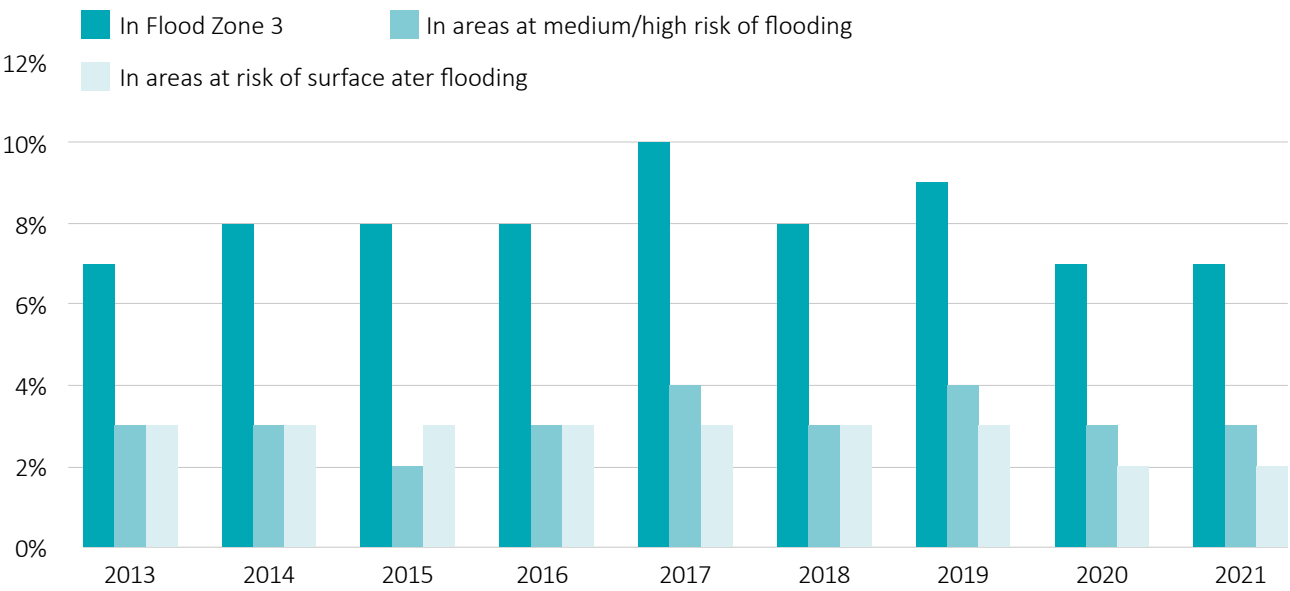


Underlying this is the strong need for more housing in the UK. Achieving this without increasing the overall level of flood risk remains a challenge. **The number of properties in the flood plain is expected to double over the next 50 years.** ³⁴ In each of the UK nations planning policy differs, but each country has policies in place to minimise building in at risk areas or to build in a resilient manner. Evidence as to the efficacy and implementation of these measures is mixed.

For example, research from the Environment Agency (EA) demonstrated that over half of Local Planning Authorities surveyed rarely or never inspected new developments for compliance with flood risk planning conditions. ³⁵ Research commissioned by LV=/Localis found that 31% of homes in the five most flood-prone districts were approved without a flood assessment, ³⁶ and **research from AXA found that between 70,000 and 120,000 homes were built in flood prone areas in England from 2009 to 2020.** ³⁷

34 Long-term investment scenarios (LTIS) 2019- GOV.UK (www.gov.uk)
35 Review of Policy for Development in areas at flood risk (publishing.service.gov.uk)
36 https://www.localis.org.uk/wp-content/uploads/2021/11/042_Floodplains_WebAWK.pdf p6
37 <https://www.axa.co.uk/newsroom/media-releases/2021/axa-pushes-safety-and-sustainability-to-the-heart-of-planning-reforms/> and <https://www.aviva.com/newsroom/news-releases/2021/07/seven-steps-to-help-protect-UK-homes-businesses-and-communities-from-climate-change-impacts/>

Figure 2.2.2.1 New homes built in flood risk areas (England only) ³⁸



The chart above shows the proportion of properties built in England that are at some level of flood risk. Flood Zone 3 means a greater than 1% of annual risk of flooding from rivers, or 0.5% from the sea.

Source: DLUHC land use change statistics <https://www.gov.uk/government/statistics/land-use-change-statistics-2021-to-2022>

Nevertheless, progress is being made. For example, in England the August 2022 update to the Planning Policy Guidance for Flood Risk and Coastal Change (PPG) represents significant progress by making clear that planning policy must consider the whole life span of a development (75 years for new developments and

100 years for new settlements) and supporting a holistic approach to sustainable drainage systems.³⁹ In Wales, the proposed update to planning policy puts a much greater focus on considering climate change and flood risk in planning decisions.⁴⁰

What has Flood Re done?

Flood Re has worked closely with the Town and Country Planning Association (TCPA) between 2020 and 2022 to help build capacity within local authorities to plan appropriately for flood risk in development decisions. Flood Re also works closely with the Association of Directors of Environment, Economy, Planning & Transport (ADEPT) Flood and Water Management Group to share expertise and insight highlighting the need for consideration of the economic consequences of developing in locations prone to flooding.

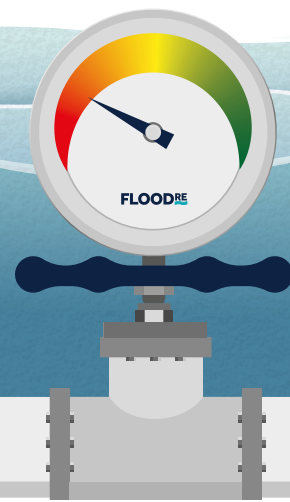
Flood Re and the Association of British Insurers have issued joint statements around several critical planning issues. Flood Re has also engaged mortgage lenders regarding lending decision assumptions, planning policy and flood risk.

38 Flood Zone 3 means a greater than 1% of annual risk of flooding from rivers, or 0.5% from the sea.
39 <https://www.gov.uk/guidance/flood-risk-and-coastal-change>
40 Technical advice note (TAN) 15: development, flooding and coastal erosion | GOV.WALES

2.2.3 Indicator 3 - CO₂/GHG emissions and the likely climate pathway

Flood Re vision

CO₂/GHG emissions are reduced to a level that can limit global temperature increase to 2 degrees Celsius, as per the Paris agreement, in order to limit the worst impacts of climate change. The UK adapts to the changes in flood risk across the course of the climate change pathway.



Flood Re assessment

Negative, despite clear Net Zero commitments from the UK Government and many leading companies. This is because global emissions are rising, and global warming now looks likely to surpass 1.5°C in the near term.

Global emissions continue to rise at a level that will see temperatures rise well beyond 2°C.⁴¹ The impacts on flood risk will be significant. The Environment Agency estimates that, compared to a 1981-2000 baseline, a 2°C rise in temperature would be expected to lead to:

- **An increase in winter rainfall of 6% by the 2050s.**
- **A rise in London's sea level of 23cm by the 2050s.**
- **Peak river flows that are up to 27% higher in the 2050s.**

The Committee on Climate Change expect annual damages for flooding in the UK to increase 27% by 2050 under a 2° scenario, and 44% under a 4° scenario.⁴³

Other research puts **increases in annual flood damage cost in the UK at between 13% and 23% over the next century.**⁴⁴ As the CCC has noted, "...recent global Net Zero pledges and commitments to reduce emissions by 2030 have improved the prospect of limiting global warming to 2°C by 2100, but they must be delivered in full and extended further."

At both industry and Government level, policies focusing on adaptation to climate change are less advanced. In the UK, a wide body of organisations, including the CCC and National Infrastructure Commission have highlighted the need for more to be done to adapt UK infrastructure to climate change.⁴⁵

⁴¹ AR6 Synthesis Report: Climate Change 2023 — IPCC

⁴² Adapt or die, says Environment Agency- GOV.UK (www.gov.uk)

⁴³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1047003/climate-change-risk-assessment-2022.pdf p3

⁴⁴ <https://www.bristol.ac.uk/news/2023/march/flood-risk.html>

⁴⁵ <https://nic.org.uk/news/nic-and-ccc-call-for-urgent-action-to-protect-infrastructure-from-climate-risks/>

What has Flood Re done?

Flood Re is only a small part of this global effort to achieve emissions reductions, but plays a supporting role in encouraging the transition to a low-carbon economy.

The scheme is a world-leading example of a successful mechanism for adaptation, which has been successfully showcased at COP26 and COP27. Flood Re is a concrete example of innovative and effective collaboration between industry and government. The scheme's ability to evolve and improve, through programmes like Build Back Better, further reinforce the scheme as an effective model that can manage risks through pooling, and play a part in reducing them through policy innovation. Organisations and governments around the world have approached Flood Re for advice on establishing similar schemes.



2.3 Bucket 2: Reduce the damage and cost of flooding

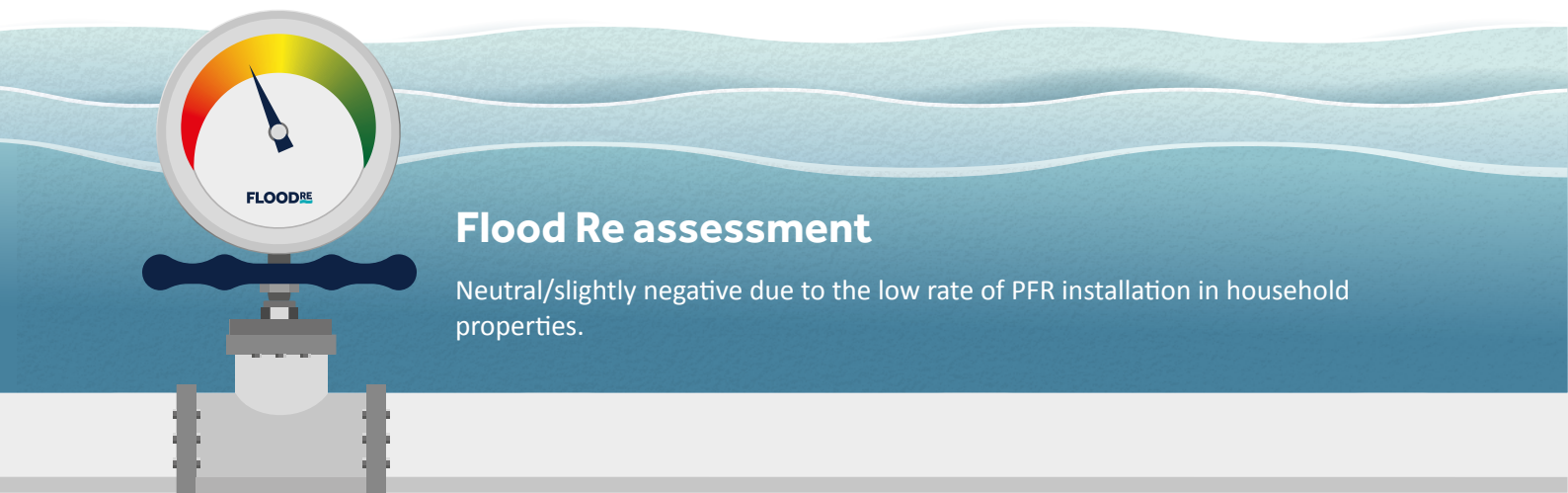
Summary

Bucket 1 covers progress towards reducing floods occurring. Bucket 2 covers progress to reduce the costs and disruption caused by flooding. There are a range of measures that can be taken by individual households and communities to reduce the impact of flooding, from signing up to flood alerts to installing Property Flood Resilience measures. There is a significant challenge to engage householders and communities with the risks, adaptations and resilience measures necessary to better protect their homes from flooding. As climate change increases, a concerted effort across the public and private sector in partnership with local communities is needed to mainstream these approaches.

