centre for sustainable energy

tcpa

SPATIAL PLANNING FOR CLIMATE RESILIENCE & NET ZERO

Barriers & opportunities for delivering net zero and climate resilience through the local planning system

A report for the Climate Change Committee

July 2023

Centre for Sustainable Energy (CSE)
Town and Country Planning Association (TCPA)

This report was commissioned by the Climate Change Committee and is written by Neil Best (CSE), Dan Stone (CSE), Hugh Ellis (TCPA) and Celia Davis (TCPA), with support from Keith Hempshall (CSE), Leah Bromley (CSE), Charlotte Johnson (CSE), Catherine Sage (CSE) and Sally Roscoe (TCPA).

CSE and the TCPA are grateful to everyone who contributed to this report, in particular the members of the advisory panel who contributed technical expertise, challenged assumptions and acted as a sounding board – Peter Ellis (freelance town planner and CSE trustee), Louise Marix Evans (independent climate change consultant), Rachel Coxcoon (Director of ClimateGuide), and Harry Steele (RTPI infrastructure specialist). We would also like to thank the many people who participated in the various research tasks, including those who volunteered their time to complete the survey, be interviewed and/or joined roundtable discussions.

www.cse.org.uk
www.tcpa.org.uk

centre for sustainable energy

St James Court,
St James Parade,
Bristol BS1 3LH

0117 934 1400
www.cse.org.uk
info@cse.org.uk

@HelloCSE

Charity: 298740
Company: 02219673
Founded: 1979

tcpa

17 Carlton House Terrace
London SW1Y 5AS

020 7930 8903
www.tcpa.org.uk
tcpa@tcpa.org.uk

@theTCPA

Charity: 214348
Company: 146309
Founded: 1899

Contents

Planning in action. How far is the planning system working in tandem with the government's legal obligations in relation to climate change mitigation and adaptation?

Executive summary

This report explores the current capability of the spatial planning system (with a focus on England) to tackle the climate crisis and specifically how the system can support the government's legal obligations in relation to climate mitigation and adaptation. The report draws together the current research literature with three strands of data: a survey of planning practitioners, four detailed local plan case studies and a series of stakeholder roundtables. Based on this data, this report makes four key conclusions:

- Spatial planning has the potential to play a vital role in climate mitigation and adaptation. The potential is not simply as a gateway to development consent but as a holistic way of defining strategic pathways to a net zero and climate resilient future. It has the potential to do this in a democratic context in which communities have a voice in the local plans which shape their future and the long-term vision for their area in the context of the climate crisis.

- The current planning system is not delivering on this potential with the necessary speed and ambition to align with the government's wider climate change objectives. The picture is complex with greater levels of action on some aspects of adaptation, but much less progress on mitigation. For example, the survey results suggest that most local plans are not fit for purpose when considering carbon emissions, and many of those in production are not considering mitigation and adaptation measures holistically. It is significant that this current performance is increasingly falling behind international best practice.

- The cause of this dysfunction lies not in the intrinsic capability of spatial planning but in a series of defined legal, policy, skills and resource issues which surround the current operation of the system. Many of these issues stem from a lack of clarity in national policy as to the priority to be placed on climate change in decision making and the absence of detailed policy approaches and methodologies which exist for many other planning issues but not for climate mitigation, and some areas of adaptation.

- It follows logically that the recommendations of this report focus on the detail of how to close the gap between the current performance of the planning system and its significant potential through defined changes to law, policy, and resources.

While the challenges of achieving this systemic change are substantial, the research team was struck by the enthusiasm, innovation, and commitment of those in the planning service who are pioneering local solutions in very challenging circumstances. Unleashing the potential of the planning system and these innovators is a vital aspect of a successful response to the climate crisis.

The following sections provide a summary of the research undertaken, and key findings.

Research method

The planning system is the key lever that local authorities hold to shape developments in their area. This can impact the design of communities, in particular the extent to which buildings, transport systems, and land align to the pathways required to meet net zero and adapt to the changing climate. However, there is significant variation between local authorities in how these issues are being considered and implemented through their local plans. The Climate Change Committee (CCC) commissioned the Centre for Sustainable Energy (CSE) and the Town and Country Planning Association (TCPA) to examine the barriers and opportunities to incorporating climate mitigation and adaptation measures in spatial planning at the local authority level in England.

The focus of the research was to engage with local authorities and planning stakeholders to understand how policy design and different enabling factors can unlock ambition at the local authority level in addressing climate resilience and net zero. This was achieved through several different components:

- An evidence review was undertaken to provide a synthesis of key findings that evidences the mechanisms and contexts that underpin barriers and enablers to resilient and net zero-aligned spatial planning.
- An analytical framework was created utilising the evidence. This identified six thematic areas which incorporated identified typologies of climate mitigation, climate adaptation and potential barriers and enablers. The analytical framework was used to inform the other research tasks, and to structure the content of this report. See below box 1.
- A review of the English planning system was undertaken to understand its capability to address climate mitigation and adaptation.
- A review of the National Planning Policy Framework (including proposed revisions), National Planning Practice Guidance, and National Model Design Code was carried out to assess its effectiveness in relation to climate change.
- 105 planning practitioners from a variety of backgrounds completed a survey which asked their views on how spatial planning can deliver action on climate change, how the current system is working and what improvements could be made.
- 50 stakeholders representing a range of expertise and organisations attended three roundtable events. The roundtable events were structured to seek perspectives on the barriers and enablers to planning for climate change, and to test and inform the development of emerging recommendations.
- Four case studies were undertaken to further understand the way that policy levers for sustainable spatial planning are utilised in practice by Local Planning Authorities (LPAs), and the outcomes these achieve in relation to planning for net zero and climate resilience. They aim to broadly reflect examples of success and failure, through two case studies concerning flood risk (adaptation), and two concerning net zero buildings policies (mitigation).

- A high-level review of the legislative and policy frameworks for planning in the UK devolved administrations (DAs) was undertaken to identify key differences in the DA's national policy levers, draw comparisons and identify potential policy enablers.

Box 1: The Analytical Framework

1. The extent to which a coherent and prioritised legal and policy framework supports the planning system to deliver on climate change.
2. The extent to which there is sufficient guidance on the specific policy actions local planning authorities should be taking on climate change.
3. The availability of detailed and government endorsed methodologies.
4. The necessary powers and resources needed to deliver a local plan strategy.
5. The skills, independence, capacity, and morale of the public planning service.
6. The awareness, training and capacity of other key stakeholders including the private sector.

Analysis of findings

Overall, the research data confirms the view represented in the evidence review (see Chapter 2): that **there is a major gap between the recognised potential of spatial planning as a public policy response to climate change and its actual performance on the ground**.

The data indicates that this dysfunction has multiple dimensions. However, the root of many of these problems lies in a failure to prioritise effective national policy development and this in turn points to an institutional culture inside national government which appears to have two significant components.

First, **the planning system in general is not seen as a key public policy solution but as a problem**. The effect of this assumption has been the de-prioritisation of national policy development and the absence of a holistic approach to the multiple benefits which effective climate mitigation and adaptation can bring to a range of other public policy outcomes including health and well-being. It has also led to major reduction in resources for the planning service, reducing the system's ability to respond to the climate crisis.

The second part of this institutional culture has been **a failure, represented in successive administrations, to provide specific political prioritisation for the role of planning in addressing established climate policy objectives including the net zero targets which flow from the 6th carbon budget**, or to follow through the deep and wide-ranging implications of the net zero commitment. This lack of priority from the centre has led to a broader cultural understanding amongst the planning service in local government that action on climate change is

not as significant as, for example, delivering a specific quantum of housing units.

This institutional culture has had a profound effect on the performance of the English spatial planning process creating a framework which was described both through the survey and roundtables as variously out of date, confusing and unhelpful. Survey participants shared frustration at the lack of leadership and political commitment to realising the potential of the planning system to address climate change.

