From risk to resilience

The case for flood-resilient communities, economy and growth

PUBLICFIRST

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FOREWORD

2025 began with storms, intense rainfall and significant flooding. Edinburgh's Hogmanay celebrations were cancelled. North Wales had its second-wettest day on record. In Greater Manchester, the Mersey burst its banks and cars were trapped in flood water. All over the UK, major incidents were declared, and, inevitably, rail services were disrupted. The M5 closed. In Lincolnshire fifty children were rescued when their school was cut off by floodwater. The costs of failing to act are increasing. We have to build in resilience rather than lock in vulnerability.

Public First's research shows 66% of the public in the UK don't think the country or their local area is prepared for flooding; 68% of people expect national government to be the lead actor responsible for improving flood defences and prevention; 60% believe that the impact of flooding can be reduced with proper investment and funding. That's an opportunity. Last week, the Prime Minister talked about "National security for national renewal." Resilience to flooding - a key national risk - will deliver better living standards and a strong rate of return for the Treasury and British businesses alike.

Every £1 invested in flood defences prevents around £8 of damage - £3 of that is a direct saving to the government because more than a third of the damage is to publicly owned infrastructure like roads, railways, schools and hospitals. For every £1 invested in maintenance, £7 is saved on new flood defences. The Leeds Flood Alleviation Scheme better protected over 5,000 homes and businesses, and 33,000 jobs while enabling £774m in new development and 3,000+ new jobs.

The National Infrastructure and Construction Pipeline 2023 projected £700-775bn of investment over ten years. The upcoming multi-year Spending Review is an opportunity for the government to lead where previous administrations fell short. It's a no brainer we should not only maintain the current rate of spending on flood defence (about £1.3bn until March 2026) but also look to maximise the benefits to the taxpayer by raising it. In 2023, the National Infrastructure Commission recommended a rolling programme of around £1.5 billion per year. Given the condition of existing flood risk management assets has degraded further since this recommendation, it is likely that more than £1.5bn a year is required to sufficiently increase flood resilience in England. This should have a greater emphasis on maintenance and nature-based solutions that can deliver additional benefits for drainage, water supply management and biodiversity net gain.

By 2050, 46% of roads, 54% of railways and 1 in 4 properties will be at risk of flooding in England alone, but my message is about lives and livelihoods right now. The government was elected on a promise of 1.5m new houses - these homes must be fit to keep people safe. Economic growth isn't only about GDP but people's quality of life. I have travelled the country meeting people who have been flooded out of their homes. I have seen people's anger and sense of betrayal and their extraordinary generosity and community spirit. This experience means I can never doubt how much flooding affects people's daily lives, and you can see this reflected in the quotes from the interviews Public First conducted during this research. Investing in flood resilience is about better protecting people, property and critical national infrastructure – and supporting the economic growth the country needs.

EMMA **HOWARD BOYD**

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Executive summary

The upcoming Spending Review is a critical moment for the government to demonstrate leadership - to set out plans for decades of resilient growth and national security, and deliver where previous governments underachieved. This report sets out new Public First economic and opinion research on the impact of flooding with immediate recommendations for policymakers.

1. **The Labour government has the opportunity to lead by addressing the UK's flooding problem.** Nearly 2 million people across the UK are exposed to flooding every year - equivalent to the combined populations of Birmingham, Sheffield and Newcastle-upon-Tyne. A third of England's critical infrastructure - including roads, railways, energy networks, and water systems - is also at-risk, jeopardising national security. This is set to worsen from rising weather risks and failing flood defence infrastructure.

   Previous governments' records on flood risk management fell short of the scale of the issue. By 2023, two years into a six-year flood defence programme, a resource funding shortfall, bureaucratic delays, inflation, and supply chain challenges meant the programme was forecast to deliver only 60% of its initially pledged target. A quarter of new flood defence projects were cancelled. Poor maintenance of existing assets has also left their condition below target-level.

   With a new government, and new funding commitments, comes uncertainty. There is no current funding commitment from the Labour government on flood defences beyond April 2026. The affordability of future funding has been under review by the Treasury since the Autumn Statement 2024. This multi-year spending review is a critical moment for this Labour government to set resilient foundations for the economy and national security.

2. **New Public First economic research finds that without decisive action, flooding will remain a significant economic harm, threatening prosperity and long-term growth.** We find that flooding has significant immediate and long-term economic costs and undermines the government's growth mission. At today's current risk levels, for each year that flood events happen - of which there is an average of 700 recorded in England - the following losses occur:

   a. **Immediate physical damage to property and infrastructure costs £2.4bn annually.** These costs are also set to increase as flood risk rises. By 2050, we expect the immediate annual damages to increase to £3.6bn. This increase is based upon Environment Agency projections, which estimate a 27% increase in at-risk properties and as much as 47% increase for public infrastructure due to future changes in rainfall, river flows, high tides and wave conditions. It does not account for any additional development or new investment in flood protection.

   b. **On average, workers are unable to reach their workplace for 10 days after a flood event, causing £290m in lost output annually.** This is likely to be a conservative estimate, given that local disruption from flooding can also affect home-based working productivity, although to a less well-known extent.

   c. **Each year of flood events causes a decade-long downward pressure on the economy worth at least £6.1bn.** Further, flooding means employment is 46,000 lower than it would otherwise be. This is due to the ongoing loss of confidence caused by flooding events. **This longer-term impact on business decisions is what should really concern policymakers.**

3. **Flood risk management can play a part in making citizens feel safer in their own homes, workplaces, and neighbourhoods.**

   Flooding has a profound impact on how safe people feel. In recently-flooded areas, locals told us how flooding causes displacement, isolation and anxiety for those affected, as well as ill-health. This loss of security is compounded for the elderly and the vulnerable. Uncertainty about future flooding and the stability of their homes and communities leaves a lasting strain on mental health for many.

   The public are most likely to say flooding must be managed for national security reasons, including safety of British citizens, and protecting agricultural land and British farmers. This was true for all voters - though Labour and Liberal Democrat voters emphasised citizen safety more, while Conservative and Reform UK voters prioritised agricultural land and British farmers. Three-quarters of UK adults surveyed said that flood-related power outages threaten the economy (77%) and national security (75%).

4. **The public recognise the rising risks of flooding and do not feel prepared.** Three-quarters (75%) of UK adults agree that flooding occurs more frequently and causes more damage across the country than before. Nearly half (45%) of the public expect flooding to worsen in their local area in the next five years, and 58% expect it to worsen across the UK in the same period. They mostly blame poorly maintained and outdated drainage and sewage systems for this, as well as new housing developments that reduce land for natural absorption and do not have adequate drainage, and wetter weather from climate change.

   66% of people don't think the country or their local area is prepared to deal with future flooding. The public are most concerned about the impact of flooding on transport disruption, infrastructure, and the food supply chain in their local areas.

5. **Trust in policy delivery and consistency is also low.** People have become used to seeing little progress in their areas - they currently have little faith in the government's ability to keep promises and get things done. There are low levels of trust in the government in general - only 30% believe it will achieve its overall policy goals. Public trust in the government's ability to handle extreme weather is particularly low, with 66% believing Britain is unprepared for events like flooding, storms, and heatwaves.

6. **The government should act now to strengthen flood defences, protect communities, and show leadership on resilience.** Public First research also finds that the top 10% of English constituencies facing the greatest vulnerability to flooding are majority (74%) Labour-held seats. The government will need to demonstrate that it is taking the issue of flooding seriously. While it is not cost-effective for the government to reduce all risk of flooding, investment in solutions can reduce risk and set a higher standard of resilience than the status quo. Constituents across this top 10% were even more positive that flooding could be minimised with the right investment than the general public (70% vs 60%).

7. **Flood prevention is a smart investment.** Every £1 spent on flood prevention saves £8 in damages. £3 of that is a direct saving to the government because more than a third of the damage is to publicly owned infrastructure like roads, railways, schools and hospitals. Additionally, for every £1 invested in the maintenance of existing defences, £7 is saved on new defences. Now complete, the Leeds Flood Alleviation Scheme will unlock £774m in economic growth while protecting thousands of homes and businesses through various structural and natural flood management solutions.

Recommendations for policymakers

1. **Commit to a long-term funding settlement in flood risk management at the upcoming Spending Review.** There is no current funding commitment from the Labour government on flood risk management beyond April 2026. After years of underinvestment in flood resilience, this Spending Review should provide a step-change in funding to a minimum of £1.5bn a year, as recommended by the National Infrastructure Commission in 2023. Given the condition of existing flood risk management assets has degraded further since this recommendation, more than £1.5bn a year is likely required. The funding settlement must support both asset maintenance and new structural and natural flood protection.
2. **Align funding with the 10-year Infrastructure Strategy for outcome-based standards on flood resilience.** While flood resilience was a welcome feature of the Treasury's plan for the 10-year Infrastructure Strategy, the government has no overall measure of the resilience it expects to achieve. The UK should adopt a Netherlands-style risk-based standard to flood resilience and require all government-funded infrastructure to incorporate flood resilience in investment plans.
3. **Increase private sector investment in drainage by mandating Sustainable Urban Drainage Systems (SuDS) for new housing in high-risk areas.** Research shows over 7,000 new homes have been approved on undeveloped floodplain land in high-risk areas. This is an area of particular public concern. Despite a pledge to mandate Sustainable Drainage Systems (SuDS) for new builds in 2024, it remains only guidance - the government should update this to mandatory for new homes in high flood-risk areas, as identified by the Environment Agency.
4. **Devolve funding to Mayoral and combined authorities to drive joint, local plans on flood resilience.** Local leaders need devolved, long-term funding to manage flood risk effectively, rather than relying on competitive grants. A climate resilience statutory duty on councils, as recommended by the London Climate Resilience Review, would enable subnational authorities to lead on strategic investment and coordinate with water companies and drainage boards in their areas. It would also enable them to prepare for other aspects of extreme weather beyond flooding.
5. **Require the new National Infrastructure and Service Transformation Authority (NISTA) to track flood and wider climate resilience across all government infrastructure spending.** The government lacks a clear estimate of spending on climate risk management due to fragmented responsibilities. As part of its new remit, NISTA could track this spending and its impact, aiding the development of resilience standards for other types of extreme weather in future infrastructure planning.

CHAPTER ONE:

THE UK'S FLOODING PROBLEM

The UK has a flooding problem. Nearly 2 million people per year across the UK are exposed to frequent flooding[1]- equivalent to the combined populations of Birmingham, Sheffield and Newcastle-upon-Tyne.[2] In England alone, 6.3 million properties, and around a third of road, rail, energy and water infrastructure, are currently at risk of flooding.[3] This is a feature of the UK's geography and weather, as well as its infrastructure and development. As an island nation within the Gulf Stream, the UK is prone to frequent and prolonged heavy rainfall, particularly over the autumn and winter.

Over time, as towns and cities have expanded, concrete surfaces have increasingly reduced natural drainage, preventing water absorption and causing rapid runoff and overwhelming drainage systems. This has not been helped by the lack of enforcement in the planning system - for example, households often block-pave driveways without planning permission, despite it being required. Cities and towns built near coastlines are also vulnerable to storm surges and coastal erosion. This means that flooding is an issue that impacts rural areas with rivers, coastal communities, as well as suburban towns and cities.

