Planning for long-term adaptation

Topic resource

Planning for the Climate Crisis: A guide for local authorities

RTPI Royal Town Planning Institute

tcpa

Publication Date: December 2025

Introduction

The short and long term demands of climate adaptation must now be foundational to how we plan for new growth and regeneration. Successful adaptation means taking account of a range of severe and complex climate impacts and requires holistic planning over the long term, grounded in consideration of how such changes will affect people's health and wellbeing.

The Climate Change Committee have warned that high emissions scenarios are still possible and 'should be considered when adaptation plans are made,' and that adaptation to extreme impact scenarios must be considered.[1] For planners, this means looking ahead to understand how communities might be shaped by changes to the climate over the next one hundred years and more.

For some communities, the threat of flooding or accelerated coastal erosion is so extreme that a long term future may not be viable. The management of this requires planners to engage sensitively with communities to explore options for a positive and hopeful future.

Building climate resilience requires an inter-organisational, inter-departmental local response in which the local development plan can be an integrating aspect. Above all, climate adaptation must be understood as the main priority for long-term planning and must be prioritised as an outcome as important as meeting housing need. Fairness and justice should also be at the heart of planning for climate resilience because the most socially disadvantaged places and communities are disproportionately more vulnerable to, and less likely to be able to cope with and recover from, the impacts of climate change. Successful adaptation can also support wider social and economic objectives and will be essential if vulnerable communities are to remain attractive places to live.

This topic resource provides an overview of key adaptation challenges and urges local authorities to utilise the levers of the planning system to deliver a long term vision of climate resilience with, and for, local communities.

More detailed guidance is provided in the further suite of topic resources on flood risk, water scarcity, overheating, and designing for climate resilience. You can find these resources here.

Publication Date: December 2025

RTPI Royal Town Planning Institute
tcpa

Policy Context

The UK and devolved national governments maintain overarching resilience and adaptation plans, including the National Adaptation Plan 3 and the Climate Change Risk Assessment (in England). These national strategies and policies provide a starting point for regional and local government to understand how the planning system can support climate adaptation actions and build local resilience to the projected impacts of climate change.

The National Planning Policy Framework (NPPF) sets an expectation in paragraph 161 that the planning system should 'take full account of all climate impacts including overheating, water scarcity, storm and flood risks and coastal change,'[2] and goes on to identify issues that plans should address, including 'flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating and drought from rising temperatures.'[3]

Key principles

The following principles should underpin successful approaches to delivering local climate adaptation strategies:

- Start with a good understanding of climate risk and vulnerability, drawing on national and local data, and consider the impact of the full range of climate impacts at different scales.
- People – and particularly disadvantaged communities – should be front and centre of thinking about planning for climate change. The input of marginalised groups into decisions about climate change policy should be consciously sought.
- Evidence on climate adaptation should reflect the time horizons of development lifespans, not just the timeframe of the local development plan. In England, planning practice guidance defines development lifetimes as 75 years for non-residential and at least 100 years for residential development. For major infrastructure, the time horizon will be much longer.[4]
- Bear in mind that climate science is dynamic. Make full use of existing online tools and data to make evidence accessible to the public. Apply a reasonable worst-case

scenario in relation to climate impacts to help communicate the future that must be planned for.

- Take account of relevant economic data on insurance risk and availability as key indicators of resilience.
- Avoid actions that will make it more difficult to cope with climate risks in the future.
- Prioritise the use of nature-based solutions to address climate risks, seeking multiple benefits for communities and wildlife.
- Monitor the outcomes of adaptation measures to build the case for further projects in future.

Figure 1: Heat waves with extreme temperatures are becoming more common in the UK.
Source: DRG Photography / Shutterstock.com

Evidence for climate adaptation

Climate impacts are, and will continue to be, felt differently across the UK, and they can also vary considerably within local authority boundaries due to the distinct geography of place and different proximity to, for example, sources of flood risk.

Publication Date: December 2025

This variation in how climate change impacts people is exacerbated by the fact that not all communities have the same level of access to the community assets that help reduce the impact of extreme weather, such as green spaces, tree canopy cover, and well-ventilated buildings.