Conversely the research findings demonstrate that local political prioritisation of climate change can be a key driver for local plan policy that aims for net zero and climate resilient development. However, the research reveals that where local authorities are producing significant innovation on climate change, they appear to be delivering this despite the national policy framework rather than because of it.

These structural, cultural, and institutional weaknesses have undermined the local planning system at all levels and provide the context in which further analysis of these challenges are discussed in the following sections (see Chapter 3 for full analysis).

Legal and policy prioritisation and coherence

The research reveals a lack of both clarity and priority in planning law and national policy in relation to spatial planning and climate change, creating an unpredictable environment for local plan development. This is perhaps unsurprising since in law there is no mechanism which ties together the provisions of the Climate Act with those of the various Planning Acts. There is currently an important duty in section 19 of the 2004 Planning Act which creates a general obligation to ensure that plan policy contributes to the mitigation of, and adaptation to, climate change. This clearly signals the priority to be given to climate change in plan-making. However, the requirement is framed in general terms, does not reference the Climate Act, and does not apply to decision taking. Practitioners find this approach indirect and weak and indicate that **meaningful action on climate change at a local level would be enabled through an update of the NPPF and a purposeful statutory planning duty, achieved through legislative changes to ensure regulatory alignment between the Town Planning Acts and the Climate Change Act**.

Many local authorities are eager to establish more ambitious requirements for new developments to be net zero carbon, in line with local climate emergency declarations. The case studies and roundtables found that **the 2015 Written Ministerial Statement (WMS) on Plan Making continues to create confusion regarding whether, where, and how local authorities can exceed national standards and adopt binding zero carbon policies for new development,** caused by outdated content in the NPPF and PPG. This constitutes poor 'policy housekeeping' which has led to contradictory statements from the Department for Levelling Up, Housing and Communities (DLUHC) and inconsistent interpretations from PINS.

The NPPF review revealed that the **NPPF does not currently address the policy implications of meeting objectives such as the net zero commitment**. The text incorporates general objectives

to reduce emissions but no explicit targets for emissions reductions. There is evidence of tensions between economic growth, transport objectives and carbon emissions as part of the assessment of a Local Plan's soundness (with lack of explicit reference to climate considerations in the 'test of soundness') and the testing of 'reasonable alternatives', with economic growth, in practice, being prioritised over climate action.

A lack of joint working between different government departments and a disconnect between their priorities means that objectives of, for example, the Department for Energy Security and Net Zero, are not always reflected in planning guidance produced and updated by DLUHC. This suggests that much more effective and joined up cross departmental working is required to ensure that the planning system embeds and gives priority to the UK's legally binding net zero target.

Current rules and guidance around development viability are hampering efforts to address climate change through local planning. 65% of survey respondents quoting development viability as a barrier to achieving net zero through the planning system.

The research found **numerous areas where emissions relating to spatial land use are not assessed or regulated** and escape from the system in the way it is currently configured, including operational emissions from development, embodied carbon in construction and demolition, emissions from permitted development, and emissions from fossil fuel, road building and aviation proposals.

Guidance on specific policy actions

Local plans should be able to demonstrate how policy contributes to the Climate Change Act national carbon budget target regime, and this, in turn, calls for an understanding of both the baseline carbon dioxide emissions, the effect of future development planned for in the local plan, and the actions needed to reduce emissions over time. The survey revealed that a third of local authorities don't know what their baseline emissions are for their area, and only 13% were able to quantify the carbon emissions that their local plan would create. A solution would be for carbon budgets to be allocated at a regional or local authority scale, derived from the overall national carbon budget, providing the basis through which compliance of plans and proposals can be measured.

The NPPF requires local authorities to ensure local plans contribute to climate adaptation. However, the survey results suggest that **many of the local plans currently in production are not considering adaptation measures comprehensively**. Only flood risk appears to be well understood and addressed consistently. Participants at the adaptation roundtable felt that a requirement for local plans and decision making to be tested against a framework of adaptation measures should be included in the NPPF, with clear parameters set within the PPG so that performance can be measured against defined targets.

Detailed methodologies and guidance

Our review of the NPPF and other national policy levers revealed detailed methodologies and robust language in some areas of national planning policy, for example in how local authorities must calculate housing need, but **a lack of methodologies with clarity and detail as to how local authorities should address climate mitigation and adaptation**.

The case studies reveal that tools with cross-sector backing such as guidance by organisations such as LETI have been used to inform net zero policies, but **there is appetite for a clearer and more standardised national definition of net zero buildings**. The forthcoming UK Net Zero Carbon Buildings Standard could form the basis of voluntary net zero policies for LPAs. These tools should be referenced and supported by the NPPF and PPG.

To support local plans and decision making to be tested against a carbon accounting regime linked to specified carbon budgets, **there should be a requirement for local plans to be supported by quantified carbon reduction evidence**, and greater weight given to carbon calculator tools in the decision-making process. The 2023 NPPF consultation proposed a consultation on a carbon assessment process, to apply to plan-making and planning applications. Such a methodology or tool is greatly needed.

There is no requirement within the NPPF to quantitatively model the carbon emissions arising from a favoured development strategy within a sustainability appraisal. The survey stressed **the need for better national guidance on how to holistically assess local plan spatial strategy options in terms of emissions as part of sustainability appraisal**. The spatial implications of proposed growth options need to be modelled, across alternative locations and at different densities, allowing local authorities to model the annual carbon footprint that would be generated by new development. This would allow LPAs to understand the least carbon-intensive options for new growth in their local plan.

It should be ensured that carbon assessment is required as part of the new Environmental Outcomes Reporting regime, and that assessment of the climate implications of plan and significant decision making is made mandatory.

Outside of flood risk, guidance on climate adaptation is insufficiently developed. Local authorities lack clear targets, standards, or data inputs to assist in assessing vulnerability, setting policies, or assessing proposals. Furthermore, outside the issue of flooding, no official competent bodies like the Environment Agency exist to give advice.

National policy levers make no explicit mention of embodied carbon and do not support LPAs in regulating this area. The evidence review pointed to low levels of understanding about the embodied carbon impacts of new buildings and lack of a commonly agreed approach to measuring embodied carbon emissions.

The National Model Design Code has been criticised for having insufficient emphasis on the need to place zero carbon at the heart of the coding process. The NMDC mentions climate

change but does not reflect the overarching nature of the issue, or the extent to which practice must change to reach net zero emissions.

Whilst National Planning Policy sets out aspirations to support walking and cycling and promote sustainable patterns of development, the objectives do not set specific targets to deliver the outcomes needed. The NPPF does not require that local authorities' transport policies should cut or measure transport emissions arising from new development, sets no modal shift targets that local authorities should aim for and makes no commitment to constraining the growth in vehicle mileage. The NPPF is unclear how the carbon and climate impacts of significant proposed transport infrastructure is to be assessed (for example significant new road building or airport development) and presently offers no methodology for local authorities to follow in assessing such proposals. The survey highlighted that there needs to be a more joined up approach between land use planning and transport planning. 'Vision-led approaches' to proposals involving transport should be supported by the NPPF and guidance, moving away from traditional 'predict and provide' approaches to transport provision.

There is **no reference to climate change adaptation, mitigation or the Climate Change Act in the Neighbourhood Plan sections of the NPPF or PPG or any encouragement for neighbourhood planning groups to address these considerations**, who have a lack of clarity as to the extent to which they can develop climate policies. There is a significant opportunity through neighbourhood planning to spread public understanding of the climate crisis, build consent for the changes we need, and add to national mitigation and adaptation efforts.