The last few months alone have brought severe storms with heavy rainfall from Storm Bert to Storm Darragh and on New Year's Day, flooding areas across Wales, Worcestershire, Yorkshire, the North East and the North West. Communities throughout the UK were evacuated from homes, lost power, and experienced significant travel disruption. Recent research by Public First for AXA UK found that coastal areas of the East Midlands, Yorkshire and the Humber, as well as areas in the South East and London, are most vulnerable to flood risks.[4] This means that not only are they particularly flood-prone but they also face compounding socioeconomic factors that will make preparing, responding and recovering from flooding more difficult.

Historic underinvestment in flood resilience has exacerbated the problem in England. Flood risk management is a devolved matter, making much of the existing Westminster debate focused on England. In 2014, half of the existing flood defences in England received no more than a minimum standard of maintenance, which, in some cases, was no maintenance at all.[5] As a consequence, the National Audit Office (NAO) and Climate Change Committee (CCC) expect that defences will degrade more quickly and will need replacing earlier.[6]

Since then, while the government doubled its funding commitment from £2.6bn over 2015-2021 to £5.2bn over 2021-2027, various challenges inhibited its effective delivery. Inflationary pressures, supply chain delays, and departmental bureaucracy on funding formulas and business cases reduced the six-year programme's forecasted impact by 40%.[7] As well as this, in 2022, the Environment Agency received an annual resource funding shortfall of £34m from the Department for Environment, Food and Rural Affairs (Defra) to maintain the condition of its

[1] Sayers et al., *Third UK Climate Change Risk Assessment (CCRA3) Future Flood Risk*, July 2021.
[2] ONS, 'Towns and cities, characteristics of built-up areas', England and Wales: Census 2021.
[3] Environment Agency, *NaFRA2*, January 2025.
[4] AXA UK, *Extreme weather risks: An analysis of England's vulnerability to flooding and heat*, November 2024.
[5] Climate Change Committee, *NAO find evidence of under-investment in flood risk management,* July 2014.
[6] Ibid.
[7] National Audit Office, *Resilience to flooding - value for money,* November 2023.

existing flood prevention assets. By 2023, the combination of underinvestment in maintenance and the cancelling of a quarter (500) of new defence projects reduced flood protection from an expected 336,000 homes to 200,000.[8]

The problem is getting worse. The UK is becoming more exposed to flooding as existing assets have degraded further since 2023 and climate change increases flood risk. The Environment Agency has struggled to meet its target condition grade (98%) of existing assets, such as flood defences - 3,097 high consequence assets are now below target condition as a result of poor maintenance and an inability to keep up with storm damage. Storm Darragh left existing assets at a condition grade of 91%.[9]

Climate change also increases flood risk. By 2050, conservative estimates indicate 2.7 million people would be exposed to frequent flooding a year, rising to over 3.8 million in more severe scenarios - a third of present-day London.[10] More recent estimates show that the Environment Agency expects 27% more properties to be at risk of flooding, rising to 1 in 4 (8 million) homes and businesses, as well as half of railways and roads in England.[11] These are even likely to be underestimated - unlike the UK-wide estimates, the Environment Agency's forecast does not account for population or urban growth. As urbanisation and nature degradation is also a key driver of flooding, it is likely that overall risk to the country's built environment could be much higher, particularly as this government plans to build more houses, data centres and energy infrastructure. Ensuring this new infrastructure does not increase flood risk alongside investing in reducing existing risk levels is therefore critical to our national security.

The upcoming multi-year Spending Review presents an opportunity for this government to underpin a decade of a resilient economy and growth. With a new government, and new funding commitments, comes uncertainty. There is no current funding commitment from the Labour government on flood defences beyond April 2026. The Chancellor allocated £2.5bn in the Autumn Budget 2024, which was topped up by £250m following significant floods over the last few months. This is a welcome commitment, providing much needed protection to 66,000 homes - but it still does not make up the 70,000 home- shortfall from the 2023 cuts.[12] The funding settlement is only allocated until April 2026, after which there is no guaranteed investment in flood defences. This Spring, the Chancellor will set out the future of flood risk management funding, following a recent review of its affordability. The upcoming multi-year Spending Review enables this government to lead where previous administrations fell short - to ensure a more resilient economy and communities for local and national growth.

Where flooding is a devolved issue, spending powers on flood risk management lie with the national governments in Scotland, Wales and Northern Ireland. Funding committed at the Spending Review would also have Barnett Consequentials for devolved nations.

This briefing sets out the political and economic case for setting out a long-term investment settlement in flood risk management at the upcoming Spending Review.

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[8] Ibid.

[9] Environment Agency, *Environment Agency corporate scorecard 2024 to 2025 - quarter two*, January 2025.

[10] "Frequent flooding" is defined as a property facing a 1.38% or greater chance of flooding in any given year. Sayers et al., *Third UK Climate Change Risk Assessment (CCRA3) Future Flood Risk,* July 2021. Conservative estimates assume 2 degree climate projections and no population growth. More severe scenarios assume 4 degree climate projections and high population growth.

[11] Environment Agency, *NaFRA2*, January 2025.

[12] Defra, *Record investment to protect thousands of UK homes and businesses,* February 2025.

Research methods

To explore the impact that flooding has on the UK economy and households, Public First combined polling, modelling, and a new approach to opinion research - 'immersive' research. This involved traveling to Wigan, Makerfield and Loughborough to meet and speak with communities affected by flooding in their local area. More method details are in Appendix A.

Economic modelling

We carried out economic modelling that moves beyond the standard 'cost of damage' approach to estimating the impact of flooding by considering the immediate, medium-term and the longer-term impacts of flooding. The immediate impact estimates both the cost of damage to property and infrastructure and the lost output when people can't get to and from work. Our longer-term impact focuses on how flood events have a downward economic pressure on GVA and employment over a decade. A full methodology is provided in the appendix.

Polling and immersive research

We also used opinion research to better understand public attitudes towards the impact of flooding and action on flood risk management. This included online polling and in-person methods of immersive research and a focus group. Polling is valuable for capturing a quantitative measure of broad opinions across the UK. By comparison, immersive research and focus groups allow us to delve deeper into what forms those attitudes and hear how people speak about an issue in their own language, and in the case of immersive research, their own local environment too.

We conducted two anonymous online surveys from 21st February - 3rd March 2025 - a nationally representative sample of 2,011 adults across the UK and a 253 sample of adults living in the top 10% of English constituencies most vulnerable to flood risk. These constituencies were identified by previous Public First research for AXA UK. Public First is a member of the British Polling Council and company partners of the Market Research Society.

Our immersive research involved sending five researchers in February 2025 to Wigan, Makerfield, and Loughborough - recently flooded Labour constituencies. Over four days, we conducted 180 interviews with residents and business owners, including one focus group. Other than the focus group, these interviews were not prearranged and took place in high streets, shops, cafés, churches, and even a sketching class, reaching people traditional market research might miss. These insights revealed concerns about flood risk, preparedness, and who they believed should take responsibility for management.

CHAPTER TWO:

FLOODING IS COSTLY, HARMING GROWTH

The economic impact of flooding is stark. This section presents new Public First economic research on the full lifecycle impact of flooding on the economy, including the immediate costs for UK households and businesses, as well as long-run downward effects on economic growth and employment.

Flooding causes immediate physical damages to property and infrastructure, costing £2.4bn annually. Public First estimates that at present-day risk levels flooding costs the UK economy £2.4 billion in direct physical property and infrastructure damages. This accounts for the total annual cost in a given year, in which there is an average of 700 recorded flood events in England alone.[13] Without more investment in flood prevention, we estimate this will rise to £3.6bn in 2050. This increase is driven by the Environment Agency's most recent estimate of how flood risk will increase to 2050 due to future changes in rainfall, river flows, high tides and wave conditions. Their risk estimates do not account for any additional development or new investment in flood protection.

To reach these figures, we have built upon our previous research for AXA UK, which estimated the cost of flooding on the most at-risk properties (both residential and non-residential).[14] To update the figures, and build a more complete picture, we analysed insurance datasets on wider public infrastructure, as well as the latest flood risk assessment by the Environment Agency (EA) - the national assessment of flood and coastal erosion risk in England (NaFra2). We also estimate insured and uninsured costs of flooding by combining data from the Association of British Insurers (ABI) and the International Disaster Database (EM-DAT).

The highest costs of flooding in England are in London and the South East which are home to large urban areas with greater housing density and higher asset values (i.e. higher property prices, and therefore higher damage costs). But the South East is not the only region suffering: property and infrastructure costs are set to exceed £100m annually in every region except the North East by 2050. In London and the South-East costs from flood damage will surge from £821.7m in 2024 to over £1bn every year by 2050.

There are also disproportionately large costs for Scotland, Wales and Northern Ireland, when compared with their populations, with the expected annual cost of damage for Scotland of £380 million and for Wales £320m, both bigger than any England region barring London. This is due primarily to the higher prevalence of flooding.

The initial insurance costs from just one storm - Storm Babet - in 2023 are expected to be between £450m and £650m.[15] These costs are yet to be confirmed and paid out but - crucially - these only account for the 70% of people with insurance. The impact on the 30% without insurance is not currently estimated, although it would likely be devastating.

[13] Public First analysis of Environment Agency, *Recorded Flood Outlines*, 2025.
[14] AXA UK, *Extreme weather risks: An analysis of England's vulnerability to flooding and heat*, November 2024.
[15] PwC, *Insurance costs of Storm Babet*, November 2023.

We found the projected cost of uninsured flooding damage in 2024 is £1.2bn. Without improved defences, this will rise to £1.8bn in 2050.