2.3.1 Number of properties that benefit from Property-level Flood Resilience (PFR)

Flood Re vision

Ensuring that community and property-level resilience and resistance measures are installed and used where it is cost-effective to do so.



PFR initiatives have been underway for over 15 years in the UK, but take-up remains low. **Research recently published by Flood Re found that this was just over 500 homes in 2021-22.** ⁴⁶

Uptake is hampered by behavioural and market barriers including a persistent lack of awareness of local flood risk, uncertainty around responsibility for flood risk, lack of understanding of PFR measures, emotional barriers, and the fact that the PFR market is still relatively immature.

Since Flood Re’s last transition plan, significant progress has been made in ensuring quality standards in PFR, including a British Standards Institute kitemarking process for products ⁴⁷ and the introduction of a Code of Practice for PFR. ⁴⁸ Despite these significant improvements in the market structure, the low rate of PFR installation demonstrates more is needed to encourage take-up of PFR by individual households, including public and private sector funding and incentives.

What has Flood Re done?

Flood Re has played a key role improving the evidence to support PFR. Flood Re collaborated with University of West England (UWE) to demonstrate the effectiveness of PFR interventions for high-risk properties ⁴⁹ and analysis of claims from 2013-2019 established that low-cost resistance and resilience measures effectively limit damage for most properties. ⁵⁰

Flood Re launched 'Build Back Better' in 2022. This offers eligible policyholders up to an additional £10,000 to implement PFR and recovery/resilience measures as part of a claim post-flood, above and beyond reinstatement to the property’s original condition. For householders in areas prone to flooding, this can break the cycle of repeated damage and rebuilding, with properly installed PFR measures meaning householders can be back in their property in days as opposed to weeks, months or many months.

In 2022, the Environment Agency, Middlesex University, Defra and Flood Re collaborated on a pilot project in East Peckham, Kent. The project delivered a proof of concept for a PFR scoring methodology using Middlesex University’s industry-standard Multi-Coloured Manual. A pilot certificate was prepared allowing the homeowner to better understand the PFR measures installed and their expected impact.

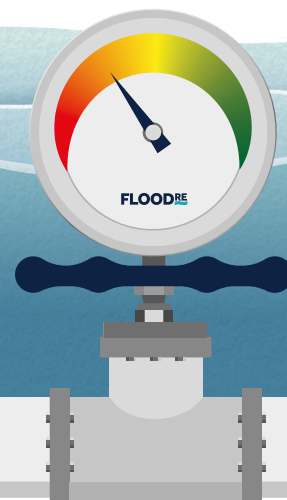
Flood Re has supported the 'Floodmobile', a mobile display of PFR products that travels to communities impacted by flooding to demonstrate the benefits of PFR, and is sponsoring a Floodmobile for Scotland (see more details below). ⁵¹

46 https://www.floodre.co.uk/wp-content/uploads/20759_Flood_Re_PFR-Report_2023.pdf
47 The BSI Kitemark for flood resistance products | BSI (bsigroup.com)
48 Code of practice for property flood resilience (thefloodhub.co.uk)
49 https://www.floodre.co.uk/wp-content/uploads/UWE-report_Evidence-review-for-PFR_Phase-2-report-1.pdf
50 <https://www.floodre.co.uk/wp-content/uploads/Key-Highlights-the-evidence-base-for-property-flood-resilience-v6-FINAL-1.pdf>
51 The Ox-Cam Pathfinder project- Introducing the Floodmobile- Creating a better place (blog.gov.uk)

2.3.2 A robust and sustainable market for flood resistance products

Flood Re vision

A well understood and accredited range of high-quality flood resilience and resistance measures are available to households across the UK.



Flood Re assessment

Slightly negative, due to the small size of the PFR market.

Research by Flood Re into the market for PFR products found that it remains small with significant barriers to growth. This contrasts with clear evidence that PFR can play a significant role in reducing flood risk. Research from JBA Risk Management found that for flood risk to be held constant in the face of climate change, **investment in PFR will need to be in the order of £2.4-£3.2bn by 2050**,⁵² which would necessitate a ten-fold expansion of the industry.

Previously, peaks in demand resulted in substitute products and concerns about the quality of installations. In response, the industry and public sector bodies have focused on developing quality and standards across the industry. This work has culminated in a Code of Practice (CoP) for the effective delivery of PFR, which was developed between 2018 and 2020.⁵³ CoP guidance

and training is now available from CIWEM (the Chartered Institute of Water Engineers and Management) which is enhancing the capacity of the industry to deliver PFR in the right way.⁵⁴ As mentioned above, a BSI kitemark for PFR products was published in 2019 and certification achieved for an initial set of products and facilities in 2021. This focus on quality and standards in the market will help support uptake of PFR by building homeowner confidence.

Build Back Better (BBB) will also assist development of the market, and planning is underway for the most effective way to meet surges in demand following a major flood. However, peaks and troughs in demand remain a challenge for the industry. **Overall, more needs to be done to achieve progress towards a mature market and robust demand for PFR.**

⁵² <https://www.jbarisk.com/news-blogs/jbas-study-reveals-impact-of-property-flood-resilience-measures/>

⁵³ The CoP includes six standards specifying what should be achieved when delivering PFR, from design (hazard assessment, property survey, options development) through construction (construction and commissioning/handover) and operation (operation/maintenance).

⁵⁴ Property Flood Resilience Industry Training- CIWEM

What has Flood Re done?

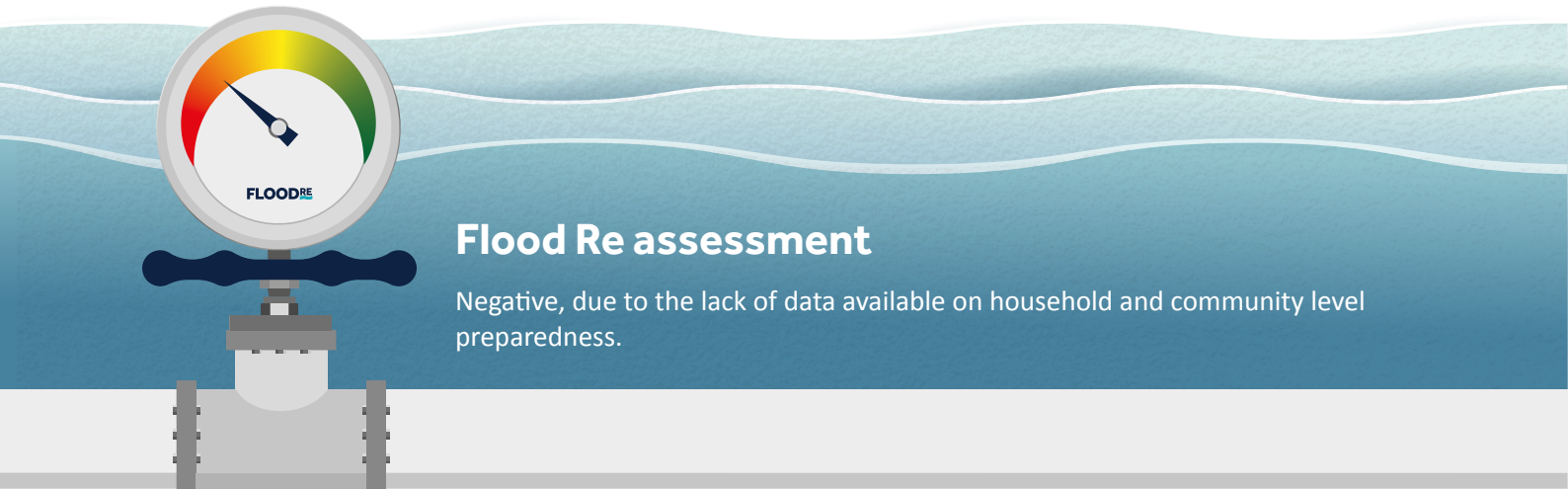
Flood Re has been at the forefront of the changes to the PFR industry working in partnership with the insurance industry and government. Flood Re Chairs the PFR roundtable, an industry-wide group instrumental in developing the CoP, standards, and in developing a forum for addressing PFR issues. Flood Re contributed to the development of a BSI standard for products. Flood Re's 2023 report on the PFR sector has helped insurers and firms to understand the supply and the market for PFR products and services, and plan appropriately.



2.3.3 Level of engagement of communities with flood preparedness

Flood Re vision

Communities and households at risk of flooding develop plans for the onset of flooding and take appropriate action to reduce the risk of flooding and potential extent of damage, once warnings are issued. Reliable, accurate and trusted sources of information on flood risks and flood events exist so that individuals and communities have the information they need to take action.



There are a number of steps that can be taken at the household or community level to reduce flood risk, if communities are engaged and signed up to warnings. Simple steps, such as mounting removable flood gates and moving valuable belongings to higher floors, can significantly limit flood damage. Community based organisations are a key trusted source of information and guidance.⁵⁵

Levels of awareness and engagement vary. In some communities, flood groups and partners make important contributions. However, limited resources and other priorities reduce the ability for statutory partners to support them. The response to recent floods has highlighted the lack of capacity.

For example, the Independent Review of flooding in London in July 2021 noted that the inability of organisations to share data, and co-ordinate emergency preparedness actions had undermined the response.⁵⁶ The report highlighted the lack of effective communication between stakeholders and to residents before, during, and after the events and how this had impeded the ability of all parties to take action.⁵⁷

There is a lack of data collected on community preparedness, such as the proportion of at risk communities where multi-agency flood emergency plans are in place, the proportion of at risk communities who understand how they would respond as a community to flooding, and the proportion of at risk areas where community members participate in event response activities. All of these have been identified by the Environment Agency as useful indicators for understanding community preparedness.⁵⁸

55 https://www.bi.team/wp-content/uploads/2021/08/210621-EA-Flood-resilience-report_final-draft.pdf
56 <https://londonfloodreview.co.uk/wp-content/uploads/2022/07/London-Flood-Review-Stage-4-Report-for-Policymakers.pdf> section- domain appears to have expired, summarized in:
<https://www.watmagazine.co.uk/2022/07/19/london-flood-review-concludes-with-recommendations-for-capitals-future-flooding-resilience/>
57 London Flood Review Stage 4 Report, section 2.2, p7
58 Measuring resilience to flooding and coastal change- GOV.UK (www.gov.uk)

What has Flood Re done?

Flood Re is not a public facing brand and therefore works through trusted national and community organisations to promote flood awareness. In 2023 this has seen Flood Re partner with the Environment Agency to launch an innovative campaign to engage householders with the possibilities of PFR (see below for more details).

Flood Re has worked with the National Flood Forum (NFF) and Scottish Flood Forum (SFF) to improve household flood risk awareness, and empower flood-risk communities. In 2020 Flood Re ran campaigns 'Let's talk about Flooding' and 'Tackling Flooding Together' with NFF and SFF. Flood Re supported the launch of the NFF's Flood Risk Communities Charter in Parliament,⁵⁹ which helped emphasise to politicians and other key stakeholders the importance of communities being placed at the heart of flood risk management.

Flood Re partnered with the Environment Agency for the Property Flood Resilience 'Pathfinder' project for the Oxford-Cambridge region. One of the project's legacy outputs was a 'Floodmobile' to demonstrate over 50 resilient adaptations for the home, and the Pathfinder projects helped raise awareness of climate change, flooding, and the need for resilience in UK regions. In 2024 a second Floodmobile will be completed and deployed in Scotland, in collaboration with the SFF.

Flood Re is also a partner in the Construction Industry Research and Information Association ongoing project around guidance for community maintenance of local assets,⁶⁰ which should empower local community groups to undertake safe, appropriate and routine maintenance of local flood risk infrastructure.