Local planning authorities should draw on a range of data sources to understand climate risk. The Met Office UK Climate Projections (UKCP18) provide 'updated observations and climate change projections until 2100 in the UK,'[5] and are an essential starting point. These have been translated into local authority level projections through the Local Authority Climate Explorer,[6] which generates a report of climate impacts for each UK local authority.

The Local Authority Climate Service also includes guidance and localised information to support climate risk assessment,[7] and the University of Exeter provides local authority level summaries of projected climate impacts through the Local Climate Adaptation Tool.[8] There are also a number of local and national map based datasets that collate data on climate risks and vulnerabilities, such as the Climate Just mapping resource.[9]

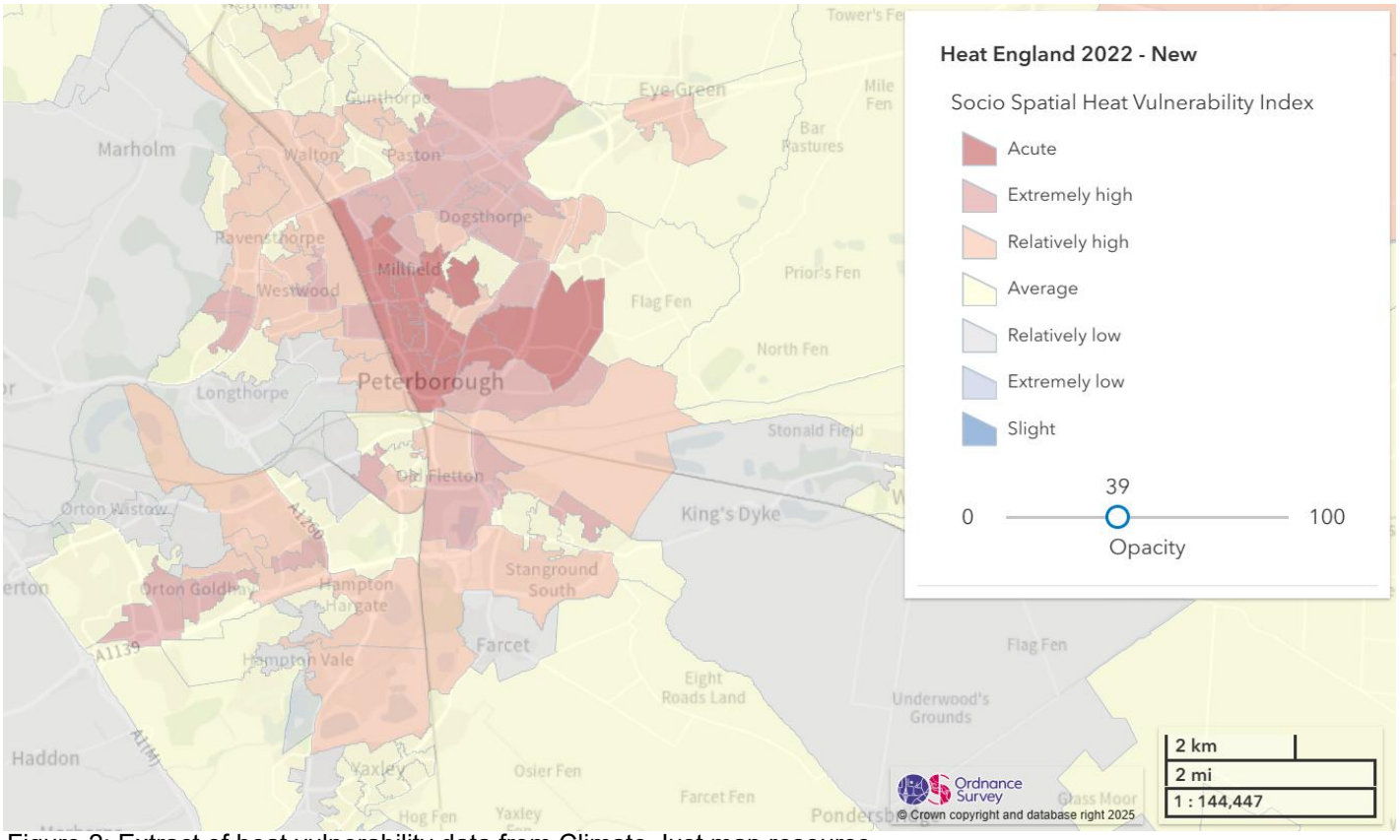

Figure 2: Extract of heat vulnerability data from Climate Just map resource.
Source: https://www.climatejust.org.uk/map.html