Powers to deliver

The research found that **the planning system in England is not operating at the appropriate scales to facilitate a comprehensive and strategic approach to addressing climate change** through long term planning for development and land use. England is the only nation in the UK without a national spatial plan, and it is well documented that the adoption of strategic planning (outside London) since the abolition of Regional Spatial Strategies in 2010 has seen very low take up, with many efforts ending in failure. **The survey demonstrated support for strategic planning to consider land use requirements beyond the boundaries of individual local authorities**, and highlighted transport, large-scale renewables and carbon sequestration as examples of issues that need to be planned for above the 'local' level.

Local authorities are constrained by the architecture of government funding, which tends to be short term, poorly designed and competitively funded. These by their nature fail to facilitate long term and transformative investment, develop skills, and contribute to cutting emissions, and will by their nature tend to support those local authorities with more resources to access them.

A regulatory weakness identified through the case studies is a local authority utilising a Local Development Order (LDO) to circumnavigate the checks and balances (and consultation) of the planning process and undermine their own local plan. There is an assumption here that the LDO process will be utilised in compliance with existing local planning strategies and policies, but

there is no requirement to justify proposals or demonstrate their alignment with national planning policy. LDOs can be referred to the Secretary of State by third parties but the system would be more effective and robust if they were checked for policy alignment prior to adoption.

Other policy areas where enabling powers would support local authorities to address climate change more comprehensively, including coordinating the delivery of net zero heat zones and requiring connections to a district heating system, securing zero carbon technologies in new and existing buildings, refusing consent for fossil fuel extraction or carbon-based energy infrastructure, and the ability to set mandatory local adaptation and resilience standards.

The system of assessing, monitoring and enforcing the energy and carbon performance of buildings requires a radical overhaul to make it fit for purpose. This could be achieved (in part) through requiring developers to submit in-use energy and carbon data from new developments (for example from smart meters installed in new buildings). Participants at the stakeholder roundtables felt that authorities annual monitoring requirements could be usefully adapted to capture monitoring against climate change indicators, which in turn would help incentivise strong policies to address emissions reductions and resilience indicators.

The research also suggests **the planning system could be utilised more effectively to facilitate the significant challenge of retrofitting existing buildings and infrastructure** both for adaptation to more extreme climate events and to enable de-carbonisation.

Skills and capacity in the planning service

The crisis in capacity and skills in local authority planning departments is well documented, and the difficulties of navigating the considerable challenge of planning for climate change in the context of these resource constraints is unsurprisingly a key theme. The research is clear that LPAs need to be resourced properly to meet the climate challenge and enable the planning system to generate more climate resilient outcomes. A long-term strategy for skills and resources is desperately needed, but this must be aligned to much clearer expectations around the role and expectations of local planning in addressing climate change.

The research offers more hopeful conclusions in considering **the significant levels of commitment, drive and ambition of planning professionals**. During the stakeholder roundtable for local authorities, the shared enthusiasm and intent of officers offered a window on the potential for local planning to be reinvigorated through centralising climate change as a primary objective. This could be enhanced through a long-term strategy for funding, resourcing and securing skills for local authority planning departments, and establishing **networks of partnership and information exchange, which act as enablers for local authorities working to establish ambitious climate change policies in local plans**.

Awareness, training and empowerment of other stakeholders

The **Planning Inspectorate (PINS) is seen by many authorities as a barrier to implementing climate change and net zero emissions policies**. But, as the independent 'regulator' of local plans, they also represent a significant potential enabler. A common area of concern from the research is the perceived lack of understanding of climate change at PINS, demonstrated by the treatment of climate change by Inspectors at local plan examinations, which has manifested in two major ways: a general lack of challenge from Inspectors over the climate policy content of Local Plans, and an inconsistency of approach at local plan examinations. PINS should ensure that all local plans meet statutory duties around climate mitigation and adaptation. Plans which fail to meet these tests should be found unsound.

Whilst some 300 local authorities have set a net zero target and/or declared a climate emergency, including 182 with targets of 2030 or sooner, not all local authorities are at the forefront of climate action. Almost a third of local authorities who responded to the survey declared that their local plan was "not at all aligned with the scale of emission reduction required by their local net zero targets". In 'frontrunner' authorities, **the prioritisation of climate change from local authority leadership is a key enabler.** Climate literacy training for senior leadership is recommended for every local authority.

Embedding climate adaptation and mitigation responses across local authority functions is needed to achieve joined up approaches. If this does not happen, then different local authority departments have the potential to become barriers to achieving net zero. For example, the survey highlighted Local Highways Authorities as being a potential barrier if their functions are not aligned to that of the LPA.

There is no one agency responsible for all sources of flooding which is a practical barrier to climate adaptation. Therefore, data and evidence on flood-related climate impacts, which is dynamic, must be drawn from a wide variety of sources and bodies, not just the Environment Agency. Due to the demanding nature and geographical extent covered by much of this data, regional and sub-regional strategic planning should play a supportive and coordinating role in its collation and dissemination, reducing the risk of LPAs duplicating or recommissioning evidence that already exists, saving precious resources.

The evidence review identified areas where **a case could be made for expanding powers over land uses to deal with climate change**, one example being how planning could be positively used for upland catchment planning to integrate the regulation of land uses in order to reduce flood risk and build resilience. This would require the expansion of control over agricultural land use.

Ensuring an inclusive and just transition to net zero is a pervasive challenge, aiming to address inequality and prevent leaving people behind. Research consistently shows that climate change impacts disproportionately affect vulnerable populations who contribute less to carbon emissions. Tackling the root causes of climate change can serve to further climate justice and equality.

However, the transition to a net zero built environment has the potential to worsen inequalities depending on who can access and benefit from these changes. Public engagement and equity are long-standing concerns for planners, but the imperative for climate change makes them even more crucial. However, opportunities to influence the planning process are, for most people, limited. The research has indicated support for de-escalating the planning system from its adversarial and legalistic way of operating and be much more conducive to citizen involvement in meeting the challenges. Empowering people with the skills to make their case must go hand in hand with enhancing their knowledge of the challenges and opportunities which will shape the future. New technology could transform the way that people engage with the planning system, by giving them better access to information and providing new tools to help create and express community visions.

Recommendations

The recommendations of this report (see Chapter 4) are founded on an assumption, supported in the evidence review and by international best practise, that **effective planning is crucial to tackling the climate crisis**. This is primarily because the system represents a spatial approach to the multiple and complex actions necessary to transform our built environment and energy systems and embed adaptation measures. It does this in a localised and democratic context by both creating an opportunity for planned approaches to development and acting as a gateway consent mechanism for the multiple responses to climate change identified in, for example the climate change risk assessment process.

Based upon the analysis in Chapter 3, the recommendations reflect two very different orders of actions which would need to be taken to secure effective responses from the planning system. The first set relates to **systemic change to the system surrounding political prioritisation and professional culture change** which are crucial in securing lasting change in a highly centralised planning system. The second set of recommendations relates to **specific measures designed to address a range of problems from policy objectives to clarity around data and methods to the skills and morale of the planning service**. The recommendations are expressed in the relation to the six analytical themes described in Chapter 3 and include an indication of the time scale necessary for their implementation.

Opportunities that arise to address the recommendations, such as the promised new NPPF that will accompany the Levelling Up and Regeneration Bill in 2024, must be grasped without delay.

Conclusions

The spatial planning system has the potential to be a key public policy solution in implementing the wide range of complex actions necessary to mitigate and adapt to climate change. It is the only regulatory system capable of addressing the spatial components of climate mitigation and adaptation.

However, **this report has found a significant gap between what is conceptually possible in planning for climate change and what is actually done in English town planning**. This is because, on the one hand, the technical solutions to mitigation and adaptation are becoming more sophisticated and effective, and on the other, that the English planning system lacks the policy direction, skills, and capacity to respond. This in turn relates to deep rooted cultural orthodoxy that planning is a barrier rather than an enabler in meeting the climate challenge.