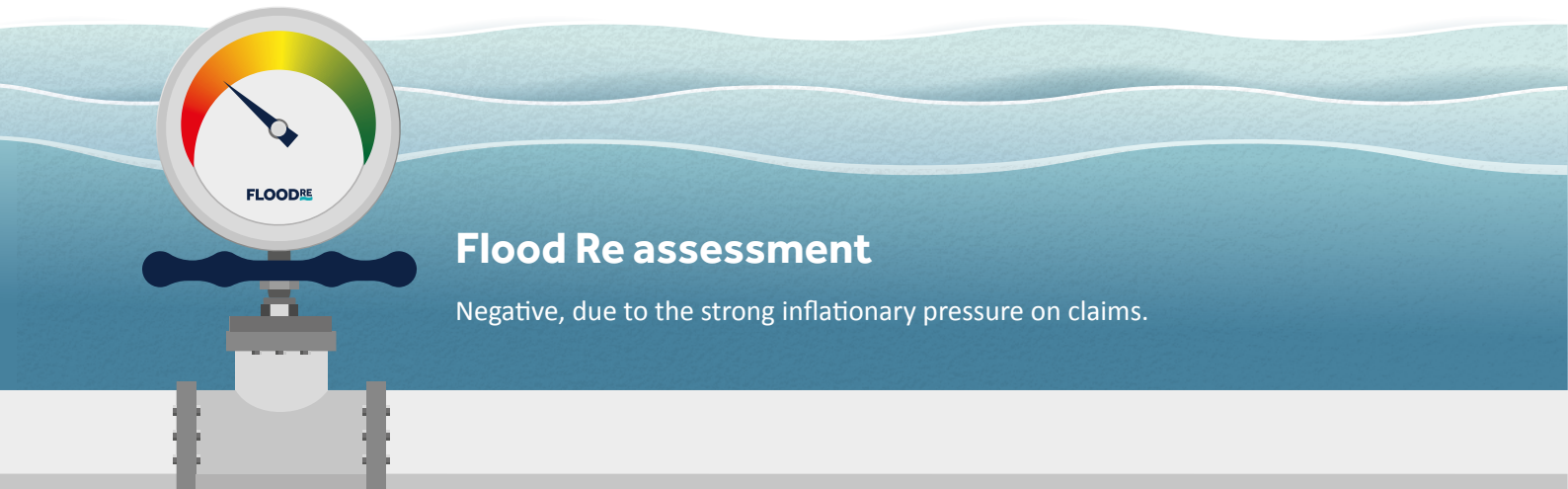


59 https://nationalfloodforum.org.uk/wp-content/uploads/2019/11/Charter_FINAL.pdf
60 Guidance for community maintenance of local assets

2.3.4 Cost and time taken to settle claims

Flood Re vision

Improved claims management, the sharing of best practice and innovation and technological advances in the reinstatement process mean that the average cost of reinstatement comes down over time.



Bringing down costs of reinstatement is a key issue for securing an orderly Flood Re exit; a decline in costs of claims would allow for a gradual reduction in the Flood Re subsidy, lessening the possibility of the 2039 'cliff edge'.

The **average cost of claims in 2021 for repairing an insured property and replacing its contents after flooding was £20,094** and the damage to peoples' health and wellbeing is often long-lasting.⁶¹

However, a high inflationary environment in 2022/23 with triple digit increases in the cost of some materials is creating upward pressure on insurers' costs.⁶² Other factors are also driving up the overall risk profile including increasing reinstatement costs, reduction of the number of builders / craftspeople and the large numbers of super-basements being permitted by local authorities.⁶³ The cost of alternative accommodation has also increased.

61 It is important to note that this average cost disguises a wide range of outcomes for different types of event, and for severe flooding, average costs per claim can be multiples of this amount. Mental health costs are not included in any figures, but in June 2020 were estimated at costing thousands of pounds per adult per flood event. A method for monetising the mental health costs of flooding (publishing.service.gov.uk) Costs estimated at £1,878 per household for less than 30cm flooding, up to £4,136 for more than 100cm flooding. Calculations based on estimated time away from work, hospitalization and drug costs, and adjusted for the fact that many don't seek treatment and suffer from other factors.

62 <https://www.marsh.com/ng/industries/construction/insights/inflation-the-impact-on-insurance-for-the-construction-industry.html>

63 A Newcastle University study of 4,650 London basements permitted between 2008 and 2017, 785 were large (at least 2 stories), and 112 were 'mega' (3+ stories or other configurations)

Flood Re's operational experience has shown that properties with multiple claims account for a disproportionate share of claims and costs. In relation to the claims paid by Flood Re, **around 10% of the homes involved have experienced multiple events and these make up around 17% of Flood Re's paid claims to date**. Like-for-like replacement that does not substantially alter a home's flood risk and resilience profile will remain a costly and time-consuming process. Homes at the highest risk of flooding are strong candidates for PFR to be installed, and Build Back Better is an important opportunity to help bring down the costs associated with the most frequently flooded homes.

What has Flood Re done?

All of Flood Re's work to support the take-up of PFR measures, most notably BBB, are aimed at promoting PFR take-up, because PFR is the most effective way at reducing the damage of a flood, reducing costs and length of disruption.



2.4 Bucket 3: Achieve an effective market

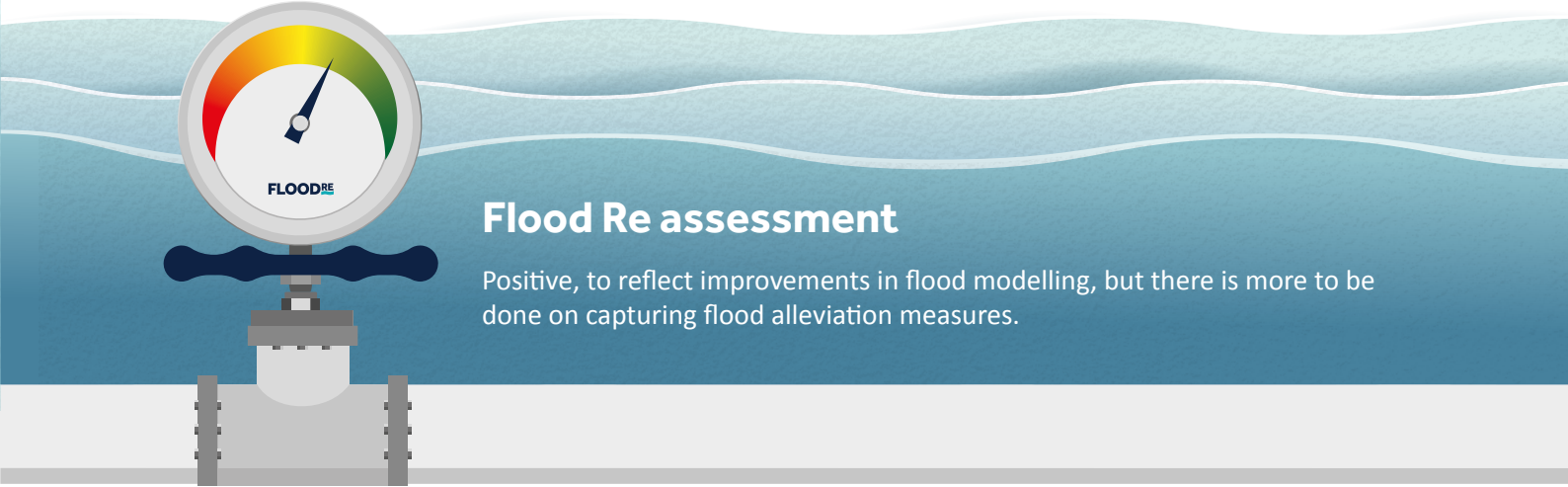
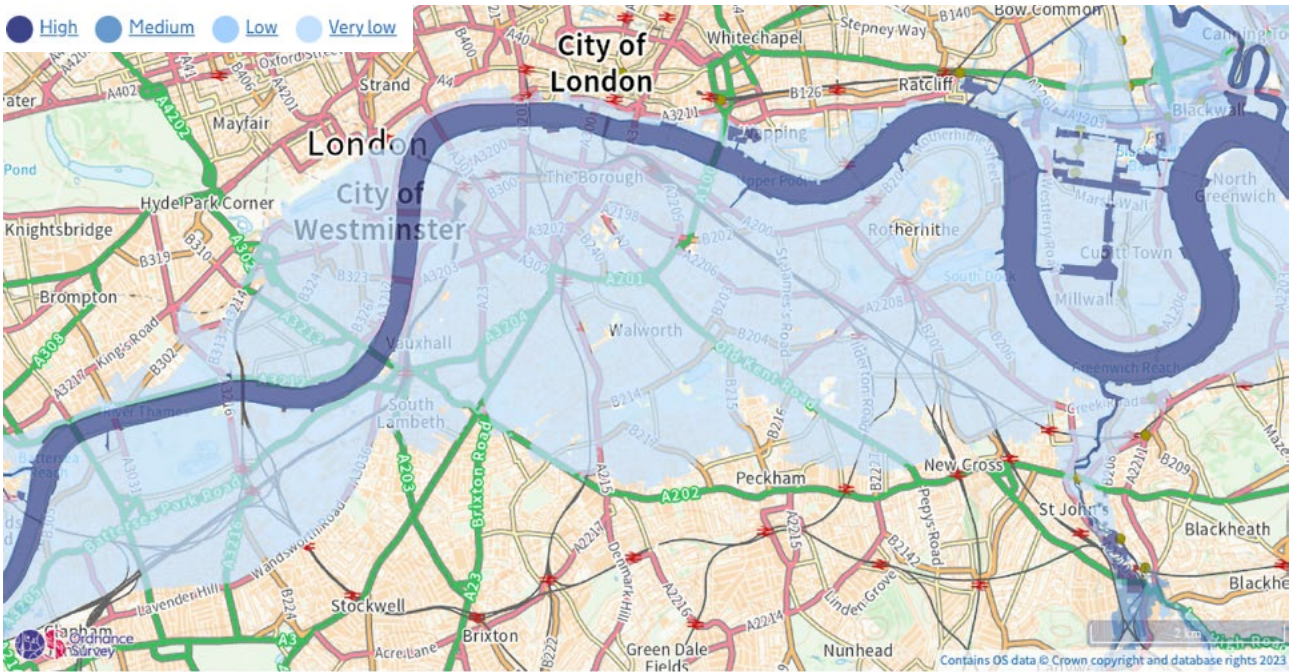
Summary

Flood Re’s entry into the market has had a substantial impact in promoting availability and affordability of insurance for households at risk of flooding. The industry has been actively engaged in finding market-led solutions to risks, although more will need to be done on a broader range of issues as 2039 approaches, with a lack of householder awareness or acceptance of flood risk remaining a barrier to an effective market.

2.4.1 Improved quality and use of flood models

Flood Re vision

The quality and precision of available data on UK flood risk continues to improve, and informs householder understanding of insurer pricing for flood risk (rather than simply experience of a claim). Modelling is updated based on new information on risk and defences. Household and community risk mitigation actions can be recognised in risk assessments and pricing.



With better information and better flood models, insurers can make more informed choices about which properties are at risk. This information can be used to target resilience initiatives towards higher-risk households and these householders can be incentivised to take action to improve the resilience of their homes.

Flood Re undertakes periodic evaluations of the available flood models. ⁶⁴ Flood Re’s 2021/2022 assessment showed that the quality of models and the effectiveness of their use has been improving, but it also highlighted improvements that are still needed. In particular, Flood Re identified the need to make property-level data more accurate and better reflect surface water

risks. Government has also committed to advancing the modelling, forecasting and communication of surface water flood risk in a collaboration between Defra, the Environment Agency, Flood Forecasting Centre and the Met Office. ⁶⁵

There are inevitable delays in model vendors capturing the benefit of improvements to existing flood defences or the building of new flood defences and delays in capturing this information can have an adverse impact on consumer pricing. In particular, flood models need to be able to capture Natural Flood Management techniques and PFR adaptations so that these can feed through to lower consumer prices.

What has Flood Re done?