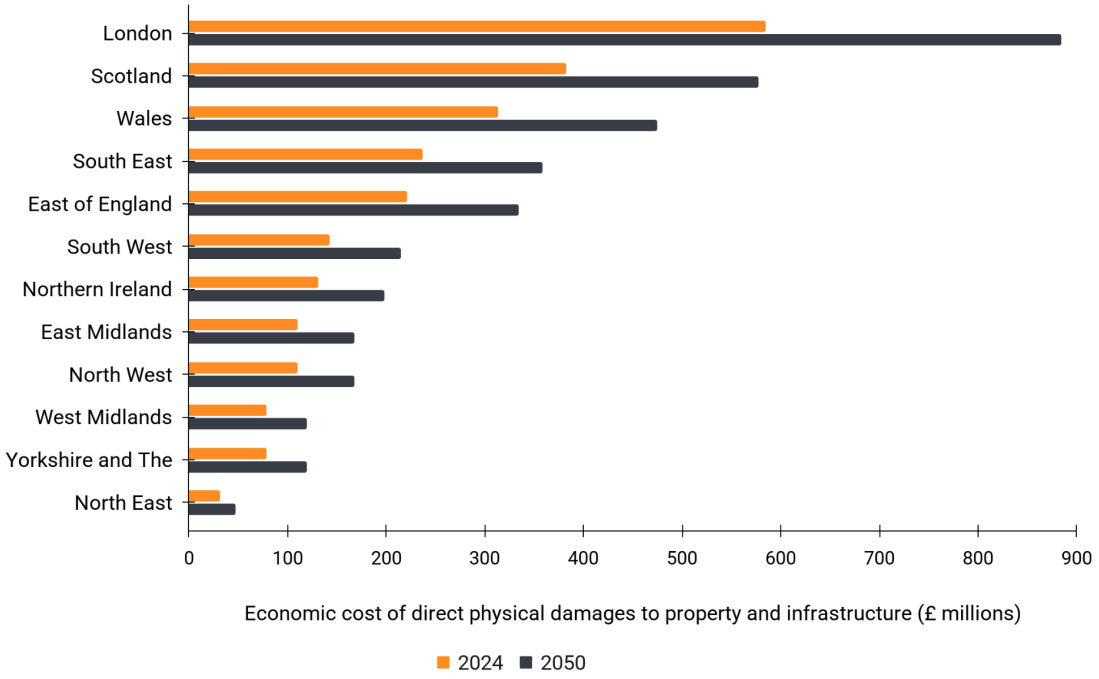
Our immersive research in recently-flooded areas enabled us to move beyond headline statistics to understand the impact that property damage has on locals. Residents told us:

> *"Luckily we saved quite a bit last time because [the water] came up slower from the bottom. This time it was overnight and we couldn't save anything."* - Woman, 60s, Makerfield

> *"The owners of all these houses kept coming in [to the shop] to buy blankets because all their things were getting ruined because the water was that bad."* - Woman, 50s, Makerfield

> *"We were shut for four days because of it. We had to throw stock away - we probably chucked around £20-30k. No one was insured either, it happened 10 years ago so you can't get insurance."* - Man, 30s, Makerfield, shop owner

Chart 1: Flood damage costs are most significant in London and rise from 2025 to 2050. *UK flood damage costs on properties and infrastructure in 2024 and 2050 by region*



Source: Public First analysis

Flooding causes £290m in lost output over the following 10-day average period where people cannot reach their workplace. Flooding does not just impact output through direct property damage - it disrupts activity by preventing people from reaching their place of work, limiting overall productivity.

Public First estimated the total cost of lost output by first mapping geospatial flood risk data to employment data to estimate the total number of jobs at risk from flooding, by region and sector. We removed jobs that could be done remotely in the event of a flood and applied GVA estimates to calculate the total lost output, by region.

These costs are lower than they might otherwise be: recent trends towards flexible and home working mean that more employees are now able to work from home for an extended period while their workplace is out of action. This is of course not true of all jobs, which is why there is a lost output cost from flood events. The extent to which people can work from home tends to differ between regions, which we accounted for. For example, London workers are increasingly able to work from home, somewhat reducing the impact in the capital (an effect far outweighed by the highly productive output of the capital). Local disruption from flooding, such as power cuts, could also affect home-based working productivity, although these are less quantified.

By far the highest contributor to the cost of lost output is London, despite the relatively high levels of home working described above. This is due to the high levels of employment and relatively high productivity of workers in the capital. The West Midlands experiences the highest cost of lost output of the English regions outside of the capital due to high employment and relatively high propensity for flooding.

Local people interviewed in our immersive research who live in high risk areas are resigned to the idea that flooding is part of local life and regularly impacts productivity:

> *"The village next to us... we know people who have lived there for 30 years... never flooded. Three weeks ago, they couldn't get out... You know it affects the economy. We're trying to grow the economy. Then if people can't get out... everything's a knock-on isn't it?"* - Woman, 50s, Loughborough

Most people could name an area that floods regularly ("once a year" or "whenever there is heavy rainfall"), impacting the local economy:

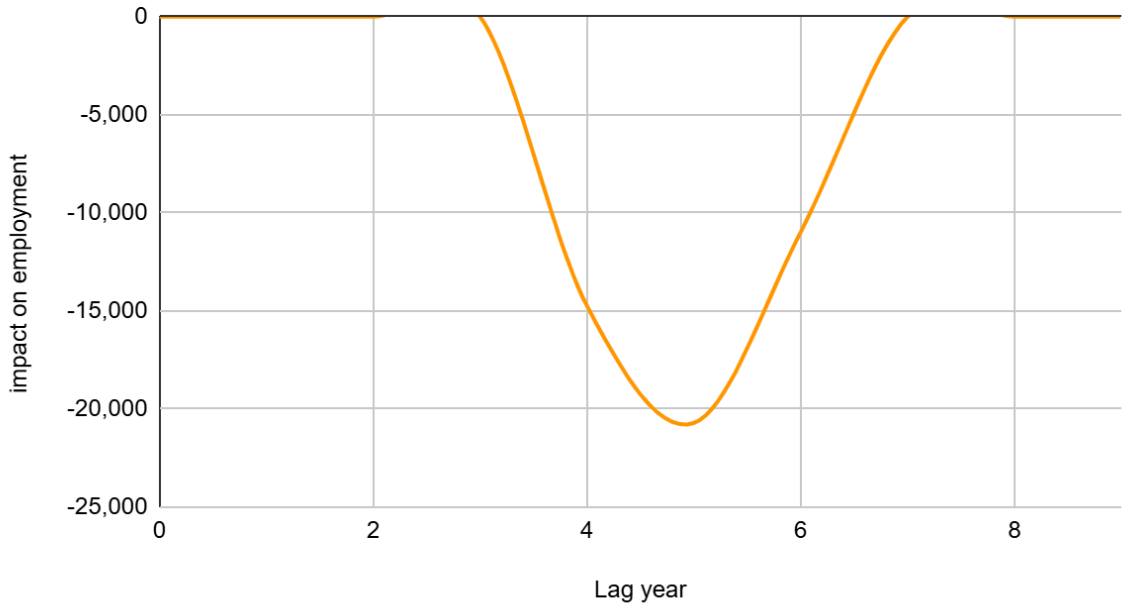
> *"It has a knock-on effect business-wise. At that point, you've already committed to paying people. You've already got the pitch ready, which means you've got groundspeople coming in from 8 a.m. All the stuff's ready for a game day as well as the preparation the week before - the food all gets done before, so it's a lot of food waste. As far as a business, it's a cost, it's a big loss."* - Man, 30s, Wigan

Flooding events do not just impact current output - they deter investment and lower future growth. Each year of flood events causes a decade-long downward pressure on the economy worth £6.1bn, and means employment is 46,000 lower than it otherwise would be. Public First analysis shows that flooding events significantly impact current and future employment and output at a greater scale than the upfront cost of damage and lost output described above. Our modelling identified Manufacturing and Transportation and Storage as the two sectors most impacted. This is perhaps unsurprising given the type of land these sectors typically occupy and the high value equipment and capital likely kept there.

Past flooding events are responsible for 26,000 fewer people employed in the Manufacturing sector and 20,000 in the Transportation and Storage sector, a total of 46,000. However, the impact doesn't take effect immediately. Chart 3 illustrates the effect over time, and shows that flooding starts to impact employment three years after the event, peaking at around five years, before returning to normal subsequent years[16].

[16] The impact can be thought of in two ways, either as the impact of flooding in all previous years on employment this year, which we have estimated as 46,000, or by thinking about how flooding this year impacts employment in all future years, which we illustrate in the chart. These are two ways of looking at the same effect.

Chart 2: Employment impacts peak four or five years after the flooding events. *Employment impacts of flooding on the Manufacturing and Transportation & Storage sectors*



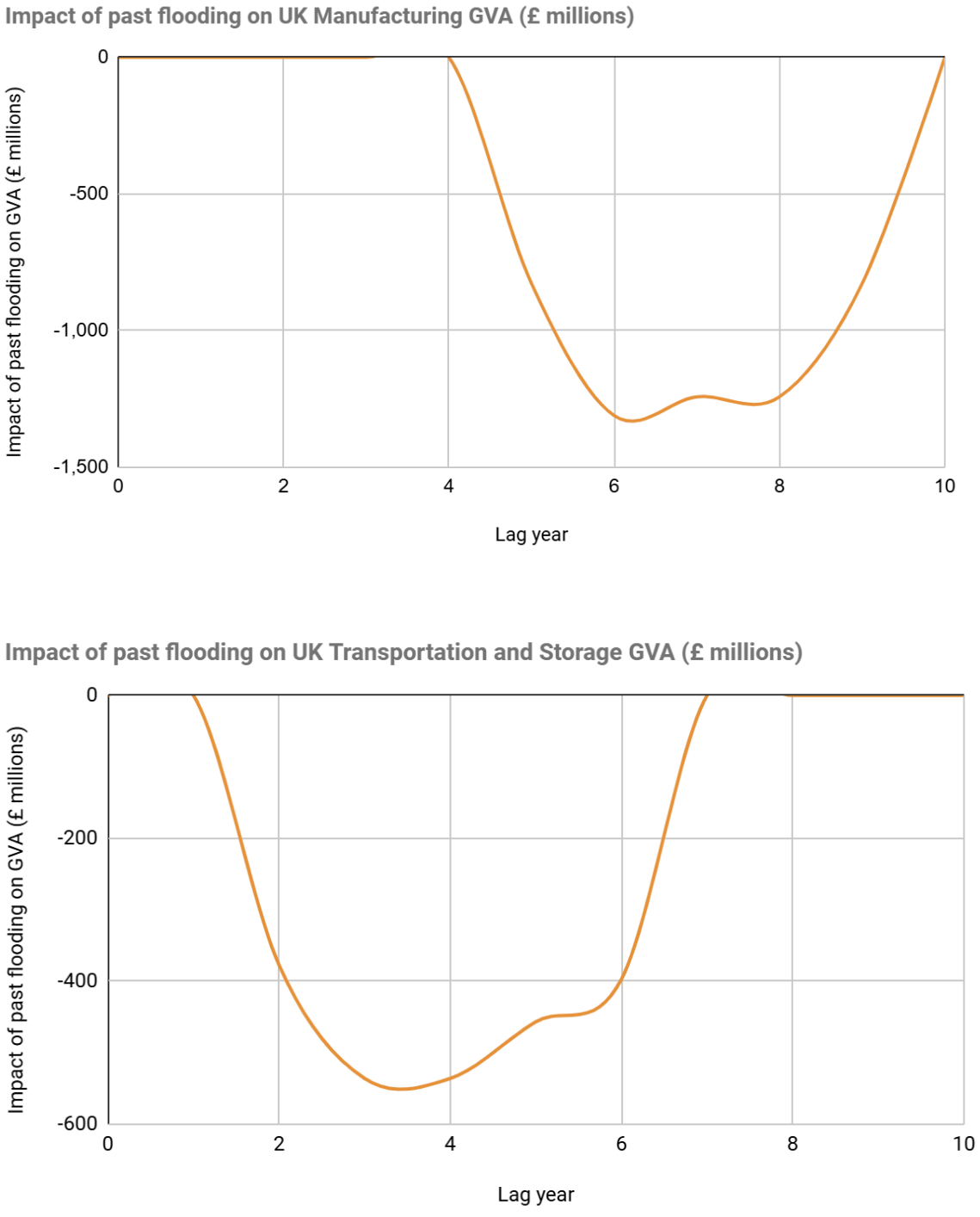
Source: Public First analysis

We estimate that every year flooding costs the economy **£6.1 billion** of lost Gross Value Added (GVA) through flooding events that have occurred in the previous five to ten years. This is made up of £3.8bn in the Manufacturing sector and £2.3bn in Transportation and Storage. The effect on GVA is both greater in percentage terms and more persistent than the impact on employment. This is because in addition to a reduction in employment, GVA is affected by a range of other factors.