To close this gap, we need to recognise that spatial planning is a regulatory gateway through which much of our built environment must pass, from new and expanded communities to renewable energy projects. Consequently, **it offers an opportunity to disaggregate our national carbon budget to local areas, ensuring that the emission reductions we have committed to nationally, occur geographically across the country and that all policies, plans and development proposals are compatible with this commitment**. It can also ensure that appropriate adaptation strategies are implemented which reflect the nation's complex geography and diverse communities.

This research found considerable enthusiasm amongst the planning profession to fulfil this role as well as examples of local plans which seek to achieve much of this ambition. However, it also reveals that **where local authorities are producing significant innovation on climate change, they appear to be delivering this despite the national policy framework rather than because of it**.

Spatial planning can offer a complete vision of a zero carbon and resilient future which applies the proven solutions we have on energy, transport, flooding, and heat resilience. It can do this holistically in order that we can all live more sustainable lives, by being a coordinator, integrator, and mediator of the spatial dimensions of wider policy streams that combine to address climate change. It is one the few processes where people have a real chance to shape their own future as it is both democratically accountable and has powerful opportunities for direct participation. **Ultimately, planning can help us ensure that all our future development is fit to take its place in a resilient and net-zero emissions future.**

NPPF remains a key barrier for onshore wind, with only 11% of local plans having proactively identified suitable areas for wind turbines.

1. Introduction

Research brief

The planning system is the key lever that local authorities hold to shape developments in their area. This can impact the design of communities, in particular the extent to which buildings, transport systems, and land align to the pathways required to meet net zero and adapt to the changing climate. However, there is significant variation between local authorities in how these issues are being considered and implemented through their local plans.

The Climate Change Committee (CCC) commissioned the Centre for Sustainable Energy (CSE) and the Town and Country Planning Association (TCPA) to examine the barriers and opportunities to incorporating climate mitigation and adaptation measures in spatial planning at the local authority level in England.

Climate mitigation is defined as action to reduce the impact of human activity on the climate system, primarily through reducing greenhouse gas emissions[1]. In a planning context mitigation means the creation of net zero-aligned local plans that address the spatial distribution and design of development and support the deployment of renewable energy to reduce carbon emissions. Climate adaptation is defined as adjustments to natural or human systems in response to the actual or anticipated impacts of climate change, to mitigate harm or exploit beneficial opportunities[2]. In a planning context, adaptation can mean changes to make development resilient to flooding and extreme weather and increase preparedness for future climate hazards.

The scale of the climate challenge

Climate Change is the defining issue of our time and is the greatest challenge facing our society. The science of climate change is now well understood, and we know that we must limit the global temperature increase to 1.5°C above pre-industrial levels if we are to avoid catastrophic climate impacts. The Intergovernmental Panel on Climate Change (IPCC) has made clear that drastic action to reduce carbon emissions is needed now if we are to have any hope of achieving that target. Yet we know that severe climate impacts are already locked in even if we do limit temperature rise to 1.5°C, which requires urgent re-design of our communities to make them safe and liveable for future generations.[3]

> “ It’s now or never, if we want to limit global warming to 1.5°C. Without immediate and deep emissions reductions across all sectors, it will be impossible … limiting warming to around 1.5°C

requires global greenhouse gas emissions to peak before 2025 at the latest, and be reduced by 43% by 2030."

IPCC, 2022

The English planning system

There is no longer an easily defined planning 'system' in England. Instead, there are a series of legal regimes which are not necessarily well integrated in law and policy. These regimes include:

1. **Town and country planning regime**
   This regime is the focus of this research and discussed in more detail below.

2. **Building regulations**
   This is an entirely separate legal framework based on the 1984 Building Act[4] (as amended by the 2022 Building Safety Act) focused on building standards. The building regulations set technical and safety standards for how buildings are constructed and how they perform, including minimum energy efficiency standards. They overlap with planning in that local authorities can set energy efficiency standards beyond the minimum standards set in Building Regulations, to reduce carbon emissions. The system is owned by the Department of Levelling Up Housing and Communities (DLUHC). Part L of the building regulations sets out requirements for domestic energy performance and links to the current debate on the Future Homes standard. This standard sets lower requirements than the zero-carbon home standard which was abolished in 2016 along with the Code for Sustainable Homes. Part O sets technical standards to mitigate overheating, including the extent of buildings which can be glazed, shading requirements etcetera. They overlap with planning in that whilst the building regulations control the technical performance of the building, they do not influence its orientation, many aspects of its design, or external landscaping, all of which influence a buildings propensity to overheat.

3. **The Nationally Significant Infrastructure Planning (NSIP) regime**
   This is a separate piece of legislation introduced by the Planning Act of 2008.[5] The NSIP regime deals with energy projects above 50 megawatts and associated infrastructure except for onshore wind which was handed back to local authorities in 2015 to ensure local control. The NSIP system is both centralised and powerful. It depends on the development of a series of National Planning Statements (NPS), each of which is owned by the appropriate government department. NPS set the terms for decisions made by the Planning Inspectorate. Local authorities have little involvement in the decisions.

4. **The marine planning regime**
   This is crucial to the deployment of offshore wind and tidal energy sources. Again, this is an entirely separate legal framework overseen in England by the Marine Management Organisation (MMO) which is an agency of the Department for Environment, Food & Rural Affairs (Defra). The MMO's plans and licensing of offshore activity is an important part of the

jigsaw and crucial to any ambitions to scale up, for example, tidal energy. This regime is also unique given that it is dominated by one player which is the Crown Estate, who owns the rights to develop in territorial waters.

While the words 'planning system' are often loosely applied to include one or more of these regimes, this research is focused on the town and country planning regime in England.

The town and country planning regime

A complete description of the evolution and current structure of the English planning system can be found in the Raynsford Review[6] of English planning completed in 2020. The Report noted that the system had become procedurally complex because of almost constant and incremental changes to law and policy. The report also noted that because planning was embedded as a statutory function of local government its performance was closely related to the structure and funding of that sector.

The legal and administrative basis of the planning system

The English planning system is framed by the 1990 Town and Country Planning Act[7] with key additions in relation to the structure and purpose of the system in the 2004 Planning and Compulsory Purchase Act, the 2008 Planning Act and the 2011 Localism Act. The system also includes the new towns legislation designed for the management of large-scale demographic change, but this has not been used since the 1960s. The legal basis of the system has several key principles:

1. The system is comprehensive in scope applying controls to the development of all land. The general exception is that successive governments have not applied these powers to agricultural land uses. This limitation is important for responses to climate change in terms of the control of, for example, upland land management.

2. The system is enabled by the nationalisation of the right to develop land and the vesting of the control of these rights to Local Planning Authorities (LPAs). This requires landowners to submit a planning application to carry out development. This process is now described as development management. The system deals with around 450,000 applications per annum[8] with most of these smaller household applications. It consents around 320,000 units of housing per annum in England .

3. In general, the system is plan led which means that decisions to grant planning permission are based upon policy in the local development plan and relevant national policy. However, the system remains discretionary in that local authorities can depart from local plan policy where material considerations indicate that that is justified. The law provides that planning decisions must be made in accordance with the development plan 'unless material considerations indicate otherwise'. The scope of what can constitute a 'material consideration' is defined in case law as *'all considerations relating to the use and development of land are considerations which may, in a proper case, be regarded as planning considerations'*[9]. However, in general they have taken the view that planning is concerned with land use in the public interest, so that the protection of

private property values would not normally carry material weight in decision making.

4. The planning system is locally administered which means that district and unitary authorities are responsible for preparation of local plans and planning applications.

The policy basis for English planning

National government sets the regulatory and policy framework for the control of development management and plan making. It also sets out the policy direction of the English planning system through national policy. This includes the National Planning Policy Framework (NPPF), National Planning Practice Guidance (PPG) and other national guidance such as the National Design Guide and National Model Design Code (NMDC) documents. Local authorities must have regard to this national policy and the Planning Inspectorate (PINS) uses it as a key framework for judging whether plans are 'sound' at examination.