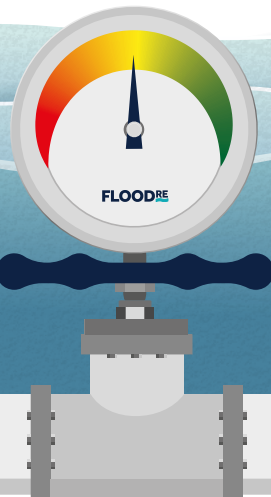
Flood Re evaluates flood models in the market every three years. This work has allowed Flood Re to engage with insurers and model vendors and to evaluate the quality of models and the availability of data. Flood Re also collaborates with individual risk model vendors on discrete research tasks and shares the findings with the market where this can lead to overall improvements in practice.

⁶⁴ This exercise accesses commercial sensitive flood models and therefore Flood Re is now able to publish the findings.
⁶⁵ Surface water management: a government update- GOV.UK (www.gov.uk)

2.4.2 Effective level of Flood Re’s impact on the market

Flood Re vision

In 2039, when Flood Re is wound down and exits the market this should be managed to ensure an orderly exit and that at risk households understand in advance the likely impact on their future insurance bills and the action they can take to mitigate any potential impacts.



Flood Re assessment

Neutral, reflecting that Flood Re’s impact on the market is largely in line with the expectations of the scheme and there is no evidence the scheme is adversely impacting market functioning.

Since 2016, Flood Re has been collecting data on availability and affordability of household insurance, via price comparison websites (PCWs) for those with flood claims in the last five years (the group that had previously experienced the greatest difficulty obtaining insurance). **Results show that previously this group struggled to obtain even two quotes, but can now obtain 5, 10 or 15 quotes, more than 90% of the time.** Average quotes for the most at-flood-risk properties are now typically in the hundreds of pounds compared to the thousands before Flood Re.

The market is beginning to actively prepare for Flood Re's exit in 2039. For example, in 2021/22, the Bank of England's Climate Biennial Exploratory Scenarios (CBES) included specific discussion of the risks arising to insurers from Flood Re’s 2039 exit from the market.

What has Flood Re done?

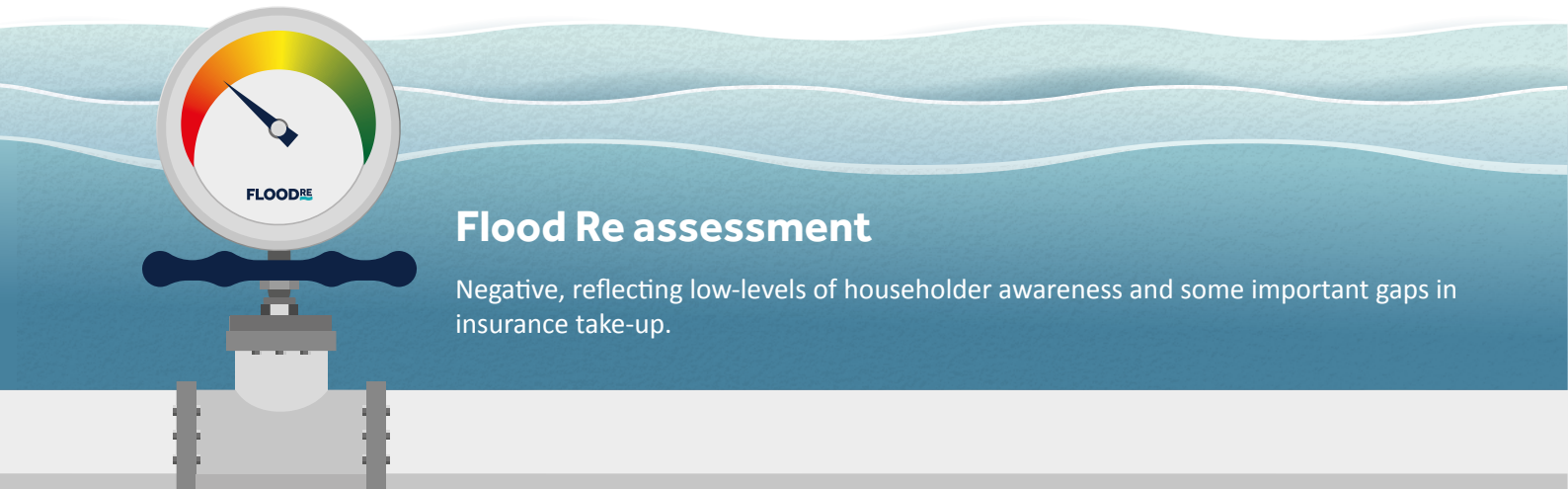
Flood Re has worked actively to make the market aware of the scheme and its benefits. This is reflected in the fact that the vast majority of insurers and brands offered to householders work with Flood Re. Flood Re continues to monitor the market, engage with insurers to ensure that the scheme is operating as intended, and ensure that insurance remains available to those eligible for the scheme, and that affordability remains strong. Flood Re has collaborated with the Bank of England on the Climate Biennial Exploratory Scenarios process, and engaged in discussions with affected stakeholders like mortgage lenders around how to manage and mitigate future risks, and prepare for Flood Re’s exit from the market in 2039.



2.4.3 Householder flood risk awareness

Flood Re vision

Householders will understand the flood risk associated with their property and steps that they can take to reduce their risk. They will also understand the role that insurance can play in protecting them when flooding occurs and the value that it provides. Furthermore, they will have the information and capability they need to shop around for the best value-for-money household insurance policy.



Householder flood awareness remains poor, which is a continued barrier to effective action to improve household resilience and lower the cost of claims. The Red Cross’s December 2022 report on flooding noted relatively small percentages of UK adults having a good understanding of the current flood risk to their home.⁶⁶ This included just 25% of those living in high flood risk areas. **Only 29% of those who had previously experienced flooding said that they knew what they would do in a flood.** When residents are made aware of their flood risk, even those in high-risk areas do not believe that risk will translate into an actual occurrence⁶⁷ resulting in a lack of action.

There are also some specific gaps in relation to insurance coverage, with 45% of tenants affected by some flooding not having contents insurance.⁶⁸ **More positively, householders in high-risk areas, especially those who had experienced flooding, do see a clear value to having insurance, and there are high levels of coverage overall.**⁶⁹ BBB will add to the value proposition of insurance, enabling householders to have their home rebuilt in a resilient way to manage their future flood risk and enhance their long-term insurability.

66 British Red Cross, “Every Time it Rains”, December 5, 2022. <https://www.redcross.org.uk/about-us/what-we-do/we-speak-up-for-change/every-time-it-rains-british-red-cross-report-on-flooding> pp 25, 36-37,
67 https://www.researchgate.net/publication/5471521_‘It’ll_never_happen_to_me’_Understanding_public_awareness_of_local_flood_risk
68 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/932523/review-flood-insurance-doncaster.pdf
Flood Re eligibility criteria allow for the ceding of contents insurance for eligible rental properties, although the buildings portion of insurance for properties that are rented out is ineligible.
69 Ibid, p37

What has Flood Re done?

As outlined above, Flood Re works with trusted partners to engage households on their flood risk, steps they can take to address it, and the role of insurance. This includes involvement in research which investigates the barriers to greater take up of Property Flood Resilience,⁷⁰ and makes a policy case for overcoming them.

Flood Re has recently launched the ‘Be Flood Smart’ campaign in partnership with the Environment Agency. The campaign uses social and traditional media to engage householders on what they can do to protect their home through adopting PFR measures.⁷¹

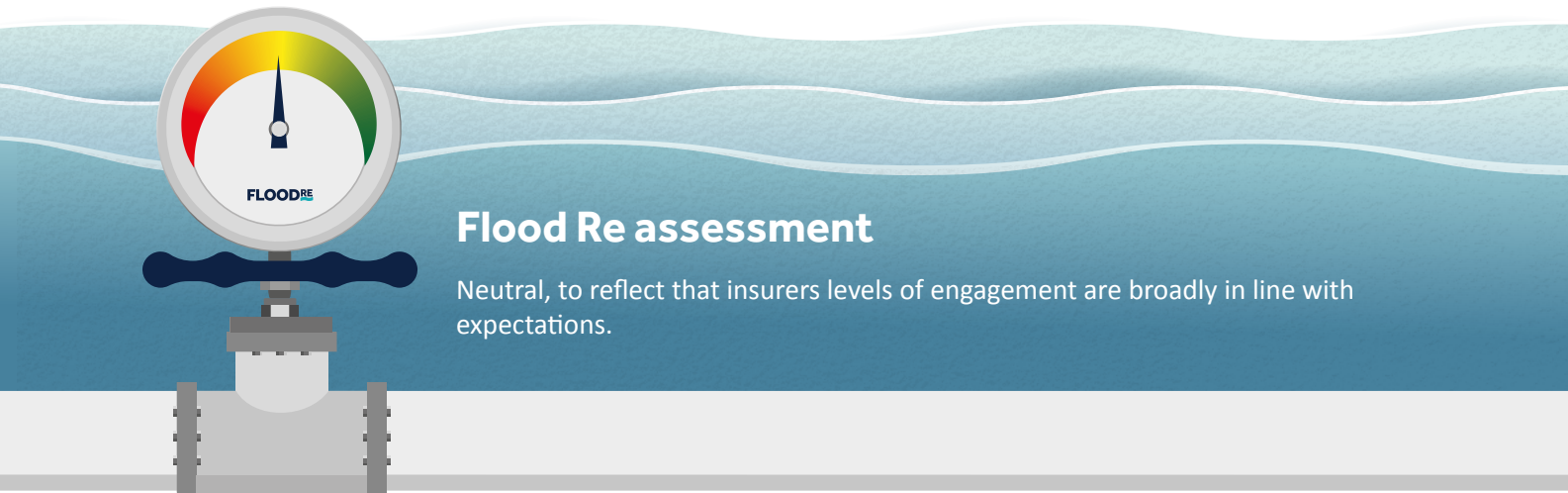


70 <https://www.floodre.co.uk/wp-content/uploads/Sayers-Flood-disadvantage-Socially-vulnerable-and-ethnic-minorities.pdf>
71 Be Flood Smart | Flood Protection | Flood Re

2.4.4 Insurers’ engagement with flooding issues and flood risk management

Flood Re vision

Insurers are active and engaged with the broader policy landscape affecting flooding risks in the UK, and able to catalyse initiatives when needed.



When Flood Re exits the market, its advocacy and policy facilitation role will need to be taken up by the insurance industry and other partners. There are already clear examples of the industry’s capability in this area.

The industry is active on climate issues – from the ABI’s annual climate change roadmap and the formation of the ClimateWise organisation, to insurer-led or sponsored research, the insurance industry has been among the most vocal in terms of promoting climate action by government.⁷² The industry has also been active in supporting increased spending on flood defences.

What has Flood Re done?

Flood Re has worked closely with insurers to improve flood risk management and to engage on Flood Re’s transition from the market. This included close collaboration with industry partners to design and implement Build Back Better (BBB). The number of insurers offering BBB demonstrates that Flood Re has been effective in supporting the sector to deliver PFR installation.

Flood Re works closely with the Association of British Insurers on policy issues and where able contributes subject matter expertise that has been developed through administration of the scheme.

72 ClimateWise | ABI



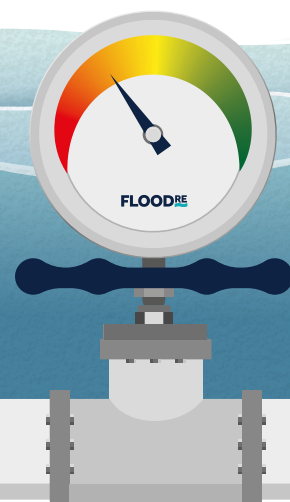
2.5 The Limits of Affordability ('the Pier')

Summary

All of the indicators above contribute to Flood Re's assessment of the number of households who may find it hard or impossible to access flood insurance when Flood Re exits the market in 2039. Flood Re terms this 'the Pier' and undertakes periodic assessments of the potential number of households in this category.

Flood Re vision

The size of the potential group of properties that will be difficult to insure in the absence of Flood Re is actively monitored and strategies are in place to minimise its size by 2039.