In the shorter term, firms experience additional cost from the damage they experience and possibly price inflation from their suppliers, both of which increase the cost of intermediate goods thus reducing GVA. In the medium term, firms may choose to reduce investment in capital given the negative impact on their finances and uncertainty around the safety of these investments, a decision that would likely reduce productivity in the medium to long term. At a sector wide level, higher value manufacturing firms with expensive equipment may be more likely to close operations or move away given the risk to their capital and the likely increased cost of insurance. This would reduce aggregate productivity for the whole sector.

There is also variation in the time lag and resistance between the two sectors we investigated, with the Transportation and Storage sector experiencing a reduction in GVA sooner but also recovering sooner. This is likely because manufacturing requires greater capital investment and longer term planning than transportation and Storage.

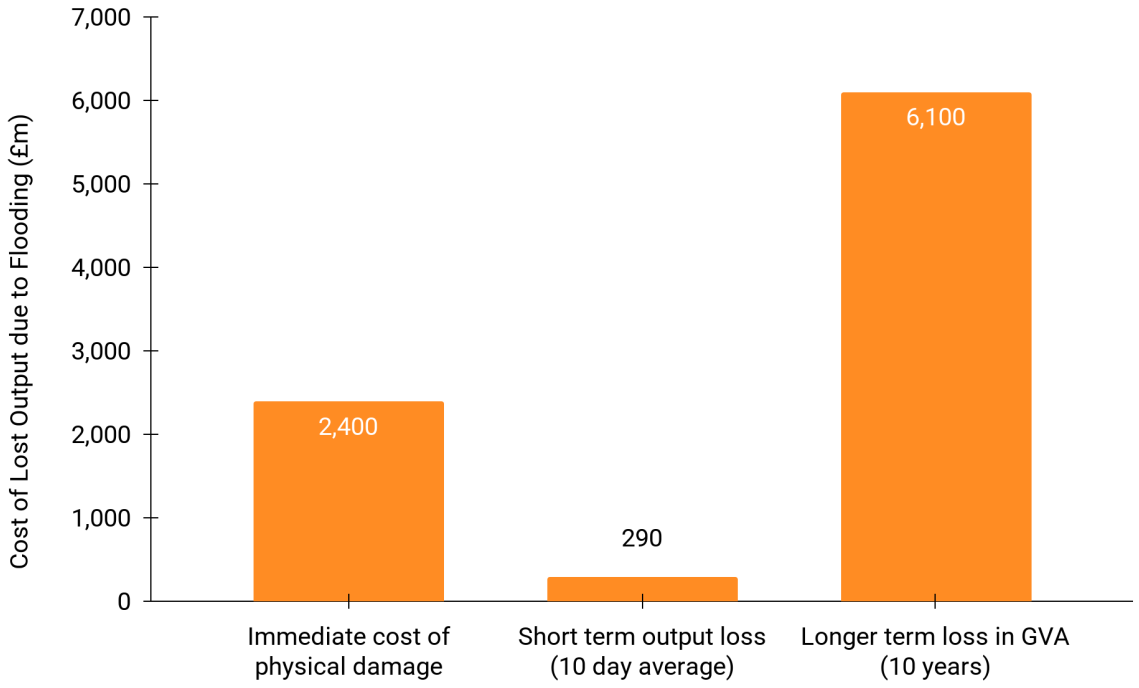
Chart 3: GVA effects are experienced later for the Manufacturing sector. *GVA impacts of flooding the the Manufacturing and Transportation and Storage sectors*



Source: Public First analysis

Given the centrality of economic growth to the government's domestic agenda, the long-term economic consequences of flooding cannot be ignored. Chart 4 illustrates the immediate, the short term and the long term economic cost of flooding to the economy.

Chart 4: Long term economic impacts of flooding are far greater than the immediate cost of damage and short term lost output. *Comparing the immediate, short term (10 days) and long term (10 years) economic costs of flooding.*



In our immersive research, the public repeatedly expressed concerns that flooding pushes businesses to relocate or shut down entirely:

> *"[A local shop] has left. It's been here for many years, a brilliant local business that's been great with the community. And to lose that is massive. It really is. And the local post office [closed temporarily due to flooding]. I know the postmistress really well, and you know, it's been heartbreaking, especially for people that rely on the post office. They didn't know where to turn so that will have had a massive impact as well."* - Woman, 60s, Makerfield

This was also reflected in our polling. Over half (55%) of UK adults think that communities affected by flooding will not benefit from national economic growth, due to the costs of repairs and damages. 1 in 3 (33%) people polled also think the UK won't be able to grow the economy until we deal with the immediate impacts of flooding. Although other messages carried more weight, the significance of this view should not be overlooked.

Flood prevention is a smart investment. Research by the Climate Change Committee identifies that for every £1 invested in flood risk management, £8 is prevented in future flood damages. £3 of that is a direct saving to the government because more than a third of the damage is to publicly owned infrastructure like roads, railways, schools and hospitals.[17] These benefits can be derived from both structural and natural prevention methods.[18] Additionally, for every £1 invested in the maintenance of existing defences, £7 is saved on new defences.[19] It is therefore imperative that setting out long-term investment in flood risk management is

[17] CCC, *Flood and coastal erosion risk management spending*, January 2014.
[18] The Wildlife Trusts, *Assessing the multiple benefits of Natural Flood Management*, March 2025.
[19] FloodRe and ABI, *Modelling the impact of spending on defence maintenance on flood losses*, June 2021.

considered as an integral part of this government's growth and infrastructure agenda. Cities like Leeds are already taking steps to integrate structural and natural solutions to reduce flood risk.

Leeds Flood Alleviation Scheme: Demonstrating the transformative potential of effective flood defences

Leeds, frequently at risk of severe flooding, was overwhelmed by Storm Eva in 2015. The initial need for new defences in Leeds was identified after near-miss flood events in 2000 and 2007 – incidents where the River Aire came perilously close to overtopping existing banks. But an early plan in 2010 stalled due to funding gaps. The issue regained urgency after the devastating Boxing Day 2015 floods (Storm Eva) overwhelmed the River Aire's banks. 3,355 properties (and 672 businesses) in Leeds were flooded with estimated £36.8 million in direct damages and over £500 million in wider regional costs.[20]

The Leeds Flood Alleviation Scheme (FAS) was designed to protect Leeds from further extreme floods offering a 1-in-200-year level of flood protection[21]. The Leeds FAS is one of the UK's most advanced flood defence schemes, integrating traditional engineering with innovative technologies and natural flood management. The scheme's total investment reached £200 million, making it one of the largest flood defence projects in the UK.[22] Delivered in two phases by Leeds City Council and the Environment Agency, the scheme now covers a 21 km stretch of the River Aire.

New defences now protect over 4,000 homes and 1,000 businesses, including across the Chancellor's constituency of Leeds West and Pudsey. It shields key commercial and transport infrastructure, including Leeds Rail Station, major road corridors (A65), and industrial areas. Before the scheme, the city centre had no permanent defences. The moveable weirs, a core part of the scheme, have already been deployed multiple times, preventing major flood damage during Storm Ciara (2020) and the 2022 winter storms.

The scheme has also enabled £774 million in economic growth, supporting new residential, commercial, and infrastructure developments. Beyond flood protection, the scheme unlocks significant economic and environmental benefits securing previously high-risk floodplain areas - particularly in the South Bank regeneration zones. An estimated 3,000+ new jobs will be created from the scheme, while 33,000 existing jobs are now protected from flood-related disruption.

[20] Leeds City Council, *Construction of groundbreaking £200 million scheme to protect Leeds from extreme flood risk is complete*, November 2024.
[21] Mott MacDonald, *10 year collaboration secures long term flood protection for Leeds*, February 2025.
[22] Leeds City Council, *Construction of groundbreaking £200 million scheme to protect Leeds from extreme flood risk is complete*, November 2024.

CHAPTER THREE:

LIVING WITH FLOODING - RISING RISKS AND FAILING INFRASTRUCTURE

What does flooding mean for at-risk communities and the nation as a whole? How concerned is the British public about flooding? Who and what do they blame for recent floods? Do they think the issue is worsening? What do those at-risk and most recently affected think? This section answers these questions with new public opinion research on attitudes towards the problem of flooding. These findings draw on a new Public First nationally representative 2,011 sample poll of UK adults, augmented with an additional 253 sample in areas most vulnerable to flood risks.[23] We also carried out 180 in-person interviews in recently flooded areas across Wigan, Makerfield and Loughborough constituencies.

The social impact of flooding is significant. The effects of flooding go beyond the financial damages highlighted in the previous chapter, it also affects people's physical and mental health. This social impact is estimated to last for up to two years after a flood event.[24]

Flooding can leave a lasting impact on people's mental and physical health due to displacement, isolation, uncertainty, damp conditions and general hazards. One of the areas we visited in our immersive research was Platt Bridge in Makerfield constituency. The area experienced severe flooding on New Year's Day 2025, as did much of the Greater Manchester area where 1,300 people were evacuated from their houses. When we visited, five weeks later, those in Platt Bridge who had been evacuated were still not back in their homes. Some were staying in hotels or with loved ones, while others had found new rental accommodation. This was not the first time - this neighbourhood was also evacuated during a flood in 2015. As a result, some locals did not have insurance and were paying hotel costs out of their own pocket.

We spoke to one homeowner who was, that day, returning to their flood-damaged house to live upstairs - they *"just wanted to come home"*. A few doors down, we visited a shop that also flooded. The now-gutted building donned 3ft-high mould tide marks across the walls. The health implications of returning to live in similarly damp conditions would be significant.

> *"We had to evacuate [in 2015], but we managed to get back in [the house] that night, so we stayed. But, we're still actually at the hotel now. We have to be out tomorrow. We've paid for the electric to be put back on ourselves, so I'm gonna live upstairs until the jobs are done."* - Woman, 60s, Makerfield

In contrast, others were stuck in their homes due to nearby flooding, causing stress and unease. Our polling found that this anxiety was particularly high in young people - 58% of 18-34-year-olds said they become stressed and uneasy when they can't leave their house due to illness or extreme weather, compared to 41% of the general public and 26% of pensioners.

[23] Identified as the top 10% of constituencies most vulnerable to flood risk in England. Public First research in AXA UK, *Extreme weather risks: An analysis of England's vulnerability to flooding and heat*, November 2024.
[24] Environment Agency, *A method for monetising the mental health costs of flooding*, February 2021.

Immersive research found this had an isolating effect on the elderly and vulnerable. For example, residents said they struggled to visit elderly relatives due to road closures or that older neighbours wouldn't leave their homes until the flooding or its impact subsided. A community sports organisation had to cancel local initiatives which, for some pensioners, was their only opportunity to get out and socialise in the week.

> *"My friend's estate couldn't get out for a day. He just stayed in his house."* - Man, 18, Wigan

> *"The elderly can't get out when it floods. My next-door neighbour, she's 96. When the flooding came and the water was cut off, a lad over the road came over and brought her bottled water. She couldn't go out."* - Woman, 60s, Makerfield

> *"One of our sessions tends to be an average of over 70s, 80s. It is targeted at adults who are socially isolated. For a lot of them, that is their activity for the week. Bear in mind, we'd just had Christmas as well... They didn't see anybody that whole time.*" - Man, 30s, Wigan

Locals across our immersive research also felt anxious about the likelihood of floods happening again. Those that were not as affected by floods felt lucky that they were, in some cases, narrowly missed. For those more negatively affected, their anxiety about future floods was often exacerbated by whether they knew of any improvements to flood protection in response. Whether people would be able to sell their homes was of particular concern.