Understanding of the health impacts of climate change may also provide a useful evidence base to direct interventions. The UK Health Security Agency has published an overview of climate change health effects, as well as an overarching adverse weather and health plan. This covers inequalities in risks to health from adverse weather includes recommendations for how to reduce these.[10]

Good practice for plan making

Climate adaptation requires the radical re-making of places to respond to the complex and dynamic impacts of climate change. There are four high-level factors to bear in mind in developing successful adaptation policy for local development plans:

Place: Climate impacts play out very differently across the diverse physical and social geography of the UK. Urban and rural areas, upland and coastal places – all require different and fine-grained responses.

People: Climate impacts affect different people in different ways, with consequences that are particularly significant for social groups least equipped for resilience. Adaptation solutions also have direct and lasting impacts on everyday lives, so taking action means working with communities and communicating an effective narrative for change.

Space: Building resilience requires interlocking measures, from major spatial-scale coastal realignment to the detail of the way that buildings are insulated and ventilated. The interdependence of decisions on such matters is vital in determining long-term solutions and is often complicated by catchments and coastal systems which do not fit with local government boundaries.

Time: Building resilience requires thinking about the very long term – and at least 100-year planning horizons. For some critical infrastructure longer, periods will be appropriate. This implies new ways of thinking and working. Time is also running out for us to begin building resilience, so we need to act now.

Climate adaptation should be fundamental in shaping the **spatial strategy** for local development plans. Local planning authorities should assess the suitability of locations for new development, and for the type and intensity of development, against the following criteria:

- Whether the site is appropriate for development, having regard to projected increases in risk resulting from climate change to known physical and environmental

RTPI Royal Town Planning Institute
tcpa

Publication Date: December 2025

elements such as sea level rise, flooding, increased temperatures, ground instability, water scarcity and exposure to extreme weather events.

- Whether development of the site would offer opportunities to help the existing community to adapt to impacts arising from climate change, for example the potential to deliver multi-functional green infrastructure to reduce flood and overheating risks.
- The local development plan should also identify and allocate land to be safeguarded for climate adaptation measures that will be needed in future, including land for new flood defences, natural flood management schemes, and urban cooling measures such as green infrastructure.
- Where the long term viability of communities is at risk due to increased climate risk, consider the inclusion of policy to enable the relocation of existing homes, businesses and infrastructure.

The development plan can also set **policies** that draw on local evidence to address specific climate risks such as overheating, flood risk, and soil erosion. [11]

More detail is provided in the suite of adaptation topic resources.

Figure 3: Homes vulnerable to coastal erosion on the North Norfolk coast. Source: TCPA

There are also a range of design and planning frameworks which can be supported in development plan policy to encourage developers to integrate climate adaptation into their proposals. The table below includes a range of standards and frameworks that can be supported through policy.