Flood Re assessment

Slightly negative, to indicate the complexity of estimating this figure so long in advance of Flood Re's exit from the market.

There are millions of properties in the UK with some level of flood risk. For some of these households, the level of flood risk would make insurance prohibitively expensive in the absence of a subsidy. To understand the limits of affordability, it is important to track the number of UK properties that would struggle to access affordable insurance in the absence of the Flood Re scheme.

In this respect, the NIC's surface water report noted that **325,000 English properties are currently at high risk from surface water flooding, which could increase to 600,000 by 2055** without further action.⁷³ The BoE has estimated, based on insurer projections for the 2021 Climate Scenarios (CBES), that in the most severe climate scenario, the number of uninsurable homes could be as high as two million in 30 years' time.⁷⁴

⁷³ <https://nic.org.uk/studies-reports/reducing-the-risks-of-surface-water-flooding/surface-water-flooding-final-report/>

⁷⁴ Presentation by Bank of England to Institute of Actuaries, June 13, 2022. https://www.actuaries.org.uk/system/files/field/document/Supporting%20the%20transition%20insights%20from%20the%20Bank%20of%20England_Stefan%20Claus_Jethro%20Green_Giorgis%20Hadzilacos.pdf

These figures demonstrate the considerable effort that is still needed to reduce the number of properties that will be difficult to insure in the absence of Flood Re, particularly given the upwards pressures of climate change and the growth in property stock at risk of flooding.

There remains a huge degree of uncertainty in making predictions for the situation in 2039. This is because of different approaches to assessing flood risk, uncertainty about where climate change will be most acute and the impact of flood defence spending. The last exercise Flood Re undertook indicates that anywhere from 200,000 to 600,000 homes could become hard to insure. Flood Re will continue to keep this under review as we approach 2039.



Section 3

Call to Action: Rising to the challenge of climate change adaptation

3.1 Outline of this section

As outlined in the previous section, achieving a flood insurance market which is both risk-reflective and widely affordable is a significant challenge requiring action on a number of fronts. This section outlines the action needed to achieve Flood Re's vision.

The core challenge is to reduce the overall risk of flooding despite climate change. This will require a step-change in approach. Currently most flood defence spending is focused on reducing long-standing flood risk in the UK. But climate change will increase the overall level of flood risk and give rise to increased unpredictability in weather patterns. So current action is not enough.

The two priorities remain investment in large-scale⁷⁵ flood defences and a focus on drainage systems (which require both investment and maintenance). However, there is growing recognition that not every area can be protected and with climate change increasing the

unpredictability of weather patterns, the UK will need greater overall flood resilience and adaptability. This means PFR and NFM will both have important roles to play. Flood Re wants to see innovation in managing floods and a system wide approach encompassing government at all levels⁷⁶, the private sector and individual households. All these parties have a role to play in reducing flood risk, and all benefit from reduced flood risk. There are also wider benefits to the UK economy of being at the forefront of climate change adaptation. This section outlines the challenge, how we meet it, and the benefits of doing so.



⁷⁵ As opposed to household level

⁷⁶ For more detail see below, and also the Committee on Climate Change Adaptation Report 2023. WEB-Progress-in-adapting-to-climate-change-2023-Report-to-Parliament.pdf (theccc.org.uk)

3.2 Climate change and flood risk in the UK

Climate change is already observable, with further effects now inevitable.⁷⁷ In the UK, 2022 was the warmest year on record. The exact impact on the UK climate, and where it will impact most is hard to predict, partly because volatility will increase and partly because we do not understand the full impact of climate change on the Gulf Stream.⁷⁸ But we do know that extreme weather events will become more likely, and this is already being witnessed: last year the UK experienced its highest ever temperatures. February 2023 was the driest ever, followed by one of the wettest Marches on record. More volatile and extreme weather increases the risk of flooding. At the same time events around the world, notably extreme flooding in Pakistan and Australia in 2022, are already pushing up the costs of reinsurance.

We have moved from talking about the future impact of climate change, to dealing with its actual impacts which will become increasingly severe and hard to manage. This means a higher risk of flooding, which has a range of negative consequences. Flood Re mitigates against some of these secondary consequences, by guaranteeing flood insurance, but not all.

Moreover, if flood risk is not significantly better managed, after 2039 many of these issues will be more acute:

- **More homes flooding.** The direct financial costs of this flooding will be substantial. It will initially be borne by the insurance industry but then passed on to householders (through higher premiums) and then the public purse.
- **Individual householders facing high costs** to access insurance and/or seeing their property value fall due to flood risk and issues obtaining insurance and mortgages (this is because the ability to obtain a mortgage is dependent on the property being insurable).⁷⁹

- **The costs of flooding will exacerbate social and economic inequalities in the UK.** As previously noted, more deprived homes obtain the majority of the benefit from flood defences: 50% of the residential population with the lowest incomes accrue 70% of the benefits. ⁸⁰ Those already economically vulnerable will be least able to withstand the economic cost of increased risk.
- **Wider economic costs from changing flood risk.** As climate change leads to increased flood risk and weather unpredictability, a larger group of homes will be exposed to potential changes in value because of flooding. This is likely to impact some individual householders (as above), but the relationship between flood risk and house prices is not straightforward ⁸¹ so it is hard to predict which areas could be impacted. The risk is more demonstratable at the macro-level where it represents instability in the market. Total mortgage debt in the UK is £1.16tn; stability in this asset pool is vital for the wider UK economy. This is one of the main ways in which climate change can threaten the UK’s economic stability.

3.3 Adapting to the risks of climate change

While a certain level of climate change may be inevitable, the consequences outlined above are not. If the UK acts now it can adapt to the evolving risks of climate change and reduce the burden of flooding to households, businesses and the public sector.

There are four key ways in which we can reduce the risk of flooding:

1. Continued investment in the building and maintenance of the UK’s flood defences to combat longstanding risk points. Whilst climate change will bring new areas of risk, often it will exacerbate existing issues. Flood defences are effective and as climate change increases more interventions will become cost effective.
2. A renewed focus on maintenance of surface water drainage systems which will become more important as weather volatility increases. Some of this is about investment (as above), but drainage systems are particularly complicated, with many responsibilities shared between many different partners (see below).⁸²
3. More novel approaches to reducing flood risk:
 - PFR measures can complement area-wide flood defences by increasing both the resistance of individual properties to flood water and their recoverability when flood water does enter.
 - Natural flood management techniques are vital at increasing the UK’s overall resilience to heavy rainfall. Moreover, they can be integrated with other climate and ecological initiatives, such as reforestation and biodiversity.
4. Engage individual households and communities on flood risk so that they are prepared and can take mitigations (from moving valuables to installing flood doors).

3.3.1 What role can individual households play in reducing flood risk?

Households can act to reduce their own flood risk:

- Householders can be **prepared**, by signing up to flood alerts and making a flood plan.
- Householders can make adaptations to their home to make it more **resilient to flooding**, through PFR measures.

For more information on how households can reduce their flood risk, see the joint Flood Re- Environment Agency awareness campaign, [‘Be Flood Smart’](#) [Be Flood Smart | Flood Protection | Flood Re](#)

Households can contribute to reducing the flood risk within their local area:

- Householders can **reduce the risk** of surface water flooding in their area by protecting green areas in their garden, increasing local permeability.
- Householders can **advocate** for local measures to reduce flood risk, such as investment in local flood defences, or better local management of drainage systems.

77 WEB-Progress-in-adapting-to-climate-change-2023-Report-to-Parliament.pdf (theccc.org.uk)
78 As above
79 The relationship between flood risk and property values is complicated and dependent on a range of factors, see Beltran_Is flood risk capitalised into property values.pdf (lse.ac.uk)
80 Inland flood defences save the UK £1.1 billion a year- Flood Re
81 Debt- Office for National Statistics (ons.gov.uk)

82 See also National Infrastructure Commission Reducing the risk of surface water flooding- NIC

3.4 Flooding is everyone’s business

Below is a double-page infographic, setting out the roles for individual householders, the private sector and the different public sector bodies in combatting flood risk. This is a first version and will be updated to clarify the role of the private sector and to make it UK-wide rather than specific to England.

Household / Landowners Government Industry

Local Level

Household / Landowners

Households can protect themselves and others:

- Sign up to flood alerts and have a flood plan
- Install PFR
- Keep gardens green
- Support local flood defence schemes

Individual property owners are responsible for private drainage and surface water on their property.

Landowners own the land but don’t have legal responsibility to maintain the floodplain.

Government

Local authorities are responsible for implementing planning policy such that new developments do not increase flood risk.

Surface water and Groundwater flooding - The Lead Local Flood Authority (LLFA) are responsible for managing the risk of this.

Highway gullies and drains - Highway roads, footpaths, drains and gullies are the responsibility of the local highway.

Internal Drainage Boards - IDBs are independent public bodies responsible for managing water levels in low-lying areas.

National Level

Industry

Insurers - Help protect households and businesses from the costs associated with flooding. They can also work with their customers to understand and reduce their flooding risk.

Developers - Build new homes and infrastructure which can change the local flood risk.

Public sewers and utility pipes - Water companies (e.g. United Utilities) are responsible for managing the risk of flooding from public sewers and utility pipes.

Financial markets - Lend to householders and businesses and invest in projects which can reduce flood risk.

Government




Main river and coastal flooding - The Environment Agency in England, the Scottish Environment Protection Agency, Natural Resources Wales and the Department of Infrastructure in Northern Ireland are responsible for managing the risk of main river and coastal flooding.




Policy on flooding - Land use management and planning is set by the devolved nations separately.

Highway authorities - Responsible for major roads and motorway drainage.



Everyone benefits from managing flood risk

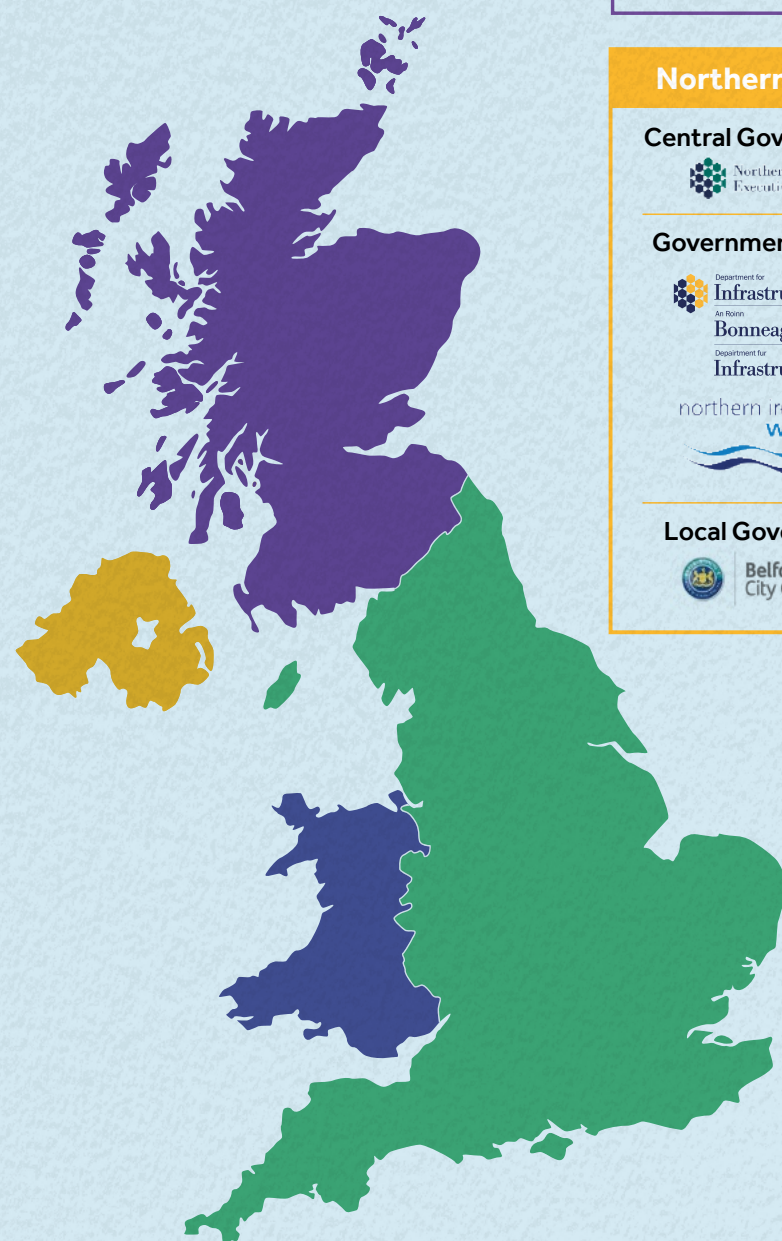
Local Level		
Benefit type	Households	Businesses
 Financial and economic benefits	<ul style="list-style-type: none">• Access to affordable home insurance and mortgages.• Reduced loss and damage.• Avoids the disruption of time out of the home.	<ul style="list-style-type: none">• Assets insured.• Reduced loss and damage.• No/less business interruption.• New business opportunities and jobs in sectors such as Property Flood Resilience.
 Social and health benefits	<ul style="list-style-type: none">• Prevents injury and loss of life.• Mental health and peace of mind.	
 Environmental	<ul style="list-style-type: none">• Reduced carbon footprint from flood recovery.	