> *"People who are flooded on a yearly basis - like my friends in Barrow - they always dread that time of year."* - Man, 30s, Loughborough

> *"No one's going to buy a house that's got a flooding issue. So they're stuck there and have to put up with that. It's really sad."* - Woman, 30s, Loughborough

> *"Would you buy it!?"* - Woman, 60s, Makerfield about her recently-flooded house

Sentimental losses are also devastating. People also told us about the invaluable items they had lost due to flooding, including family heirlooms, which could not be replaced. Our polling supports this - nearly half (49%) of the general public said that if anything were to happen to their family heirlooms, they would be devastated.

> *"I had stuff there from 1876. That's all gone. I had my nan's grave deeds, my mum and dad's pictures of when they were all young - that's all gone."* - Man, 40s, Makerfield

Flooding is a prevalent local and national issue. Across many towns and villages we visited, flooding was often the top local issue. This feeling was strongest the closer residents were to recent floods but proximity was not always geographical proximity: those with family or friends affected by flooding also strongly viewed it as a local issue. However, residents of flood-affected areas did not feel flooding was unique to their area - instead, they thought it was an issue that affected the UK more broadly.

> *"Well, I think it [flood prevention] is pretty important. I think maybe even on a level with social care because the amount of people it affects here is pretty major."* - Man, 40s, Makerfield

> *"The surrounding villages are known for flooding, but I think the country as a whole has an issue with flooding. I think within Great Britain, we're seeing it more and more."* - Woman, 20s, Loughborough

Nearly four in ten (38%) UK adults have been affected by flooding in their local area within their lifetimes. Around half of these (18% of the public as a whole) say they have been affected in the past 12 months. In the ten most vulnerable constituencies, nearly half (48%) said they had encountered some form of local flooding.

One in ten UK adults have experienced flooding at their home or workplace. 12% of the public has lived in a house that was flooded and 10% said their workplace or business has flooded. 17% of the public also say that they know someone whose home has been affected by flooding. As highlighted in the previous chapter, this can have devastating, financial implications for households and businesses.

> *"I know it used to be very bad in Quorn when I lived there. The river would come up and the properties close by would be flooded. My friend had a shop and we had to put sandbags up so many times."* - Woman, 60s, Loughborough

Flooding is most commonly an inconvenience to daily life. Road diversions or travelling through floodwaters are among the most common ways people experience flooding. Nearly a third (32%) of the public has passed through a flooded area, with over half of them (53%) doing so in the past year. Three in ten (30%) also said they had to take a different route due to flooding or traveled through a road that was flooded (27%).

> *"Where I live, I think there was like two weeks where there's normally five ways in and out but four of them were flooded. It's an absolute nightmare. There was one day where I left work at 5pm and didn't get home till 8pm."* - Man, 20s, Loughborough

> *"I had to drive all the way back around because [the road] was flooded. It's like that every time it rains and under the bridge. But people are so stupid, sometimes they think they can just go through it and then they break down. It holds up all the traffic, especially on weekends."* - Man, 70s, Wigan

In the last five years, 1 in 10 have also had to miss out on an event they were going to due to flood-related cancellations. 12% of the public said an event they were going to attend (football match, community group, etc.) was cancelled as a result of flooding. In Wigan, locals told us of a recent Wigan Athletic game that was cancelled because all access points to the stadium were flooded. Given how quickly the rain and flooding came overnight, the cancellation occurred on match-day, causing last-minute disruption for 10,000 home and away fans.

> *"Normally it's the pitch that calls a game off, but we had to be called off because you couldn't actually access the surrounding areas. I've been watching [Wigan Athletic] since 1979 and have never not been able to get to a match because of flooding."* - Woman, 60, Makerfield

The public is concerned about the impact of flooding. The public is most concerned about the impact of flooding on transport disruption, infrastructure, and the food supply chain in their local areas. Nearly three-quarters of the public say these are top concerns (73% each), while other important concerns include the negative impact on local wildlife and natural spaces (71%) and losing their belongings (71%). Disruptions to transport align with the public's previous experiences with flooding - with a third of the public saying they have been diverted from their usual route due to flooding.

For those in the most vulnerable constituencies, concerns beyond transport and food supply disruptions centered on the instability of homeownership, including fears of being unable to sell their home (78%), losing their belongings (75%), and not being able to access or afford home insurance (72%).

Reform voters were notably less concerned about all flood-related issues in their local area but somewhat more concerned about specific flood-related issues throughout the country, like disruptions to national transport (72%), potentially losing landmarks and historical sites (69%), the negative impact on national wildlife and natural spaces (79%), and disruptions to the food supply chain (81%).

The public thinks flooding is getting worse. Three-quarters (75%) of the public agreed that flooding occurs more frequently and causes more damage across the country than it used to. Nearly half (45%) of the public expect flooding to worsen in their local area in the next 5 years, rising to 58% who expect flooding to worsen across the UK in that same period.

On the ground in recently-flooded areas, locals also generally thought that flooding was becoming more frequent - only a few thought there had been no significant change, given that the area had always been prone to flooding.

> *"I don't think that Quorn has really flooded like it has in the last two years... of course, historically there has been flooding, but I've lived here for 25 years and the village hasn't flooded like that."* - Woman, 50s, Loughborough

> *"Isn't it just part of the weather in England? But maybe something is causing it - there didn't used to be floods like this."* - Man, 20s, Loughborough

People blame flooding on many things - but mainly poor drainage infrastructure. Almost half (44%) of the public said that one of the top three causes of flooding in the UK was poorly cleaned and maintained drainage and sewage systems, followed by 43% who cited outdated drainage and sewage systems not equipped to deal with heavy rainfall. Climate change ranked third (38%). Blocked and poorly maintained rivers and streams (31%) and new housing developments in flood risk areas (28%) were also popular responses.

This reflects what we heard on the ground in recently-flooded areas. These communities often felt they had no answers to why the area repeatedly floods - relying on 'rumours' and 'theories' from fellow residents. However, the most common reasons included poor maintenance of drains and waterways, building new homes on floodplains, and the worsening climate.

> *"You hear lots of rumours - like Northampton opened their floodgates and let it all down here, the drains aren't being cleared anymore. Is it climate? Or is the council so hard up for money that they're cutting back on those little jobs? The drains were always cleared before. Is that the reason? A lot of people are blaming building houses."* - Woman, 50s, Loughborough

Looking ahead, people also expect poorly maintained and outdated drainage systems (42% each) to be the most common explanation for why flooding might worsen in their local area over the next ten years. This was followed by new housing developments being built without suitable drainage (35%), rivers and waterways not being maintained (34%), climate change (33%) and more development generally, meaning water can't be drained and absorbed naturally (33%).

This is likely driven by public attitudes towards how the quality of this infrastructure has changed over the last ten years. Drainage and sewage systems were also seen as types of public infrastructure that have worsened in the past decade. Two in five (39%) say that the quality of drainage and sewage systems have worsened over the last 10 years. This is around similar levels to railways (38%), followed by flood defences (32%). Main roads and motorways are thought to have declined the most (51%).

Public consent for building more homes will partly depend on flood risk management. Following drainage and sewage systems failures, the public are next most likely to say that flooding is caused by new housing developments in flood-prone areas without suitable drainage. 50% of UK adults also worry that more housebuilding will lead to more flooding in their area. This was reflected in our immersive findings, where locals in recently flooded areas felt sceptical about recent developments and questioned why they were built in flood-prone areas.

> *"It's all these new houses that are being thrown up everywhere. They're being thrown up in under a year or whatever, and I don't think they're even considering the drainage system and things like that. Maybe for the individual property, but as a whole, no..."* - Woman, 20s, Loughborough

> *"You see in the news where buildings get placed sometimes just aren't normally thought out. They are just put in places to get them built and then it will lead to stuff like this, floods."* – Man, 20s, Wigan

This perception is not entirely unwarranted - research commissioned by insurance firm Allianz found that more than 7,000 new homes have full or conditional approval planning permission on previously undeveloped floodplain land in the 12 local authorities with the highest proportion of homes at flood risk.[25] This raises a potential political challenge for the government if new homes are at least perceived to drive up flood risks for existing residents. As a result, the government should ensure that, where necessary, new homes are built with sustainable urban drainage systems.

While the public acknowledges that there is not enough housing in the UK for the population (66%), they don't think that building more homes on floodplains will solve the housing crisis as no one will want to buy them (73%). It may be true that some people would not buy a house in a high-flood risk area, it is unlikely that no one would, given housing demand is extremely high. Previous research by Public First for AXA UK found that one in five young people aged 18-34 (21%) said they would consider buying a home in an area at risk of flooding, compared to 13% of UK adults. This suggests that those that do end up purchasing these homes may be more desperate to get on the housing ladder or less informed about the potential risk to their property and selves. This might mean that they are also less prepared to respond and recover from flooding.

> *"We were going to buy a house in Croston, but when we saw about the flooding, we took it off the list."* - Man, 40s, Wigan

The public recognises the role of climate change in increasing flood risk but rejects it as an excuse for inaction. As highlighted above, some of the public connect increasing flood risk with climate change - flooding is seen as the most impactful climate risk in the UK with 56% saying it

[25] Localis, *Plain dealing revisited: Planning for flood resilience*, October 2024.

will have the greatest impact, followed by severe storms (53%), sea level rise and coastal erosion (41%), energy supply issues (40%), heatwaves (36%) and food supply disruption (35%). 70% said there are more extreme weather events now than there used to be, with over half (54%) worried about the impact of climate change on the economy. A similar amount (55%) also agree that seeing devastating floods in other parts of the world makes them more worried that it will happen in the UK.