The key players in English planning system

In addition to local authorities and the Department for Levelling Up, Housing and Communities (DLUHC), who are the government department responsible for the NPPF, there are other significant players in the planning process. The most significant is PINS which oversees the examination of all local plans and deals with cases where developers have appealed against the refusal of planning applications. It is in the first of these roles that PINS plays a determinative influence on the content of local plan policy. They apply the 'soundness test'[10] which is described in the NPPF to assess whether the plan has been drawn up in line with national law and policy and is evidenced, effective and viable. The Inspectorate's judgments are therefore highly dependent on the coherence and quality of national policy and guidance. PINS also determine nationally significant infrastructure projects.

Statutory consultees[11] also play a key role in the context of planning for climate change, particularly the Environment Agency (EA), who provide direct support to planning authorities in the preparation of plans and are a statutory consultee on some forms of planning application. The role of the EA in leading on policy development on flood risk is of critical importance but the agency does not carry an overarching brief for climate adaptation and has no responsibilities, for example, on overheating. There is no equivalent government agency to advise local authorities on climate mitigation. National Highways manage and plan the trunk road network in England, including motorways and A-roads and are a statutory consultee in respect of relevant planning applications. Active Travel England are a new statutory consultee assisting planning authorities implement good walking, wheeling and cycling infrastructure.

The planning system was predicated on the public sector playing a significant role in the development of infrastructure and housing, which it did so until the late 1970's. However, while LPAs can make plans, they now rely largely on private sector developers for delivery. As a result, the private sector has a major influence both locally and nationally on planning policy.

Though not a part of the planning system, the North Sea Transition Authority plays a significant

role in offshore development, and in regulating and influencing the oil, gas, and carbon storage industries. The North Sea Transition Authority, the business name for the Oil and Gas Authority, is a limited company owned by government which issues licenses on behalf of government for fossil fuel extraction. Among other obligations, it is required to have regard to maximising the economic recovery of UK petroleum. The Government has confirmed plans to expand fossil fuel production in the North Sea more broadly[12].

The impact of devolution

Over the past decade there has been a slow and incremental process of devolving some planning powers to combined authorities in England. Each one of these devolution deals has tended to be bespoke which results in a variety of strategic planning arrangements. Outside of London, only Liverpool, the West of England and Greater Manchester have statutory powers to deliver Spatial Development Strategies. Progress has stalled in the West of England, while Greater Manchester's joint development plan document is currently under examination.

The operation of the system

While there is a widespread perception that the planning system results in unnecessary delays to development, this assertion is not supported by the evidence. 87% of applications are approved[13] and 87% are processed inside the limited time scales set for determination.[14] There are much more serious issues in the delivery of up-to-date local plans, with coverage at present only amounting to 42% of LPAs.[15] The absence of an up-to-date local plan results in uncertainty for all parties. The causes of these delays are complex and related to resources, skills, changing local authority political leadership and above all the constantly shifting planning reform agenda at the national level. An illustration of this latter factor is the delay created by the changes to the housing forecasting regime at the end of 2022, resulting in numerous local authorities pausing or suspending work on their local plans[16].

> "That fewer than half of LPAs have an up-to-date local plan having had a decade to prepare and maintain one is not a ringing endorsement for the performance of the planning system, but is not particularly surprising."
>
> **Lichfields, 2022**

The impact of planning reform

Over the last 30 years the planning system has been subject to successive and radical changes in structure and policy direction. For example, the creation of statutory regional plans in England in 2004 demonstrated the value of strategic responses to climate change on issues such as transport, water availability and flood risk. These plans were abolished in 2011 and since that time there has been neither a national nor regional spatial approach to planning in England. London was the exception retaining an effective strategic plan, supplemented in an ad-hoc (and often voluntary)

way through a handful of sub-regional plans at Combined Authority level.

Overall, the reform measures of recent decades (and expressed more recently in documents such as the 2020 Planning White Paper)[17] have resulted in three significant trends in relation to planning for climate change.

1. **Deregulatory.** The clearest example of this deregulation is the removal of the need to seek planning permission for the conversion of existing buildings to residential use through the operation of permitted development rights (PDR). Permitted development applications severely limit the criteria by which LPAs can assess proposals. These criteria do not include climate mitigation or important aspects of climate adaptation. Applicants for potentially large conversions of existing commercial and office uses no longer have to demonstrate compliance with local planning policy on climate mitigation for example. There has also been the expansion of the use of Local Development Orders (LDO) by LPAs which can grant permission for prescribed forms of development in a certain area. LDO's are not subject to independent examination and do not have to conform to local plan policy.

2. **Centralising.** The English planning system has always been significantly more centralised than other jurisdictions in northwest Europe. The Secretary of State has always had extensive powers to intervene in any decision of any kind at the local level. However other measures such as imposing permitted development or the potential creation of National Development Management Policies (NDMP) which outrank the local plan represent a shift in power from local to the centre.

3. **Set in the context of local government budget restrictions.** In some cases, the budget for local planning functions has been reduced by up to 60%. The government has launched an initiative to address skills, capacity, and morale but there is a general view across the sector that the capacity of the public service to respond to development proposals and government policy initiatives is the single greatest source of delay in the system.

The Levelling Up and Regeneration Bill

The Levelling Up and Regeneration Bill (LURB) currently proceeding through parliament, will create an entirely new planning system in England with a new emphasis on discretionary strategic plans, slimmed down local plans and more powerful national policy instruments. The legislation is complex and there are mixed views across the sector as to its value and practicality. When the system comes into force in 2024 it will be accompanied by a new NPPF. This provides a unique opportunity to shape the system to respond to climate change.

However, one of the striking features of the reform process and of the provisions of the LURB is that none of their content has been designed to respond to the climate crisis. Overall, reforms have been focused on speeding up planning consents for housing or latterly a concern about 'beauty' in design. The Planning White Paper[18] made only the briefest mention of climate change and did not propose any specific planning reform measures that might more effectively address mitigation and adaptation.

Planning in the UK devolved administrations

Northern Ireland, Scotland and Wales all have responsibilities for planning, and so the DAs all play a key legislative and policy role in determining how climate change is addressed through the planning system. The overall structure of planning remains similar across the four nations, with local development plans forming the basis of a plan led system.[19] Local development plans must be in conformity with national planning policies, which are expressed through:

- The NPPF in England.
- The Strategic Planning Policy Statement and the Regional Development Strategy 2035 in Northern Ireland.
- The National Planning Framework in Scotland.
- Planning Policy Wales and the Future Wales National Plan in Wales.

The capability of the English planning system to address climate adaptation and mitigation

It is not possible to understand the performance of the English spatial planning system in tackling climate change without being precise about the capability of the system. This capability has two dimensions. The first can be defined as the outcomes of the current statutory planning system in England which the evidence review in Chapter 2 makes clear are sub-optimal in relation to measures to address climate change.

The second is the conceptual power of spatial planning to be a key public policy instrument in dealing with climate change mitigation and adaptation. This potential is illustrated by the past performance of English planning, the current capability of other planning jurisdictions in the UK and by international best practice. In essence, spatial planning is a key implementation route for a wide range of complex actions necessary to mitigate and adapt to climate change. This capability is defined by the ability to provide spatially specific plans capable of integrating energy and resilience strategies with other public policy objectives. It can do this over the long term and in a democratic context. More detailed examples of this capacity include:

- Direct consent of projects necessary to secure the pathway to net zero including the approval renewable energy developments and the prevention of, for example, fossil fuel extraction.
- Determining the location, scale, mix and character of development to ensure that its density, layout, building orientation and landscaping make it resilient to climate impacts. This includes the multi-functional benefits of integrating Sustainable Drainage Systems (SUDs) and green infrastructure.
- Enabling adaptation (and in extreme circumstances planned relocation) of communities in flood risk areas.