National Level		
Benefit type	Industry	Government
 Financial and economic benefits	<ul style="list-style-type: none">• Reduced pay-outs for the insurance industry.• New opportunities for investment, such as Natural Flood Management.• Financial market stability, managed risk.• Water companies effective cost management.	<ul style="list-style-type: none">• Cost savings to the public purse.• Clarity on roles and responsibilities.
 Social and health benefits	<ul style="list-style-type: none">• High standards regarding consumer duty and ESG.	<ul style="list-style-type: none">• Resilient housing possible in more areas.
 Environmental	<ul style="list-style-type: none">• Can support existing climate and nature risk policies.	<ul style="list-style-type: none">• Improved biodiversity, water quality, carbon capture, fewer drought risks.



3.4.1 Flood risks and responsibilities across the UK

Flood risk and water management is a devolved matter, and each country organises responsibilities slightly differently.



Scotland

Central Government
The Scottish Government

Government agency
SEPA
Scottish Water

Local Government
EDINBURGH
THE CITY OF EDINBURGH COUNCIL

Northern Ireland

Central Government
Northern Ireland Executive

Government agency
Department for Infrastructure
Bonneagair
Department for Infrastructure
northern ireland water

Local Government
Belfast City Council

England

Central Government
Department for Environment, Food & Rural Affairs

Government agency
Environment Agency

Local Government
GREATER LONDON AUTHORITY
Sheffield City Council
Waltham Forest

Regulator
Ofwat

Private water companies
Thames Water
United Utilities
Water for the North West

Wales

Central Government
Welsh Government

Government agency
Cyfoeth Naturiol Cymru
Natural Resources Wales

Local Government
CARDIFF HARBOUR AUTHORITY
Awdurdod Harbwr

Regulator
Ofwat

Private water companies
Thames Water
United Utilities
Water for the North West

3.5 Five steps to achieving a system-wide approach to flooding

Step 1 – Awareness

Action begins with householders, businesses and public bodies understanding the level of flood risk they are exposed to. Flood risk can often be hidden until a flood happens.

Step 2 – Knowledge and Expertise

Of both flood risk and how to mitigate it. The UK is a world leader in research into flooding and climate, and significant public and private sector investment has improved our ability to model flood risks. But challenges remain:

- **As outlined above**, there are many parties who have a role in alleviating flood risk. Disseminating the latest research and best available knowledge to all the parties who can act on it remains a significant challenge.
- **Approaches like Property Flood Resilience (PFR) and Natural Flood Management (NFM)** can make a significant contribution to risk mitigation, but as these are new and innovative approaches, gaps remain in our knowledge about how best to realise their value.
- **Flood risk emanates from different sources – sea, river, surface water, ground water –** this makes creating flood maps which are both accessible and accurate inherently difficult. Mapping the uncertain impact of climate change onto this adds a layer of complexity.

Step 3 – Prioritisation

Flooding is one issue amongst many. For example, drainage is just one of many pressing issues for local authorities, water companies are considering flooding alongside drought and private companies are facing multiple climate related costs. This is why it is important that flood risk and mitigation is well understood.

Step 4 – Coordination

Key elements of our response to flooding rely on co-ordinated action between multiple actors. This is particularly important regarding surface water flooding, the source of flood risk with the most uncertainty and where risk is growing the fastest.⁸³

Step 5 – Investment

Flood defences work and require investment.

- **Public investment is at record levels**, but risks are increasing and therefore investment will need to be maintained and increased through adoption of a longer-term approach to flood risk.
- **Private sector investment and innovation has the potential to transform approaches to mitigating against flood risk**, particularly around PFR and NFM. But unlocking private sector investment will require better quantification of the benefits that NFM and PFR can provide.

Flood Re works across the system to catalyse change, from supporting partners to raise awareness of flood risk, to incentivising private sector investment in PFR through the Build Back Better initiative. See Section 2 for more details of our work to date, and Section 4 for our commitments for the next five years.

83 CBES chart 4.12 Bank of England CBES Chart 4.12, May 2022

3.6 Key priorities for the next five years

Flood Re has identified the following priorities for action over the next five years to ensure flood risk is sufficiently well managed and insurance is affordable without Flood Re's existence. These have been organised under the three 'buckets' set out in Section 2.

3.6.1 Reducing the risk of flooding

- **Global action to limit temperature rises to less than 2°C.** Without action to reduce overall global warming, flood risk may well become unmanageable in the UK and elsewhere. Temperature rises are likely to hit 1.5°C in the next period, but this can be mitigated and hopefully reversed through decisive action now.
- **Continued high levels of public sector investment in flood defences.** Record levels have been allocated in the public spending review period; it is vital all this money is spent. It is known that even more investment will be required in the next period as risks increase.
- **Improvements in the UK response to surface water flooding.** There are 325,000 homes in England with a greater than 30% chance of flooding from surface water in the next decade.⁸⁴ Tackling this risk is complex because it needs concerted effort from multiple partners. There is no silver bullet. A more effective approach starts with better local and national modelling of surface water risk. This needs to be backed up with greater awareness across the public and private sectors as well as householders, better co-ordination between parties and investment in assets and maintenance.
- **Further adoption of Natural Flood Management techniques.** As outlined above, NFM has a crucial role to play, but better modelling and public-private investment frameworks are required in order to systemise its benefits and unlock investment, both public and private.

- **Manage new developments so that they do not increase flood risk.** This means ensuring that new developments are not themselves at risk and that they do not increase the risk to other properties by increasing pressure on local drainage systems. It also means ensuring that adaptations to homes do not increase the exposure to flood risk (for example 'super-basements').

3.6.2 Reducing the cost of flooding

To achieve this, more focus is needed on community-level and household-level resilience approaches. Flooding needs to be a priority within local and national resilience planning. Homes need to be resilient to flood water entering the house, or recoverable so that if water does enter, the damage is reduced. This is known as Property Flood Resilience.

- **More homes being built in ways that make them resilient to flooding.** This would require greater adoption of flood resilience methods and products across the system from planners to developers to housebuilders. If this is to be achieved, planning controls need to be able to clearly define and enforce standards in this regard.
- **Lower the cost of adapting existing properties to make them more flood resilient.** This will be achieved by increasing the size of the PFR sector to bring down costs and improve customer choice through competition, scale and innovation.
- **Increase funding for property level adaptations.** Both the public and private sectors have a role in supporting property resilience measures. Achieving this will require better evidence on efficacy to unlock public sector investment and clearer incentives for private sector investment.
- **Achieving a tipping point** in not just property level, but community and national level, resilience as well.

3.6.3 Achieving an effective market

Insurance companies are increasingly assessing flood risk on a property level basis, thanks to developments in the underlying flood models they utilise. Whilst there are advantages to this approach, it is a challenge to capture all the relevant factors which affect flood risk at a property level. It also creates an inherent tension between more accurately predicting flood risk at a property level whilst being able to pool the risk in a way that supports affordable pricing.

To be fair to consumers, it is important that flood risk models capture adaptation measures, as well as underlying risks. There is a particular challenge in achieving this for PFR measures, and community-level Sustainable Urban-Drainage Schemes (SUDs); yet both can have a big impact on the resulting level of risk to which a property is exposed. Notwithstanding the position in commercial risk models, the requirements on insurance companies have been strengthened in this regard through the introduction of the 'Consumer Duty'. Flood Re expects that as insurers and their agents prepare to meet the requirements of this new regime, their underwriting and pricing models will need to better reflect PFR measures which have been proactively installed to protect a given home (towards risk reflective pricing). In addition, insurers will increasingly need to demonstrate clear decision making on whether to offer policyholders Build Back Better cover and whether to repair resiliently using BBB after a flood.

In the medium-term the insurance industry will also need to consider its approach to risk pooling. This may impact on the number of properties who can get insurance in the absence of Flood Re from 2039. As set out in Section 1.7, Flood Re will support the industry and Government to find a solution to this challenge and share insights from the Scheme to inform this consideration. In the interim period, the following would help prepare for the market transition:

- **Insurers need to be able to capture all flood resilience measures in their risk pricing.** This means large-scale flood defences, but also those at a household and community level. It is particularly important that risk models can incorporate PFR adaptations which individual households may install to reduce their level of risk.
- **Insurers should repair flooded homes to a resilient standard,** through Flood Re's Build Back Better or an equivalent scheme. This means that when a property is flooded it will not be equally vulnerable to future flooding once repaired.
- **More householders to be engaged on their own flood risk.** It is important that Flood Re's exit from the market is not the first time that a householder becomes aware of their property's flood risk.

⁸⁴ Flood and coastal erosion risk management report: 1 April 2020 to 31 March 2021- GOV.UK (www.gov.uk)