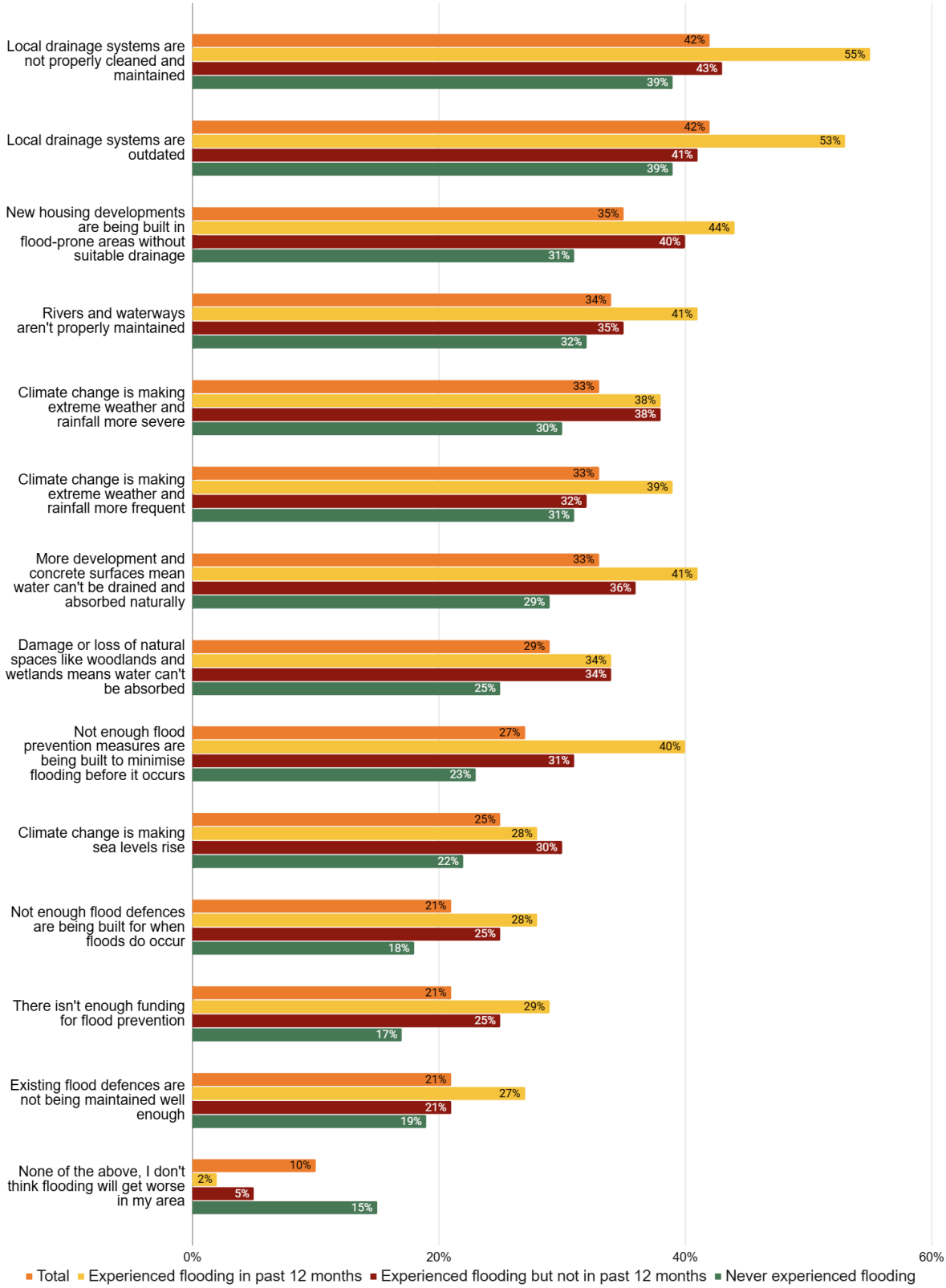
On the ground in recently-flooded areas, locals did not feel climate change was an acceptable excuse for inaction - if anything, it made the case stronger for investing in flood prevention.

> *"I do think the council has to take a bit of accountability. They kind of just go 'climate change is getting worse' [shrugs shoulders]."* - Woman, 40s, Loughborough

> *"People blame climate change. I agree, there's a bit of climate change going on... but I think it's all down to the authorities concerned. Whether it's water companies, the council or landowners, they're not cleaning the ditches, cleaning the rivers like they used to years ago... Prevention is far better than maintenance afterwards."* - Man, 70s, Loughborough

> *"I believe it's environmental damage to the planet that means we're getting more weather conditions and the infrastructure hasn't caught up with that. Money's not being spent on things like that."* - Woman, 40s, Loughborough

Chart 5: The public blame outdated and poorly maintained local drainage systems for flooding. *As far as you are aware, what do you think are the main causes of flooding in the UK? Please select up to three.*



Source: Public First polling of 2,011 British adults, 21st Feb - 3rd March 2025.

CHAPTER FOUR:

THE POLITICS OF FLOODING

The upcoming multi-year Spending Review presents an opportunity for the Labour government to reverse decades of under-investment in flood risk management and deliver change in people's lives. This section sets out why taking action on flooding can not only make the economy and communities more resilient but can also strengthen the government's broader policy agenda.

The public doubts the government's ability to keep promises and get things done. Public First research over the past year consistently finds that people do not have faith in politicians to fix the country's problems.[26] Our immersive research and polling of the general public for this project also reflected these views.

The public has low levels of trust in the government both as an institution and to deliver on its policy agenda. Less than a third (30%) of people say they expect the government to achieve its goals. There is also scepticism about whether the government actually has the interests of the public at heart; nearly three-quarters (72%) of respondents said the current government cares more about getting re-elected than it cares about solving issues facing the country. This relates, in part, to the public's perception of policy inconsistency - two in three (66%) adults say it feels like the government changes its goals every few weeks

Our immersive research also highlighted how this general sentiment towards politics and government impacts public opinion on local and national resilience to flooding.

> *"I don't have any optimism towards the future, regarding everything really. Across my life, I've never seen anything get better... I expect it to get worse and worse... When I see the floods in January, I don't think it'll get better. I think, 'here we go again'..."* - Man, 20s, Loughborough

The public does not feel the country is prepared to deal with flooding or extreme weather. At a national level, two-thirds (66%) say that the current government is ill-prepared to deal with extreme weather events, such as flooding storms, heatwaves and drought. Over half (55%) of the public and those in the most vulnerable constituencies think that their local area would not be prepared to deal with the effects of flooding.

This varies by voter group. Notably, those who voted for Labour in 2024 but said they would not vote for Labour in the next election were more likely to say the government was not prepared to deal with extreme weather (75% compared to 65% of the general public and 40% of Labour hold voters) and that their area wasn't prepared to deal with flooding (58% compared to 46% of Labour hold voters). This creates a political opportunity for Labour: demonstrating the government's willingness and capability to invest in flood preparedness is a direct counter to the idea that Labour is not investing in these communities.

A general feeling of vulnerability was reflected on the ground in recently flooded areas - largely driven by the fact that both the area and other parts of the country continue to flood. The recurring nature of even minor, inconvenient floods served as evidence to locals that insufficient

[26] Public First, *Lessons from the ground: our immersive research in 2024*, December 2024.

action was being taken to prevent future flooding. As a result, many could not conceive how the area would deal with more frequent or severe flooding in future. Locals ranged from being frustrated at the inaction to being resigned because *"nothing ever changes".*

> *"It breaks you down that it's happening again. It doesn't feel like anyone is doing anything. The same happens every year."* - Woman, 40s, Loughborough

> *"I'm 28 and in my life, I don't think they've ever done anything to prevent it. And it happens every single year. There is a row of flood defences, like a sort of pathway between Barrow and Quorn. But that was before I was born, and since then, literally nothing's been done... How can we prepare if no one is doing anything about it?"* - Man, 20s, Loughborough

Where these communities had seen repeated flooding, many locals thought that the infrastructure was more unprepared to deal with flooding than the local people. As highlighted in the previous chapter - this is largely because people think the quality of public infrastructure more generally has declined over the last decade. They also think that drainage and sewage systems, waterways, and flood defences more specifically are not properly maintained. As a result, locals feel unprotected, like they can only rely on themselves or their nearby community.

> *"They're more [prepared] this year. But I would say the people, the business owners, and the actual residents... the infrastructure is not prepared."* - Woman, 50s, Loughborough

> *"I just feel like the infrastructure can't take it. The infrastructure isn't prepared for climate change."* - Woman, 60s, Wigan

> *"Everybody just helped each other. That's what it's all about isn't it. [...] You just help one another. It's just one of them things isn't it, if somebody's struggling you help them."* - Man, 70s, Makerfield

> *"To be honest, what has helped is the community and certainly the church. The only people we've got help from - not the council and not the water companies.... If it weren't for the community, we wouldn't a) know anything about what's happening around and b) wouldn't be in the position we're in now to be able to come back home."* - Woman, 60s, Makerfield

Yet, the public still expects central government to invest in reducing both the causes and impacts of climate change, including flooding. The public does not see flooding as inevitable and instead hopes it can be minimised with proper investment led by the central government. Although, this should not come at the expense of investment in low-carbon solutions to tackle the causes of climate change.

The majority of the public (60%) believes that the impact of flooding can be reduced with proper investment and funding. Notably, those in the most vulnerable constituencies were more positive about reducing flood risks with 70% saying that flooding can be minimised with the right investment. In comparison, less than a third (31%) think that no matter how much money is invested, flooding will always cause significant damage, falling to 23% in the most vulnerable constituencies. This is because they think certain factors will continue to drive flood risks, despite pledged investment, such as urban development (40%), climate change (39%), historical flooding (38%), and lack of trust that investing in flooding would be spent effectively (37%).

The public expect the national government to be the leading actor responsible for improving flood defences and prevention, chosen by 68% of the general public. Local council (60%) and water companies (59%) follow. This was consistent across all voter groups, but varied in the most vulnerable constituencies, which were most likely to attribute responsibility to water companies (74%). Those we spoke to on the ground were more likely to say that local councils were responsible for flood risk management. Water companies were also seen as responsible for poorly maintained drainage systems.

In reality, across the UK, the majority of flood risk management is done through government investment.[27] Given flooding is a devolved matter, national governments set out how much funding is allocated to the national environmental bodies, who provide funding to local authorities to deliver preventative solutions.

Our immersive research found that locals often had conflicting views on their council's ability to take action on flooding. Many often recognised that funding for local councils comes from national government and is constrained - but some thought that councils did not use funding effectively and were frustrated, while others felt they simply had "too much on their plate".

> *"It's a balancing act. Flooding should be high on the list of priorities but [the council] already have a list of high priorities."* - Woman, 50s, Makerfield

> *"Why is the council not doing it? They know it will happen because of the kind of weather we're getting now. It's a given, isn't it? Obviously, they can't sort the weather out, but they can prevent it to a degree, for a better village, you know. Less flooding, less insurance claims, but they're not. I don't know why that is."* - Woman, 40s, Loughborough

Overall, this was reflected by the general public. Only 8% of the public said local councils have the funding to deal with flooding and use it for flooding. Over a third (37%) said councils have the funding but choose to prioritise other issues, and 42% said they lack funding for flooding entirely. This was higher in the most vulnerable constituencies (58%) - see Chart 6.

This creates an opportunity, this Spending Review, for the government to demonstrate leadership. While it is not cost-effective for the government to invest in preventing all flooding[28], it can set out the right investment to help make communities and infrastructure more resilient.

Action on flooding and wider climate resilience should be given equal importance as reducing emissions to tackle climate change. Given the choice, the majority of the public feel that the national government should focus equally on preparing areas to deal with the effects and reducing the causes of climate change (38%), rather than focus more on mitigation (25%) or more on adaptation (28%). The 3 percentage point difference between these individual options is not statistically significant enough to draw any firm inferences. It is therefore critical for public support, and future climate risk management, that the government demonstrates equal commitment to emissions reduction and resilience.