- Encouraging a wide range of behavioural change, such as enabling people to make personal choices through, for example, the creation of green and walkable streets and the promotion of active travel.
- Playing a crucial role in economic stability by ensuring that development is intrinsically resilient to flood risk or by relocating development where climate risks mean insurance and mortgage cost become unaffordable.[20]
- Enabling strategic planning at scales that reflect functional economic and natural geographies, so that areas affected by, for example, coastal change or fluvial flood risk, can effectively plan together. Strategic planning can coordinate energy planning, options for onshore grid connection or offshore wind development, and transport systems to enable decarbonisation.
- Planning offers the opportunity to set and implement the long-term strategic vision necessary to deal with impacts such as sea level rise – and, crucially, it operates within a local democratic context, allowing communities to participate.

This brief view of what is conceptually possible is practically illustrated by the progress of many European cities such as Freiburg in Germany in relation to mitigation or Rotterdam in the Netherlands in relation to the management of surface water flooding. The EU projects GRaBS[21] and SPECIAL[22] amongst many other research programs illustrate the scale of this potential.

> "Many other nations deliver much better planning outcomes than England does. They do this by deploying a range of place-making tools relating to energy, housing, transport, culture, participation and taxation in ways which allow for a co-ordinated and comprehensive approach. Freiburg, Copenhagen, Almere and Basel can all demonstrate the application of place-making innovation which goes beyond anything currently delivered in any English city or region. Each has its own distinct problems, but overall their comparative advantage is clear in relation to indicators of carbon dioxide emissions, resilience measures, public transport use, housing provision and the design and deployment of technology in the built environment."
>
> **TCPA, 2018**

The gap between what is conceptually possible on climate change and what is actually done in English town planning has never been wider. This is because on the one hand the technical solutions to mitigation and adaptation are becoming more sophisticated and effective and on the other the English planning system is losing the skills and capacity to respond.

England has failed to keep up with global best practice in response to climate change, particularly in relation to the content of national planning policy.

The contribution of planning to economic growth, resilience and energy security

Any regulatory failure by the planning system in addressing climate change has direct economic consequences. Increasingly it is recognised that the economy and climate change are intertwined, with the pace and severity of climate change accepted by the Bank of England as presenting an unprecedented economic risk.[23] The recent Independent Review of Net Zero[24] comments that in a high emission future, the level of global disruption will be so severe that 'normal' economic activity will become very challenging.

The planning and building control systems regulate the construction of over £120 billion of built development per year[25] in the UK and are inextricably involved in managing these risks. With the uncertainty of long-term climate impacts a perfect approach to climate adaptation is likely impossible. However, there is enough certainty in climate predictions to understand the scale of change required for how we design and manage the built environment. For example:

- During the 2022 heatwaves, 2,803 more people over 65 years of age died than would be expected with normal trends,[26] and with climate change, heatwaves are predicted to become more frequent and more severe.
- The UK Met Office predict[27] that in a business-as-usual (high emission) scenario, Britain could experience summers as much as 5°C hotter by 2070, with a 50% chance that by 2050 they will be as consistently hot as the summer of 2018.
- The CCC have modelled that 1.8 million people already live in areas which are at significant risk of flooding.[28] New homes in these areas built after 2009 do not benefit from the FloodRe insurance scheme and as a result will see insurance cost rise steeply.

Shortcomings in how these systems address known adaptation issues will have long term impacts, for instance developing homes in flood-prone areas or new homes which dangerously overheat in heatwaves, meaning buildings will require significant public investment to retrofit in the future. Likewise, the introduction of early and robust climate mitigation policies can reduce costs. The Climate Change Committee (CCC) stress that designing new homes with ultra-high levels of energy efficiency will be cost approximately one-fifth the amount of retrofitting homes to the same quality and standard.[29] Overall, setting aside the social and health costs of not acting, introducing the most robust climate mitigation and adaptation measures as possible will save money. The CCC predicts the cost of reaching net zero is less than 1% of GDP per year, before benefits are counted, and those benefits could be substantial.

Whilst the economic risks posed by climate change are significant, so too is the economic opportunity presented by net zero, which has been described as the economic opportunity of the 21st century.[30] The CCC have modelled[31] that there is potential for the net zero transition to create

more jobs than will be lost. Between 135,000 and 725,000 net new jobs could be created by 2030 in low-carbon sectors, such as buildings retrofit, renewable energy generation and the manufacture of electric vehicles. With the right conditions, net zero can provide an opportunity for growth in high quality jobs, distributing opportunities across regions and increasing diversity. Falling behind in the global shift towards decarbonisation could result in the UK capturing fewer benefits from new green industries.

As an example, although international volatility has driven the cost of gas to an all-time high since 2022, stoking inflation in the wider economy and leading to the unprecedented situation of the government paying a proportion of household energy bills, the cost of renewable energy technology (including onshore and offshore wind, solar PV and batteries) continues to plummet, with reductions of 60 to 90% since 2010.[32] Revising planning policy to accelerate the deployment of more affordable renewable energy sources and developing net zero standards for new housing can reduce household energy bills, reduce the exposure of the wider economy to volatile and high fossil fuel prices, support emission reduction and support job creation.

In summary, addressing climate change robustly through the planning system will save money in the long run and offer significant economic opportunities, while failing to adapt and mitigate climate change will lead to severe social, health, and economic consequences.

Temperatures in England are continuing to increase, raising the risks of drought, fire, rising sea levels, flooding, and damaging storms, and leading to declining biodiversity.

There is no one agency responsible for all sources of flooding (sea, river, surface water) which is a practical barrier to climate adaptation.

2. Research Methods and Findings

Methodology

The focus of the research was to engage with local authorities and planning stakeholders to understand how policy design and different enabling factors can unlock ambition at the local authority level in addressing climate resilience and net zero.

The key tasks identified were:

1. Identification of the barriers to achieving climate resilient and net zero-aligned spatial planning for local authorities in England, and the opportunities for the planning system to better support these objectives.
2. Evaluation of the objectives in the NPPF and other policy levers for sustainable spatial planning.
3. Providing recommendations for central and local government that would enable local authority actors to incorporate climate change adaptation and mitigation in spatial planning.

These tasks were delivered through several different components including an evidence review, a desk-based review of national planning policy, a high-level comparison with devolved administration approaches, an online survey of planning practitioners, three facilitated stakeholder roundtable discussions and analysis of four case studies with associated interviews.

Analysis of the outputs of these components has identified a set of key themes that capture the key barriers, challenges, and opportunities to incorporating climate mitigation and adaptation measures in spatial planning. Recommendations have been developed (see Chapter 4) for central and local government action, which consider the opportunities for the planning system to overcome barriers, and where other policy levers or additional enablers may be required.

An advisory panel was established to contribute technical expertise, identify, and challenge assumptions and act as a sounding board.

Evidence review

Many of the barriers to achieving climate resilience and net zero through local planning are known and have been the subject of previous research. A review of existing evidence was undertaken to provide a synthesis of key findings that evidences the mechanisms and contexts that underpin barriers and enablers to resilient and net zero-aligned spatial planning.

A realist review methodology was used, which seeks to understand what interventions work (or do not) where, under what circumstances and with what outcomes.

An initial seven reports that were completed between 2019 and 2022 were reviewed and analysed, with others subsequently identified and analysed through the realist review methodology. There were several notable findings:

- The NPPF contains ill-defined sustainability and climate objectives and no clear vision for planning on net zero.
- Climate change is generally not considered to be a central priority in local plans.
- There are practical difficulties around guidance and tools used to prepare local plans, and the powers available to Local Authorities.
- There is no mandatory requirement for Local Authorities to report on adaptation.
- There is a general lack of scrutiny and consistency from Planning Inspectors over local plan climate policy content.
- National policy mechanisms can actively work against local authorities making effective use of their potential to cut emissions, including overriding national policy priorities that lock-in carbon emissions.
- Local authorities are hindered by inadequate funding to deliver on their climate emergency declarations and short-term, competitive national funding streams dilute efforts.
- Several important climate mitigation and adaptation themes were identified from the evidence review. A typology of the barriers and enablers to sustainable planning was also developed, which then informed the other research tasks. The survey questions were primarily based around these.