Section 4

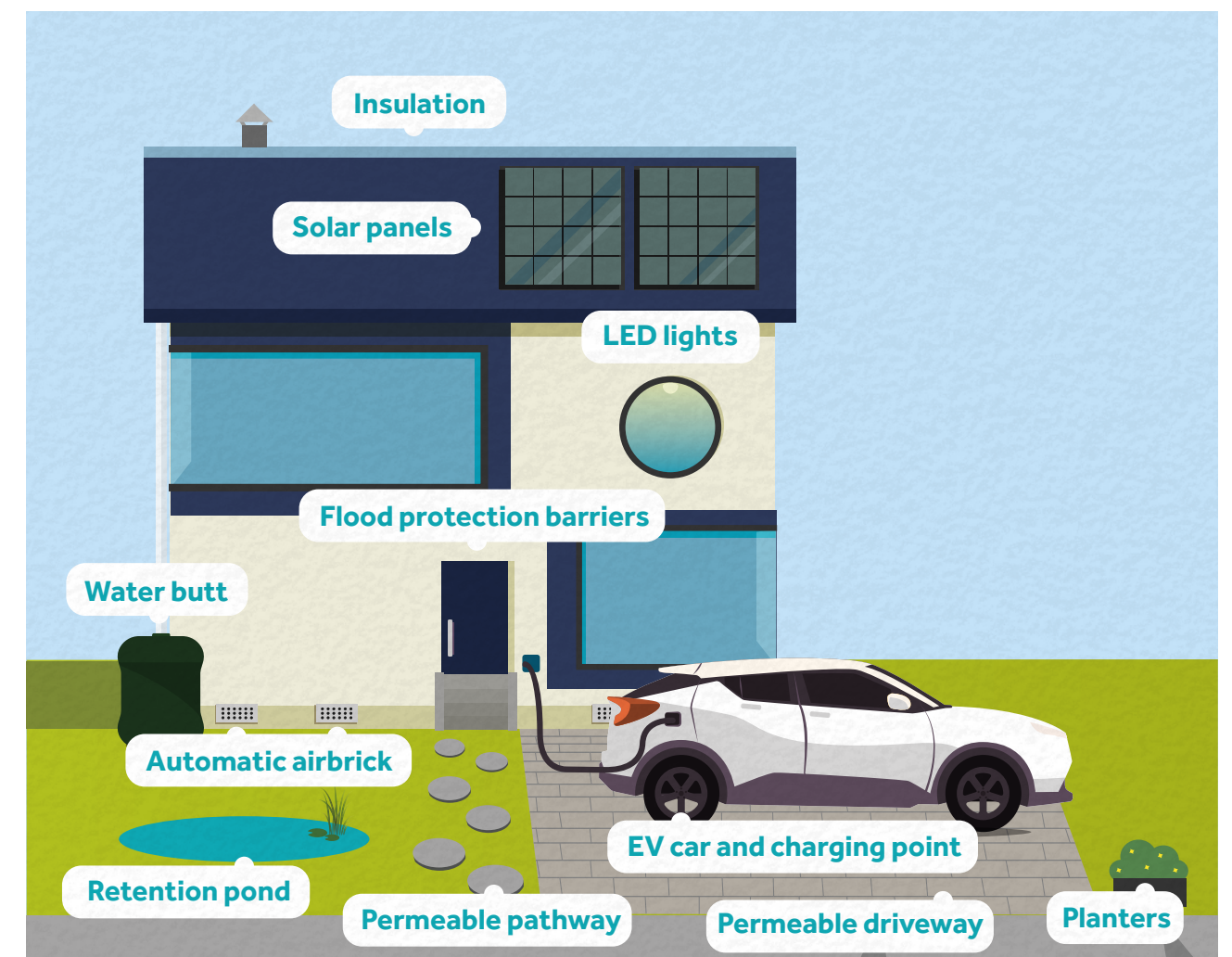
Flood Re's commitments

4.1 Overview of this section

As set out in Section 1, Flood Re will cease to exist in 2039, and household flood insurance will transition to risk-reflective pricing. How many households face increased premiums, and by how much they increase, will depend on the overall level of flood risk facing UK domestic properties in 2039.


Flood Re is a small organisation but has shown through initiatives introduced under the auspices of the previous Transition Plan, it has the potential to catalyse bigger changes across Government and industry. This section outlines Flood Re's plans for the next period. The ambitions are high. The challenge is considerable and urgent, but it is also being recognised by a growing number of partners. Flood Re is committed to using its expertise, experience and resources to act as a catalyst for change at the national, local and household level.

This section explains what Flood Re will do, and why.




4.2 Flood Re’s Transition Principles

Mitigating flood risk requires action on a number of fronts. Flood Re has to make tough decisions about how best to utilise its limited resources. In deciding what initiatives to pursue, Flood Re is guided by the following five principles.




1. Additionality

In many of the areas where change is needed, significant bodies of work are already underway. For example, all the UK’s environment agencies, the Committee on Climate Change, Defra, devolved governments and local authorities are engaged in detailed bodies of work on the appropriate scale and nature of future flood defence investment. There are also individuals and groups exploring how changes to building regulations could support increased flood resilience and how industries can work together to certify and standardise the approach to resilient repair. In taking forward its work, Flood Re will seek to engage in activities that are additive or complementary to the work that others are already undertaking. It will seek out and identify gaps in existing knowledge and action and develop a view on how it can contribute to filling these gaps.




2. Expertise

Flood Re will engage in work where it has the necessary expertise to contribute meaningfully. Where work is identified that requires expertise that Flood Re does not have, it will identify those who are well placed to undertake this work. In some cases, where the work fits with Flood Re’s other principles, it could commission this work from the relevant parties. Where this does not happen, it will engage with others to make the case for the work needed and demonstrate the value it could provide to delivering Flood Re’s objectives.




3. Impact

Flood Re will seek to maximise the impact of the action it takes. Evidence and testing will be used to ensure that the scale of action Flood Re takes is proportionate to the potential benefit delivered by the activity in terms of ensuring the affordability and availability of household flood insurance both now and in the future.



4. Sustainability

Flood Re will engage in work that promotes the sustainability of a risk-reflective and affordable market for household insurance. This means focusing on actions that both support the transition up to 2039 and create the conditions for an affordable market to continue to exist after 2039. A key part of this will be to ensure the maintenance of a competitive market for household insurance. For this reason, where Flood Re is undertaking or commissioning work, it will prioritise activities that actively support and do not inhibit competition in the market



5. Partnership

Flood Re has few direct policy levers. As such, in many circumstances, Flood Re’s primary role will be in supporting, facilitating, and promoting the actions of others. This means that, where there is a case for action, Flood Re will consider how it could partner with local and national organisations and individuals to take this work forward, before considering taking direct action itself.

4.3 Flood Re’s Commitments

Flood Re’s commitments reflect the Theory of Change set out in Section 1:

- Improving our **understanding** of how to manage flood risk
- **Engaging** across the system to bring about change
- **Leading** innovation

4.4 Understanding

4.4.1 Scoring methodology for Property Flood Resilience

Flood Re will lead a project to create a comprehensive scoring methodology for Property Flood Resilience (PFR) efficacy.

As explained above, adaptations made to individual houses can drastically reduce the costs and disruption of flooding, including the time taken to repair the home and the need for alternative accommodation. But the efficacy of these measures is poorly understood. At present, adaptations made to homes are considered in isolation and independently of the individual property. The result is that assessments are made of the quality of individual products (such as flood doors) but not how well they work together, or how to consider the intrinsic features of a property which may make a home more resilient to flooding.

The scoring methodology Flood Re is developing and testing will utilise existing insurance industry methods to understand the link between flood depth and damages. This will enable a proper evaluation of how property level adaptations can protect different house types in different circumstances – and how this will link to financial losses.

Flood Re believes this research will be vital in driving uptake of PFR. It will have a range of uses in the public and private sector. Most importantly, it will enable a proper economic appraisal of the costs and benefits of adapting different properties, which in turn can unlock private and public funding sources.

4.4.2 A Centre of Excellence

As this Plan outlines, managing flood risk requires sustained action across multiple parties. Achieving change requires these partners to understand what they can do and what impact they can have. The UK is a world leader in research into flood risk and climate change yet there remain key gaps in knowledge, in capacity to test new approaches and in translating research into models and products that can be readily applied. Flood Re has long been active undertaking, commissioning, and disseminating flood research. During the next transition period Flood Re will formalise its role by establishing a Centre of Excellence. This body will seek to use knowledge, research and modelling to change behaviour, unlock investment and support innovation in the public and private sector.

Flood Re has demonstrated through the PFR scoring work already undertaken (with more to follow), the value of innovations specifically aimed at industry-level outcomes. There are many equivalent challenges in utilising knowledge and research to unlock investment and adoption of approaches that reduce flood risk. In the automotive space, the Thatcham Institute has been instrumental in evaluating and disseminating information on safety measures and new technologies, and there may be benefits to having similar capabilities in flood risk management and resilience. This could benefit important approaches and technologies currently building the evidence base to deploy at scale, including PFR, Sustainable Urban Drainage Systems, and NFM.

To support the creation of the centre, Flood Re will undertake a systematic assessment of relevant research capabilities in the UK with a focus on identifying the gaps in knowledge which are impeding management of flood risk, and existing knowledge infrastructure to leverage and amplify. Just as Flood Re is a cross-sector partnership, the new institution will be interdisciplinary, capable of undertaking, synthesising and translating research across multiple fields to improve understanding of flood risk, different approaches to mitigation and how to engage householders to protect themselves.

Crucial to the success of this endeavour will be the ability to engage partners across the public and private sector. Flood Re is not interested in research solely for research sake, so the proposed centre will be focused on the practical application of research and cross-dissemination of knowledge between sectors. In doing this, Flood Re will build on its existing approach to undertaking research only where gaps in knowledge have been identified which are holding back efforts to reduce flood risk and to allow for an effective market transition.

4.4.3 Promoting the development of Natural Flood Management

Realising the potential of Natural Flood Management (NFM) techniques has the potential to make a significant impact on the UK's resilience to extreme weather events and flooding in particular (see Section 3). Greater deployment of NFM will also help bring forward projects with climate, biodiversity, water quality and other benefits, which would help address the climate and nature emergencies, as well as aid farmers to transition to a new model for agriculture. Flood Re is already a research partner in the Wyre Valley NFM project (an innovative public-private research partnership)⁸⁵, and will continue to explore opportunities to develop, analyse and refine NFM techniques. Given Flood Re's unique Government-industry partnership model, a focus will be placed on research and projects which can support the creation of frameworks to unlock private-sector investment in NFM approaches.



85 £1.5m to be invested in natural flood management in Lancashire- Wyre Council

4.5 Engaging

4.5.1 Increasing community awareness of flood risk

As flood risk evolves due to climate change, it is more important than ever that householders understand the risk to their home and how this can be addressed at individual, community and national level.

Actions taken at household level, as simple as making a flood plan, can reduce the damage of flooding. But individuals and households can also reduce flood risk, through PFR, by ensuring their gardens are permeable and by advocating for drainage to be a local priority.

Flood Re wants more households to be aware of their flood risk, but the design of the Scheme means it does not interact with households directly- one of Flood Re's successes is to have helped hundreds of thousands of households, most of whom are totally unaware of Flood Re's existence. Instead, Flood Re works through community partners to engage individuals and communities about flood risk and how this can be mitigated.

Flood Re will continue this approach through the next transition period. The approach will be varied and guided by the transition principles: working in partnership, supporting work that is innovative, avoiding duplicating the work of others. Current work spans from supporting the acquisition of a bespoke Floodmobile for Scotland to engaging DIY influencers to spread awareness of PFR measures.

4.5.2 Supporting an effective planning system

The UK faces a significant challenge in building more homes without increasing flood risk. Achieving this means new developments are not themselves at risk of flooding, or increase the risk to existing homes. This task is made more complicated by the fact that a number of major cities – such as London and Hull – are inherently vulnerable to flooding. There are a number of clear planning principles that are meant to prevent new buildings adding to flood risk. But effective implementation relies on flood risk being understood and the measures to address it being clearly defined. This may be property-level resilience measures or local drainage.

In recent years Flood Re has worked with partners to upskill local planners on flooding and climate risk so this can be applied in relation to individual decisions and local plans. Over the next period Flood Re will continue this approach in order to develop the capacity of the planning system to effectively manage new developments and flood risk. This will start with research into the process of planning consent, controls and enforcement to examine whether the planning system has the right tools in place to consistently achieve the principles set out in planning guidance.

4.6 Leading

4.6.1 Property Flood Performance Certificates

Having developed a scoring methodology for assessing PFR efficacy, Flood Re will introduce a process for enabling individual properties to be assessed. This assessment will utilise the scoring methodology above so that a property can be assessed for its intrinsic features (such as building materials, elevation) and its adaptations. This will be combined to create a single-score sheet, a 'Flood Performance Certificate'. For the first time, this will enable householders to get an assessment of their properties' resilience to flooding, and what measures they can take to improve this.

A successful assessment scheme will bring both simplification and sophistication to the process of considering how properties can be built to withstand flooding:

- Simplification because it will give a single score that takes account of both house characteristics and adaptations in how well protected a house is against flood risk. This single score will be easily understood by the householder and financial services such as insurance or lenders.
- Sophistication because it moves consideration of property adaptations from a simple yes/no of what has been installed, to a more holistic understanding of what the property has and what it needs. Some houses will benefit from extensive and expensive adaptations, some homes will benefit from some simple and low-cost adaptations. Flood Performance Certificates will recognise this breadth.