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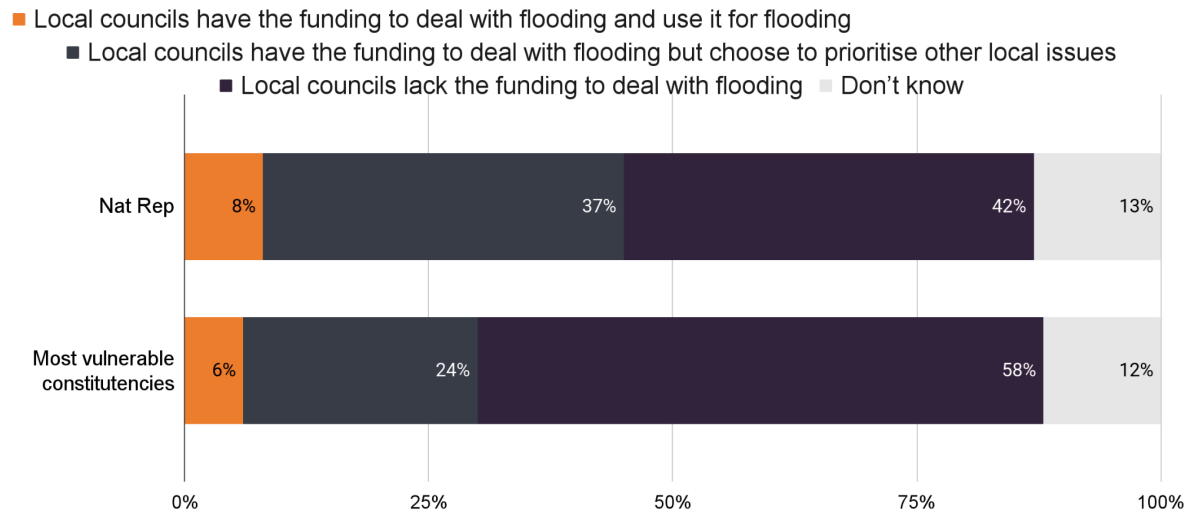
[27] ONS, *Investment in flood defences, UK*, May 2023.

[28] Environment Agency, *Flooding and dredging: Explaining the Environment Agency's approach*, December 2021.

Chart 6: The public thinks councils lack the funding to deal with flooding. *Which of the following comes closest to your view?*



Source: Public First polling of 2,011 British adults and 253 adults living in the constituencies most vulnerable to flooding, 21st Feb - 3rd March 2025

Proactive action on flooding could also strengthen Labour's broader policy and political agenda. While the politics of flooding appeared to be stacked against Labour, with their constituencies being more vulnerable to flooding than most other parties, this is also an opportunity to deliver on national security and resilience.

The English constituencies most vulnerable to flood risk are majority Labour. Recent research by Public First for AXA UK, published in November 2024, found that of the top 10% most vulnerable English constituencies to flood risk, three-quarters (76% or 42 constituencies) are Labour.[29] Of the remaining 13, eight are Conservative, two are Independent, and Liberal Democrats, Reform UK and the Green Party have one each. Part of this can be explained by the fact that the Labour government has a large majority, and therefore, a large share of overall constituencies. We would expect - as seen in Chart 7 - Labour constituencies to feature across differing levels of risk, given there are so many of them.

Reform UK constituencies also share high vulnerability to flood risks. Overall, in England, Labour constituencies have a higher average vulnerability to flooding than other parties, such as the Conservatives, Green Party and Liberal Democrats - see Chart 8. Reform UK is the only party with a higher flood vulnerability than Labour. This is partly due to Reform only having five constituencies, two of which are in the most vulnerable 20% of all English constituencies. It is hard to draw firm conclusions from this, given that the sample is small, but notably, Boston and Skegness is most vulnerable to flooding - Richard Tice's (Deputy Leader of Reform) seat.

Flood risk management can play a part in citizens feeling safer in their homes, workplaces and neighbourhoods. The recent announcement of an increase in defence spending highlights this government's commitment to taking the UK's preparedness for security risks seriously - action on flooding should be considered in a similar vein.

People don't think the government is prepared to deal with some of these global risks. The majority of the public does not feel the government is prepared to deal with any global issue,

[29] AXA UK, *Extreme weather risks: An analysis of England's vulnerability to flooding and heat*, November 2024

including as wars and armed conflict (63%), threats to financial stability and economic downturn (63%), food shortages and insecurity (61%), risks related to artificial intelligence (61%) and loss of biodiversity and ecosystem collapse (60%). **Dealing with extreme weather events (65%) was the most commonly reported global risk the public said the current government is ill-prepared to deal with.**

> *"Of course [flood prevention] should be a priority, that's the problem with this country. We always just wait for something bad to happen. Why don't we just stop it before it happens? It's like with COVID."* - Man, 20s, Makerfield

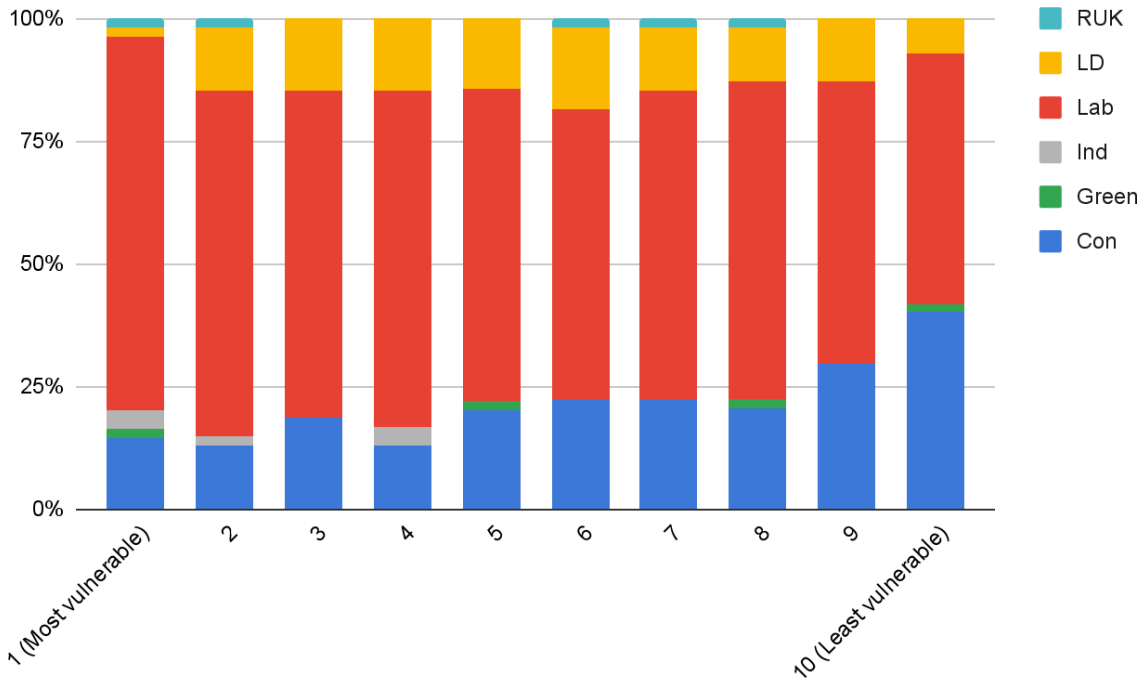
The public also sees the issue of flooding as a national security problem. Three-quarters of UK adults say flood-related power outages threaten the economy (77%) and national security (75%) while a further 78% say flooding must be managed to prevent food shortages across the country. Additionally, the most convincing arguments for increasing flood investment were to ensure the safety of British citizens and to protect agricultural land and support British farmers. This was true for all voters - though Labour and Liberal Democrat voters emphasised citizen safety more, while Conservative and Reform UK voters prioritised agricultural land and British farmers.

Investing in flood risk management can go some way to making people feel safer. Closer to home, flooding also has a tangible impact on how safe people feel in their homes, workplaces and neighbourhoods. As highlighted in the previous chapter, flooding can take a significant toll on people's mental health, causing stress and anxiety. Two-thirds (65%) of the public said that extreme weather events should be dealt with so that people no longer have to live in fear of them happening. Locals in recently flooded areas often spoke of this, telling us about neighbours and friends that live with the ongoing fear of their home flooding.

> *"People that are coming back [into their homes] don't feel safe. They're scared it's going to happen again. As soon as it rains, they're at the door checking. What a life must that be? Because they know nothing's been done. If something had, maybe they'd feel more safe."* - Woman, 50s, Loughborough on her recently-evacuated neighbours

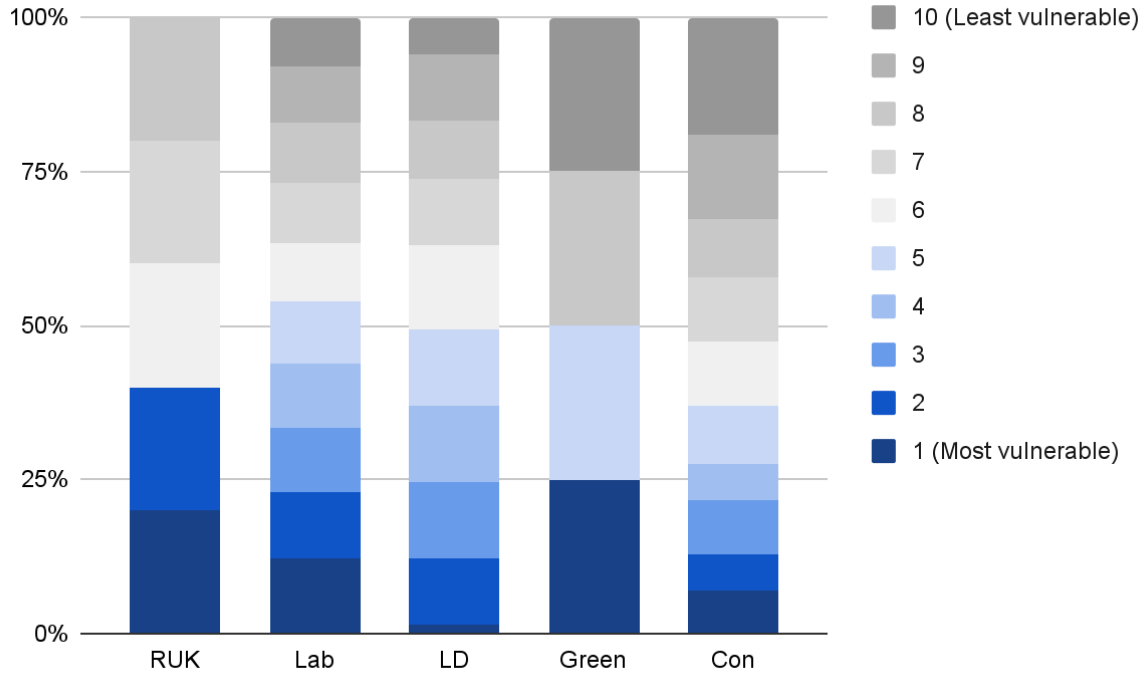
> *"Businesses can keep growing and people can be safe in their own houses without having to worry about moving again."* - Woman, 40s, Loughborough

Chart 7: The English constituencies most vulnerable to flood risk are majority Labour. *Share of constituencies per flood vulnerability decile and political party, England.*



Source: Public First analysis of our Climate Risk Index for AXA UK

Chart 8: Reform UK and Labour constituencies have the highest average flood vulnerability. *Share of constituencies per political party and vulnerability decile, England.*



Source: Public First analysis of our Climate Risk Index for AXA UK

CHAPTER FIVE:

RECOMMENDATIONS

The upcoming multi-year Spending Review presents an opportunity for this Labour government to set resilient foundations to grow the economy and keep British citizens safe. While it is not cost-effective to taxpayers for the government to prevent all flooding, increased public investment in flood risk management can make communities and infrastructure more resilient.