A final analytical framework was created by condensing the typology of identified barriers or enablers into six themes to improve the clarity and brevity of our analysis and recommendations. The analytical framework primarily informed the research tasks that came after the survey.

Box 2: Mitigation Themes Identified

- Energy efficient development.
- Embodied carbon in new development.
- Low-carbon heat.
- Renewable energy generation.
- Integrated public transport.
- Electric vehicles and supporting infrastructure.
- Active transport.
- Location of new development.

Box 3: Adaptation Themes Identified

- Flooding from surface water.
- Flooding from rivers and the sea.
- Sea level rise / coastal erosion.
- Impacts on habitats, landscapes, and land management.
- High temperatures and overheating.
- Urban heat island effect.
- Water scarcity and drought.
- Reduced water quality.
- Health impacts of climate change.
- Soil degradation.

Box 4: Typology of Identified Barriers or Enablers

- Alignment between the Planning System and the Climate Change Act.
- Clarity of NPPF climate change objectives and the requirements placed on local plans.
- The prioritisation of climate change against other considerations.
- Local authority statutory powers and duties.
- Detailed methodologies and guidance available to local authorities.
- Resources available (e.g. funding, skills, and access to expertise).
- Evidence base requirements.
- Strategic planning with neighbouring authorities.
- PINS involvement in plan making or decision taking.
- Viability of development.
- Political leadership.
- Planning system reforms.

Box 5: Analytical Framework

The six elements which provide the analytical framework for the analysis of the data in Chapter 2 are:

1. **The extent to which a coherent and prioritised legal and policy framework supports the planning system to deliver on climate change.**
2. **The extent to which there is sufficient guidance on the specific policy actions local planning authorities should be taking on climate change.**
3. **The availability of detailed and government endorsed methodologies.**
4. **The necessary powers and resources needed to deliver a local plan strategy.**
5. **The skills, independence, capacity and morale of the public planning service.**
6. **The awareness, training and capacity of other key stakeholders including the private sector.**

NPPF review

Whilst there is discretion for councils to develop local planning policies, local plans adopted by LPAs must be consistent with national policy set out in the NPPF. Therefore, the English planning system is centralised in terms of directing the scope of local policies.

The NPPF sets the overall objectives for the planning system. It details how LPAs should plan for different forms of development, how development and land use should address climate change, and the priority which must be given to climate and other considerations in local plans and decision making.

Consequently, how the NPPF and other national policy levers address climate change significantly influences how effectively planning can address climate change and local authorities' scope for action. This is both a limitation and a strength. The NPPF review found some areas where the NPPF constrains and slows climate action, but this could be changed and revised rapidly, with no need for legislation, and with revisions carrying weight for plan making and determining planning applications with instant effect.

A review of the NPPF was carried out to assess its effectiveness in relation to climate change. The following national policy levers were also considered as part of this review:

- Consultation on revised NPPF (launched in December 2022).[33]
- Levelling Up and Regeneration Bill (LURB).
- National Planning Practice Guidance (PPG).[34]
- National Model Design Code (NMDC).

In this review, we analysed the NPPF issue by issue, applying the following questions which emerged from the analytical framework and evidence review:

- Does policy support alignment between the planning system and the Climate Change Act?
- Are national planning policy objectives and requirements placed on local plans in respect to climate change clear?
- What weight and prioritisation is given to climate considerations against other considerations?
- How strong is the wording in respect of climate duties and responsibilities?
- Are clear and detailed methodologies in place?
- Are evidence base requirements clear?

The section below discusses the key themes emerging from the analysis of national planning policy.

Whilst the NPPF discusses reducing emissions in general terms, the Climate Change Act is only specifically mentioned once in a footnote. The phrase 'net zero' is not mentioned at all. The NPPF requires LPAs to take 'a proactive approach to mitigating and adapting to climate change in line with the Climate Change Act 2008', but this requirement is not mentioned anywhere else, nor are the deep and wide-ranging implications of this requirement explored elsewhere.

There are numerous areas where policy drivers have the potential to conflict with climate goals, for example the promotion of economic growth, the need to accommodate development needs, and proactively promote fossil fuel development. The NPPF provides no guidance as to how these objectives are to be met whilst staying within the fixed national carbon budgets.

The policy review revealed that the NPPF and PPG lacks guidance on how specific policy actions can help to address climate change, fails to explore the full policy implications if the net zero commitment is to be met, fails to support policy strong enough to achieve this objective, and fails to explicitly tie general objectives to reduce emissions to explicit objective targets for emissions reduction.

Aside from flood risk, guidance on climate adaptation does not contain clear targets, standards or data inputs to assist local authorities in assessing vulnerability, setting policies or assessing proposals.

In other areas, including energy performance standards and sustainable transport, the NPPF and PPG text is out of date and doesn't reflect the current regulatory position or policy from other central government departments.

The NPPF provides detailed methodologies and robust language in government priority areas (economic growth, housing provision) but lacks clarity and detail around climate issues (aside from flood risk), giving the impression that more priority is given to other policy areas above climate considerations.

Survey

The Smart Survey digital platform was used to gain feedback from town planners and related environmental professionals who have knowledge of, or have participated in, the local planning system. They were asked about their views on how spatial planning can deliver action on climate change, how the current system is working and what improvements could be made. The survey was open for three weeks and contained subdivisions of questions depending on which planning sector respondents identified with (e.g. town planners working in the public sector were asked a different set of questions to those working in the private sector). The questions were framed around the mitigation and adaptation themes identified in the evidence review, and the associated typology of barriers and enablers.

In total, there were 105 responses from a range of practitioners. Each region of England was represented, with the South West, South East and the East of England representing over 50% of respondents.

Figure 1: A breakdown of respondents by the region of England that they work in

South West	**28.6%**	West Midlands	**5.7%**
South East	**18.1%**	Yorkshire & Humber	**2.9%**
London	**7.6%**	North East	**2.9%**
East of England	**12.4%**	North West	**4.8%**
East Midlands	**4.8%**	Other	**12.4%**

When broken down by sector, 50% of respondents reported working in the public sector, 12% working in the private sector and 16% working for an NGO.

Figure 2: Respondents by sector

Local authority	**51.4%**	NGO	**16.2%**
Planning Inspectorate	**1.0%**	Government body	**1.9%**
Private sector	**12.4%**	Other	**10.5%**
Professional group/organisation	**6.7%**		

Renewable energy generation, energy efficient development and active transport were the three areas that respondents reported as the most important climate mitigation measures that the planning system should be supporting.

For climate adaptation, impacts on habitats, landscape and land management, flooding, overheating, and drought were the areas that respondents stated were the most important measures that the planning system should be supporting.

The survey revealed scepticism from respondents around how effective the planning system is in addressing climate mitigation and adaptation measures. For most identified measures, many respondents felt that the planning system is either 'not very effective' or 'not at all effective'.

The measures that respondents felt the planning system is least effective at dealing with include embodied carbon in new development (80% of respondents agreed that the planning system is either 'not very effective' or 'not at all effective'), health impacts of climate change (79%), low carbon heat (72%) and high temperatures/overheating (71%).

Addressing flooding (from rivers/seas and surface water) was identified as the measure that the planning system is the most effective at dealing with. 49% of respondents agreed that the planning system is 'extremely effective' or 'somewhat effective' at addressing flooding from surface water, and 48% at addressing flooding from rivers and the sea.