Flood Re sees both the scoring methodology and the property-level assessments as key tools to support the wider take-up of PFR measures. Flood Re is laying the groundwork that can enable other partners to incentivise the take-up of these tools. Flood Re will work with a

range of partners to ensure that the scoring methodology and the property-level assessments have the greatest utility. There are a number of potential benefits to Flood Performance Certificate:

- They will enable **householders** to understand their properties' level of resilience to flooding, and how this could be increased with additional adaptations.
- They will provide clear and recognisable standards for **those undertaking adaptations** to existing properties, or **those building new homes** which need to be resistant to flooding. This includes planners, builders and developers.
- Enable insurance **companies** to include the information in their risk calculations and pricing.
- Enable **Lenders** to consider how adaptations can impact on the long-term resilience of properties they have lent against.

While Flood Re will work to ensure these tools are as practical as possible, it will require public and private sector buy-in to drive take-up of these tools as part of the process of mainstreaming Property Flood Resilience.

4.6.2 Build Back Better

Flood Re will continue to pioneer an industry-wide response to flooded homes through **Build Back Better** ensuring flooded properties will be repaired with PFR measures installed to protect from future floods.

The insurance industry has always played a vital role in supporting householders through the trauma of a flood. But repairing homes to the same state they were in before leaves them wide open for the next flood – maintaining the financial risk to householders and insurers, as well as the potential disruption floods cause. This means insurers are actively working to protect their customers into the future and to reduce their future exposure to risk.

Build Back Better offers householders the chance to install PFR measures up to the value of £10,000 when repairing their properties after a flood. This way the next time the area floods their home will be better prepared to keep as much of the water out as possible. Measures can also be installed so that when water does enter it is easier, quicker, and safer for families to clean up and move back in – often in a number of days rather than many months.

David Hegarty, Bewdley resident: “The last two floods – a year ago and two years ago – we had about two foot of water in the house and it was contaminated with sewage and diesel. After the first flood, we were out of the house for about a month, then we moved back in albeit to the upper floors [...] This time round it was a comparable flood, it was 5.5 metres and the house didn’t flood, and we kept the water out. [...] It strikes me that if you flood and you have a lot of damage, it’s ridiculous to just put everything back to how it was before.”

Build Back Better is not just about pioneering a new approach within the insurance industry, it will also lead to a significant number of homes having PFR measures installed. This has direct benefit to the properties adapted. There is also a secondary benefit in supporting an expansion of the PFR industry, which drives innovation to reduce costs and improve consumer choice in regards to PFR. This supports the UK's wider ambition to be a world leader in green industries and climate adaptation.

Flood Re has already achieved big changes in the insurance industry:



Build Back Better launched in April 2022.



By April 2023 insurers representing 68% of the domestic home insurance industry had signed up to Build Back Better.



Flood Re wants to see 100% of the UK domestic insurance market offering Build Back Better.

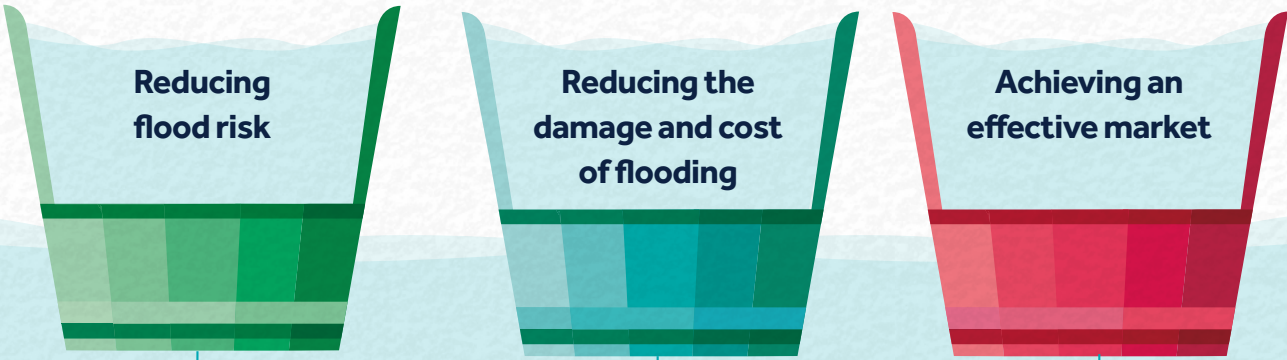
This is critical to ensuring the whole insurance industry is contributing to reducing the overall level of risk. Every householder who experiences a flood should have the option to install flood resilience measures if they get flooded. It is crucial that insurers work with householders to encourage a high take up of the Build Back Better offer, to ensure as many properties as possible are protected against flood risk.

Flood Re will work with the industry to support the development of the scheme, so that Build Back Better becomes embedded within industry approaches and supports take-up amongst householders. In addition, Flood Re will monitor the efficacy of BBB-funded adaptations and other PFR installations in reducing damage in the event of a future flood.

4.7 The benefits of Flood Re's commitments

<div>Flood Re Commitment</div> <div></div>	<div>What are the benefits Flood Re expects will derive from this?</div> <div><p>The primary benefit here is to householders who have experienced flooding by reducing their future exposure to flood risk. These householders should experience less disruption and lower financial costs.</p><p>But there are a number of secondary benefits:</p><ul style="list-style-type: none">• This unlocks private sector funding for flood resilience infrastructure, providing a model for future approaches to climate change adaptation.• It supports an expansion of the Property Flood Resilience market (PFR), which in time should reduce costs and increase consumer choice.</div>	<div>What are the benefits Flood Re expects will derive from this?</div> <div><p>This both reduces the cost of flooding and helps achieve an effective market in insurance.</p></div>	<div>Flood Re Commitment</div> <div></div> <div>Property-level Flood Resilience assessments</div>	<div>What are the benefits Flood Re expects will derive from this?</div> <div><p>The aim is to translate the scoring methodology into a tool which can be applied at household level. The benefits of this are primarily for the householder, who can both understand the work they've undertaken and demonstrate its efficacy to secondary partners such as mortgage lenders and insurers.</p><p>But all these secondary partners - such as lenders and insurers but also those working in house building – benefit from a framework with which to assess PFR efficacy. Again, this also incentivises wider PFR take-up, bringing with it benefits of an expanded PFR market.</p></div>	<div>What are the benefits Flood Re expects will derive from this?</div> <div><p>This is primarily about achieve an effective market but will also help reduce the costs of flooding.</p></div>
<div></div> <div>Scoring Methodology for Property Flood Resilience</div>	<div>What are the benefits Flood Re expects will derive from this?</div> <div><p>The primary purpose is to create the conditions for wider adoption of PFR across the UK by enabling a proper assessment of the value of PFR at an individual and group level.</p><p>This should:</p><ul style="list-style-type: none">• Enable a proper economic assessment of the benefits deriving from installing PFR, which in turn should unlock PFR funding from public and private sources.• Enable an assessment of PFR to be used in building, planning and financial services including by lenders.• Support the conditions for the expansion of the PFR market, driving innovation and cost reduction.</div>	<div>What are the benefits Flood Re expects will derive from this?</div> <div><p>This is primarily about reducing the cost of flooding but also helps achieve an effective market.</p></div>	<div></div> <div>Centre of Excellence</div>	<div>What are the benefits Flood Re expects will derive from this?</div> <div><p>Increased knowledge and better evidence will help drive more efficient market responses to flood risk and improve the efficacy of state interventions.</p><p>Specifically, the Centre for Excellence will focus on knowledge gaps as experienced by those working to tackle flood risk in both the public and private sector (for example local Government and the insurance industry). This will ensure the Centre is focused on outputs with a high degree of operability.</p></div>	<div>What are the benefits Flood Re expects will derive from this?</div> <div><p>The Centre will directly support efforts to reduce the risk of flooding and reduce the cost of flooding.</p></div>
			<div></div> <div>Improving awareness of flooding</div>	<div>What are the benefits Flood Re expects will derive from this?</div> <div><p>Flood awareness is a vital pre-requisite for flood prevention work. Communities have a vital role to play in advocating for and implementing flood alleviation schemes, as well as maintaining them. Increasingly, evidence demonstrates the value of individual actions (such as maintaining permeable spaces in gardens) as well as making changes to individual properties to reduce their risk.</p></div>	<div>What are the benefits Flood Re expects will derive from this?</div> <div><p>Improving awareness of flooding can lead to a reduction in the risk of flooding and the costs of flooding.</p></div>

4.8 Flood Re’s commitments support the Three Buckets



The Centre of Excellence will help to **reduce the risk of flooding** by supporting research and disseminating information. It will also support research into **reducing the damage and costs of flooding**, and in so doing will **support an effective insurance market** supported by the best possible evidence.



We work with partners to raise awareness of flooding so that householders can understand how they can **reduce the damage of a flood** should it occur, and to maintain public support for flood alleviation work to **reduce the overall risk**.



We work with local and national partners involved in the planning process to share information on flood and climate change risks so that planning policy can **reduce the risks of flooding**.



Build Back Better helps **reduce the damage and costs of flooding** because it provides protection from future floods and **helps achieve an effective market** by ensuring insurers help use floods to improve future preparedness.



The scoring methodology Flood Re is developing will lead to **reductions in the damage and costs of flooding** by improving the utilisation of Property Flood Resilience measures.



The introduction of Flood Performance Certificates that Flood Re is leading will both help to **reduce the damage caused by flooding** and **help an achieve an effective market** by allowing insurers to understand the mitigations individual properties have.

The data Flood Re will collect on flooding claims on homes which have had **PFR installed is a vital part of achieving an effective market**.



Conclusion

As the Flood Re scheme reaches maturity it is clear it has been a success: it has delivered available and affordable flood insurance for householders, while supporting an open and competitive insurance market. Much of the credit for this success rests with the Scheme’s original architects in Government and the insurance industry. But this success should not mask the pressing need to address flood risk in the UK.

There has been significant progress in this regard, from record Government investment to Flood Re’s Build Back Better initiative. Yet, because of climate change there has also been – and will continue to be – very real increases in the underlying level of risk. Essentially, more is being done, but it is only sufficient to stand still. If the UK is to manage flood risk sufficiently, so that insurance remains available and affordable when Flood Re exits the market, then all parties will need to re-double their efforts. There is a compelling social and economic case for investing in flood mitigation. Flood Re will continue to use its resources and to act as a catalyst for change by understanding, engaging and leading.

Flooding in numbers



Climate change related damages are estimated to **cost the UK 1.1% of GDP every year**. By 2050 it is estimated this will be 3.3% of GDP.



55,000 homes were flooded across England in 2007. The total cost of this was estimated at £5.9bn (in 2023 prices).⁸⁶

In 2022 there were **10 severe weather events** – floods, storms and droughts – which cost more than \$2.5bn in damages.⁸⁸



Around the world, the annual cost of flooding is \$32bn a year. This is expected to rise to \$40.6bn over the next 30 years.⁸⁷



England is currently spending about £1bn per annum on flood defences (averaged out over five years). Flood defences currently save 2/3rds of the cost of flooding in the UK. **Without flood defences, annual losses would be £1.8bn rather than £0.7bn.**⁸⁹

In 2022 flooding killed 1,739 people in Pakistan; 603 people in Nigeria; 232 people in Brazil and 23 people in Australia. **All of these weather events were made more likely by climate change.**



On average it costs £32,000 to repair a home after a flood, based on data from storms Ciara and Dennis.



£10,000 is available through Flood Re’s ‘Build Back Better’ scheme to add flood resilience measures to homes after a flood.



There are 200,000 homes in England who face a greater than 30% chance of being flooded from rivers or the sea during the next decade. For surface water the figure is even higher: 330,000 homes facing a greater than 30% chance of being flooded.

⁸⁶ 'The costs of the summer 2007 floods in England', Environment Agency, February 2021

⁸⁷ 2022: Cost of Flooding | Cabot Institute for the Environment | University of Bristol

⁸⁸ counting-the-cost-2022.pdf (christianaid.org.uk)

⁸⁹ Inland flood defences save the UK £1.1 billion a year- Flood Re

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