1. **Commit to a long-term funding settlement in flood risk management at the upcoming Spending Review.** There is no current funding commitment from the Labour government on flood risk management beyond April 2026. After years of underinvestment in flood resilience, this Spending Review should provide a step-change in funding over the next Flood and Coastal Erosion Investment plan period. Investment should increase up from the previous government's annual rate of £866m[30] to a minimum of £1.5bn a year, as recommended by the National Infrastructure Commission (NIC) in the 2023 Second National Infrastructure Assessment (NIA2).[31] Given the condition of existing flood risk management assets has degraded further since this recommendation, it is likely that more than £1.5bn a year is required to sufficiently increase flood resilience in England.

   The funding must allow for adequate investment in both asset maintenance and new structural and natural solutions. Previous funding settlements did not provide sufficient funding for maintaining the existing flood risk management asset base. As it stands, the infrastructure condition is below-target level and has degraded further following recent storms. It is critical that the funding settlement enables maintenance while not detracting funding from investing in new protection, particularly as flood risk rises and reaches new areas. The funding should also enable a range of solutions from hard engineering and structural methods to natural management techniques.

2. **Align funding with the 10-year Infrastructure Strategy for outcome-based standards on flood resilience.** While flood resilience was a welcome feature of the Treasury's initial plan for the 10-year Infrastructure Strategy, the government has no overall measure of the resilience it expects to achieve. Therefore, policymakers do not know if they are making progress towards its ambition of a nation more resilient to flooding.[32] This measure should be used to set clear standards by which the public can accept as successful flood risk management, including how many properties will be better protected as a result of a new funding settlement. Policymakers should also require government-funded infrastructure to consider flood resilience standards as part of their investment plans.

   The UK can learn lessons here from the Netherlands approach to setting risk-based standards based on the likelihood of particular flood events. For example, the UK's varied approach to flood prevention provides between 1-in-100 year or 1-in-1,000 year protection.

[30] Annual investment rate of £5.2bn over a six-year programme, delivered from 2021-2023. Since then, the new Labour government has allocated £2.65bn until 2026 - a rate of £1.3bn a year.

[31] NIC, *Second National Infrastructure Assessment*, October 2023.

[32] PAC, *Resilience to flooding*, January 2024.

The Netherlands, by contrast, delivers to a higher flood resilience standard of a 1-in-100,000 year flood.[33]

3. **Increase private sector investment in drainage by mandating Sustainable Urban Drainage Systems (SuDS) for new housing in high-risk flood areas.** The government has an ambition of building 1.5m new homes to meet the country's housing needs. As our research showed, perceived housebuilding on floodplains is of particular concern to the public. This is not unwarranted - research commissioned by insurance firm Allianz found that more than 7,000 new homes have full or conditional approval planning permission on previously undeveloped floodplain land in the 12 local authorities with the highest proportion of homes at flood risk. The government previously pledged to implement a mandate on SuDS for new homes in 2024 - known as Schedule 3 of the Flood and Water Management Act 2010 - however this has yet to be introduced and instead remains guidance. As part of the 10-year Infrastructure Strategy and commitment to flood resilience standards, the government should reconsider accelerating the mandate for new homes in identified high-risk areas by the Environment Agency.

4. **Devolve funding to Mayoral and combined authorities to drive joint, local plans on flood resilience.** Local leaders should be empowered to make long-term plans for reducing flood risk in their areas with certainty of funding. DEFRA currently decides how to prioritise funding allocated by the Treasury for flooding, whether that be to the Environment Agency or local authorities. The Environment Agency has a statutory duty to manage national flood risk and coastal erosion for England, but local authorities act as Lead Local Flood Authorities for managing local risks from surface water, groundwater and smaller watercourses. This funding is most often secured by councils bidding for grant funding for flooding interventions. Devolved budgets would enable combined authorities and Mayors to invest in long-term risk management plans, build capacity and coordinate better with water and sewage companies and internal drainage boards. This would require a statutory duty on councils as a condition of the devolved funding settlement - building on existing recommendations by the London Climate Resilience Review, this statutory duty should include flooding and wider aspects of climate resilience.

5. **Require the new National Infrastructure and Service Transformation Authority (NISTA) National Infrastructure Commission to track flood and wider climate resilience across all government infrastructure spending.** The government cannot currently provide estimates of how much it spends on managing risks across all climate risks including droughts, high temperatures and heatwaves, surface water flooding and storms. This is because action on risk management is taken by a wide range of government departments and agencies, and no one collects this information. By Spring 2025, the new NISTA will be operational, combining the National Infrastructure Commission with the Infrastructure Projects Authority (IPA). As part of its new remit, NISTA would be well placed to track this spending, and its impact, as part of its third National Infrastructure Assessments to be published and reported to government in 2028. Over time, this would also support the development of resilience standards across other aspects of extreme weather referenced in the 10-year Infrastructure Strategy beyond flooding.

[33] Dutch Water Sector, 'Dutch parliament adopts unique risk standards for flood protection', July 2016.

Appendix A

METHODOLOGY

A1. Economic modelling

Immediate cost of damage

To measure the annual economic cost of flooding through damage to property and infrastructure we start with data from the Association of British Insurers (ABI) to estimate the cost to insured properties and infrastructure[34]. We then scale up to include non-insured damage using the International Disaster Database (EM-DAT) and adjust to 2025 using inflation data from the ONS[35]. Using data from the Environment Agency's (EA) National Assessment of Flood Risk and Erosion (NAFRA) we project forward to estimate the cost of damage in 2050, and break both the 2024 estimate and the 2050 estimate by region.[36] The Environment Agency uses UKCP18 RCP8.5 climate scenarios in their assessment.

Short term cost of lost output

To measure the cost of lost output, we utilise the NOMIS Business Register and Employment Survey (BRES).[37] This gives detailed breakdowns of worker numbers by industry and by Lower Layer Super Output Area (LSOA). We select only job codes that are likely to be disrupted in the event of a flood ensuring we do not include jobs that can be done remotely.

We take geospatial flood risk data and perform a spatial analysis onto LSOA boundaries to identify the jobs by sector that are at risk of disruption from flooding.[38] By combining GVA data from the ONS, the average probability of flooding calculated from the NAFRA data, and the average duration of flooding using the recorded flood database we estimate the expected annual cost of lost output by region.[39,40] We use the ONS consumer price index (CPI) data to adjust to 2025 prices and the NAFRA projections to estimate lost output in 2050.[41]

Medium to long term cost of lost output

To estimate the long term impact on output and employment we first calculate a measure of flood intensity using the EA recorded flood dataset.[42] This dataset consists of flooding events recorded since 1948 and includes over 17 thousand flood events since 1999. We combine the

[34] ABI, *Association of British Insurers (ABI), General insurance - Property*, Accessed March 2025
[35] EM-DAT, *EM-DAT Documentation*, Accessed March 2025
[36] Environment Agency, *National assessment of flood and coastal erosion risk in England 2024 - GOV.UK*, December 2024
[37] ONS, *Business Register and Employment Survey - Office for National Statistics*, October 2022
[38] Environment Agency, *Risk of Flooding from Rivers and Sea - Properties in Areas at Risk - data.gov.uk*, January 2025
[39] Environment Agency, *Recorded Flood Outlines - data.gov.uk*, February 2025
[40] ONS, *Gross Value Added (GVA) - Office for National Statistics*, February 2025
[41] ONS, *Inflation and price indices - Office for National Statistics*, February 2025
[42] Environment Agency, *Recorded Flood Outlines - data.gov.uk*, February 2025

flooding events from each year into a unique layer and overlay this with MSOA boundaries to calculate the share of MSOAs in an LA that were affected by flooding, what we call the 'flood intensity'.

To estimate the impact that flood intensity has on GVA and employment, we use a panel data fixed effects time series model over ten time series lags and controlled using population and time fixed effects and geography fixed effects. We carried out this analysis on a range of sectors, the results of which were most significant for Manufacturing and Transportation and Storage. To estimate the total employment effect we applied the coefficients from our analysis to total employment by sector from the BRES dataset, and estimated the impact of GVA using GVA data from the ONS, being careful to apply the correct uplift to our coefficient so that our final estimates measure the total impact of expected flooding events in a given year.[43]

A2. Immersive research

At Public First, we increasingly turn to immersive research as a key approach for qualitative studies. Unlike traditional focus groups, which typically last an evening, immersive research involves sending researchers into specific locations for extended periods - often several days - to gain deeper, more authentic insights. They also allow us to access people who would otherwise be very difficult to reach.

For this study, Public First conducted 180 in-depth interviews with residents and workers in Wigan, Makerfield and Loughborough constituencies. These were chosen because they all experienced recent, repeated flooding over the last few months and were of political interest. All three are Labour constituencies - Wigan and Makerfield are Labour holds, whereas Loughborough is considered a bellwether seat as it has reflected the national result at every general election since February 1974. Across these constituencies, we visited Wigan and Loughborough town centres as well as Ashton-in-Makerfield and Platt Bridge in Makerfield constituency, and villages of Quorn and Barrow-upon-Soar in Loughborough constituency.

Over four days, we spoke with residents and workers in their local environment - in the high street, shops, cafes, churches, leisure centres and even a community sketching class - allowing us to engage with a diverse range of individuals. Our goal was to gain first-hand insight into the impact of local flooding and the benefits of better flood risk management; their concern and sense of risk both now and in future; how prepared they thought to deal with future floods; and who they thought was responsible for improving flood risk management. We also hosted one evening focus group of eight participants aged 28 to 65 in Loughborough to gather insights from working professionals who are not usually as available or accessible during the day.

Interviewees ranged in age from 18 to 80 and reflected the demographic makeup of the constituency. None of the conversations outside of the focus group were pre-arranged, as we find that engaging with people in their natural environments leads to more authentic discussions and allows us to reach individuals who might never participate in focus groups or online surveys.

To maintain consistency and comparability, all interviews followed a shared discussion guide. However, the open and informal nature of these conversations provided deeper, more spontaneous insights than structured research methods typically allow.

[43] ONS, Gross Value Added (GVA) - Office for National Statistics, February 2025

A3. Polling

To sense-check our immersive findings with more quantitative methods, we conducted two anonymous online surveys targeting 2,011 adults across the UK and 253 adults living in the constituencies top 10% most vulnerable to flooding. These constituencies were based on previous analysis by Public First for AXA UK, mapping local climate risks, including the constituencies most vulnerable to flood risks.[44]

Fieldwork was conducted from 21st February - 3rd March 2025. All results are weighted using Iterative Proportional Fitting, or 'Raking.' The results of the nationally representative survey are weighted by interlocking age & gender, region, and social grade to Nationally Representative Proportions. The results of the booster are unweighted.

Public First is a member of the British Polling Council, and company partners of the Market Research Society. As with all opinion polls, there is a margin of error in the answers, and the margin of error is greater when sample sizes are smaller (when there are cross-breaks of specific groups of people). For the public, the margin of error is +/-2%. For the booster, the margin of error is +/-6%.

[44] AXA UK, *Extreme weather risks: An analysis of England's vulnerability to flooding and heat*, November 2024

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