Framework	Summary	Key adaptation themes
BREEAM UK New Construction: Residential Access here	Assessment framework for new homes based on three key sustainability indicators, covering environmental, social, and economic performance.	✓ Design and placemaking ✓ Green infrastructure ✓ Nature and biodiversity ✓ Overheating
Building for a healthy life Access here	A design toolkit to improve the neighbourhoods and create successful places.	✓ Design and placemaking ✓ Green Infrastructure
Building with Nature Access here	Standards and accreditation scheme that supports cross-disciplinary decision making and integrates green infrastructure into design and delivery of new places.	✓ Design and placemaking ✓ Flood resilience ✓ Green Infrastructure ✓ Nature and biodiversity
One Planet Living Access here	A sustainability framework based on the understanding the ecological footprint of communities and enabling healthy and sustainable living within the Earth's natural limits.	✓ Flood resilience ✓ Local food production ✓ Nature and Biodiversity ✓ Water management
The SHIFT sustainability standard Access here	An assessment and accreditation scheme for social landlords that covers a range of categories from CO2 emissions to water efficiency and management.	✓ Flood resilience ✓ Nature and biodiversity ✓ Overheating ✓ Water management
Place standard with a climate lens Access here	A tool to support place-based solutions to address climate mitigation and adaptation.	✓ Flood resilience ✓ Nature and biodiversity ✓ Overheating ✓ Water management

Decision making

Local planning authorities should engage constructively with developers to deliver well designed sustainable buildings and high-quality local environments suitable for climate resilient and net-zero living. In determining planning applications, local planning authorities are advised to expect proposed new development to:

- Consider, and take actions to address, climate impacts over the whole lifetime of the development.
- Avoid adding to the vulnerability of existing or other proposed development to impacts arising from climate change.
- Consider using assessment frameworks to ensure that adaptation strategies are identified and addressed.
- Take a design led approach that utilises layout, building orientation, tree planting, massing and landscaping to support resilience to extreme weather events.
- Put robust monitoring and reporting regimes in place for climate adaptation. LPAs can promote this by including climate change indicators in development management checklists.
- Ensure that new development does not increase the climate impact risks to existing development or constrain future adaptive pathways designed to deal with overheating or flooding.
- Recognise the growing needs of those seeking to relocate development from vulnerable areas and ensure that such needs are fully considered in decision-making.

Horizon scanning

The Climate Change Committee will publish the fourth Climate Change Risk Assessment (CCRA4) in 2026. This will inform the next National Adaptation Programme.

Publication Date: December 2025

Further Resources

Climate Just webtool
A free webtool and map showing localised climate risk alongside data on social and economic inequalities. Link: https://www.climatejust.org.uk/

Natural England – Green Infrastructure Framework
A national toolkit to design and deliver high-quality green infrastructure to enhance climate resilience, biodiversity, health, and equity. Link: https://designatedsites.naturalengland.org.uk/GreenInfrastructure/Home.aspx

University of Exeter Local Climate Adaptation Tool
Brings together data to assess climate risks at a local authority level, and identify tailored adaptation actions across different sectors. Link: https://www.lcat.uk/

References

[1] *CCC letter to Minister Hardy – advice on the UK's adaptation objectives.* Climate Change Committee, October 2025. https://www.theccc.org.uk/publication/letter-ccc-letter-to-minister-hardy-advice-on-the-uks-adaptation-objectives/

[2] *National Planning Policy Framework.* MHCLG, 2024. Paragraph 161.

[3] Ibid. Paragraph 162.

[4] *Planning Practice Guidance: Flood risk and coastal change.* MHCLG, September 2025. https://www.gov.uk/guidance/flood-risk-and-coastal-change#para6

[5] *UK Climate Projections (UKCP18).* The Met Office. Available from: https://www.metoffice.gov.uk/research/approach/collaboration/ukcp

[6] *Local Authority Climate Explorer* from the Met Office is available from: https://climatedataportal.metoffice.gov.uk/pages/lacs

[7] Ibid.

[8] Available from: https://www.lcat.uk/

[9] Available from: https://www.climatejust.org.uk/map

[10] *Adverse weather and health plan equity review and impact assessment 2024.* UK Health Security Agency, 2024. https://www.gov.uk/government/publications/adverse-weather-health-plan-equity-review-and-impact-assessment

[11] For more information on how planning can support soil health see the resources from the Soil Taskforce: https://www.soilstaskforce.com/reports

Cover image: Flooding of the River Severn in March 2020. Source: Matt Rakowski / Shutterstock.com
Icons: Flaticon.com by iconixar

Planning for long-term adaptation
Topic Resource 13
Planning for the Climate Crisis: A Guide for Local Authorities

Fifth Edition

Publication Date: December 2025