Figure 3: Effectiveness of the planning system in addressing climate mitigation measures (percentage of responses)

	Not very effective or **not at all effective**	**Extremely effective** or **somewhat effective**	**Neutral** or **don't know**
Location of new development	**49**	**24**	**26**
Active transport	**45**	**31**	**24**
Electric vehicles and supporting infrastructure	**38**	**36**	**27**
Integrated public transport	**65**	**14**	**21**
Renewable energy generation	**65**	**20**	**15**
Low-carbon heat	**72**	**11**	**17**
Embodied carbon in new development	**80**	**6**	**14**
Energy efficient development	**60**	**23**	**17**

Figure 4: Effectiveness of the planning system in addressing climate adaptation measures (percentage of responses)

	Not very effective or **not at all effective**	**Extremely effective** or **somewhat effective**	**Neutral** or **don't know**
Soil degradation	**66**	**5**	**29**
Health impacts of climte change	**79**	**5**	**15**
Reduced water quality	**68**	**8**	**24**
Water scarcity and drought	**70**	**5**	**25**
Urban heat island effect	**70**	**5**	**25**
High temperatures and overheating	**71**	**7**	**22**
Impacts on landscapes and land management	**41**	**23**	**36**
Sea level rise and/or coastal erosion	**33**	**27**	**40**
Flooding from rivers and the sea	**25**	**48**	**27**
Flooding from surface water	**27**	**49**	**24**

All of the types of barriers or enablers to achieving net zero through the planning system identified in the evidence review were recognised by respondents as being capable of acting as such, to varying degrees.

Some, such as 'alignment between the planning system and the climate change act' (41% identified this as a barrier, and 49% as an enabler), and the 'clarity of NPPF climate change objectives and the requirements placed on local plans' (45% versus 49%) were seen to be capable of being both a barrier and an enabler.

Others were clearly identified as acting as more of a barrier. 70% of responses identified 'continual planning system reforms' as a barrier, compared to only 14% who saw this as an enabler. Viability of development (65%), resources, including funding, skills and access to expertise (57%) and evidence base requirements (51%) were also strongly identified as barriers.

49% of responses identified 'Planning Inspectorate involvement with plan making or decision taking' as a barrier. 33% gave a neutral answer, suggesting some degree of uncertainty. Only 15% saw PINS involvement as an enabler, the second lowest score behind 'continual planning system reforms.'

Figure 5: Barriers and enablers to achieving net zero through the planning system (percentage of responses)

	Not very effective or **not at all effective**	**Extremely effective** or **somewhat effective**	**Neutral** or **don't know**
Planning system reforms	**70**	**14**	**16**
Political leadership	**46**	**38**	**16**
Viability of development	**65**	**16**	**19**
Planning Inspectorate involvement in plan making or decision taking	**49**	**15**	**36**
Strategic planning with neighbouring authorities	**42**	**39**	**19**
Evidence base requirements	**51**	**32**	**18**
Resources available (e.g. funding, skills, and access to expertise)	**57**	**35**	**7**
Detailed methodologies and guidance available to local authorities	**44**	**43**	**13**
Local authority statutory powers and duties	**40**	**39**	**22**
The prioritisation of climate change against other considerations	**48**	**41**	**11**
Clarity of NPPF climate change objectives and the requirements placed on local plans	**45**	**49**	**6**
Alignment between the Planning System and the Climate Change Act	**41**	**49**	**10**

Other notable findings from the survey are as follows:

- None of the local authority respondents identified that their adopted local plan was fully aligned with the scale of emission reduction required to reach net zero. Almost a third (28%) said that their local plan was 'not at all aligned' with this target. 8% said their local plan was 'mostly aligned', with 24% identifying as 'somewhat aligned' and 33% as 'slightly aligned'.
- Only a quarter (26%) of local plans addressed embodied carbon. None had a policy in place to monitor embodied carbon from new development (17% were in the process of developing one).
- 73% of local plans addressed flooding from surface water, 69% flooding from rivers and seas, and 49% impacts on habitats, landscapes and land management. No other adaptation measure scored higher than 33%. The adaptation measure least likely to be addressed by local plans was the urban heat island affect (16%).

- 29% of local authorities reported that they did not know what their baseline carbon emissions were for their area.
- A third of local authorities (31.3%) said that they were unable to quantify the carbon emissions that their local plan would create. Only 12.5% said that they had been able to do this. A further 25% said that they could do it (or were planning to do it) but hadn't yet done so.
- Only 4% of local plans included a policy for new zero carbon development. 22% said that they were developing a policy on this issue. Nearly half (48%) said that they had not currently included a policy for new zero carbon development but would like to do so in the future. 7% said that they had 'no plans to develop a policy on this'.
- 22% of respondents said that their local plan did not contain a renewable energy policy. Of those that did, only 13% included a defined target for renewable energy generation, only 11% had identified suitable areas for wind turbines, and only 4% had identified suitable areas for solar farms. None had included any criteria for battery storage schemes.
- 12% of respondents said that their local plan did not contain a transport policy. Of those that did, only 14% included a defined target for reduction in car use and a modal shift to more sustainable forms of transport, only 28% included maximum car parking standards, and only 26% included support for segregated cycle lanes. 56% including policy support for electric vehicle chargers.

The survey results suggest that the majority of local plans are not fit for purpose when considering climate change, and many of those in production are not considering mitigation and adaptation measures holistically.

The public sector respondents viewed resources as the main barrier to incorporating mitigation and adaptation measures within local plans. The viability of development, planning system reforms and clarity of national policy objectives around climate change and the subsequent requirements placed on local plans also scored highly. Private sector planners viewed political leadership as a more significant barrier than those who worked for local authorities.

Roundtables

Fifty stakeholders representing a range of expertise and organisations attended three roundtable events in late March 2023 (15 attended the session on mitigation, 19 for adaptation, and 16 for the LPA session). Attendees represented private sector consultants, developers, government agencies, planning law, the voluntary sector, and professional organisations. Local authority representatives were invited to represent a mix of size, location, and geography across England.

The roundtable events were structured to seek perspectives on the barriers and enablers to planning for climate change, and to test and inform the development of emerging recommendations. The sessions were recorded, transcribed, and analysed against the themes

emerging from the analytical framework, which were introduced at the roundtable sessions to structure discussion. The key findings and themes of discussion are briefly summarised below.

Mitigation

Whilst there is clear potential for the planning system to contribute to deliver net zero, roundtable participants felt that in its current form this is not being utilised. Climate change is not expressed as a central objective of planning in the NPPF, which leaves its prioritisation vulnerable to the discretion of local authorities.

> "The planning system is a major tool for shaping the future of the built environment and we're not using it, basically, at all, to help deliver net zero."
>
> **Mitigation roundtable participant**

There are numerous areas where clearer guidance and direction would support local authorities and developers (e.g. embodied carbon, site conditions, design, infrastructure), with the lack of a methodology to account for carbon impacts of development expressed as a particular concern and barrier. The impact of skills and knowledge gaps across the sector were also raised as a significant challenge.

Adaptation

Roundtable participants felt that there is not currently a coherent legal and policy framework for planning and climate adaptation, and that national policy and guidance does not address all areas of climate risk or comprehensively direct local plans on how to address these.

There are disparities between the volume and clarity of guidance on flood risk compared to other adaptation issues and missed opportunities to embed adaptation in planning guidance e.g. the NMDC. Government guidance is viewed as sparse and not fit for purpose on issues including overheating, soil erosion, carbon loss through development and how to balance issues that often come into conflict.

Local authorities

Local authority participants felt strongly that national policy was hindering local progress, and uncertainty around the basis on which authorities can push forward climate change policies was a significant barrier. The March 2015 Written Ministerial Statement (WMS) on Plan Making (addressing energy performance standards) was raised as a current example of national policy causing significant levels of uncertainty, and frustration was expressed that building regulations fall behind local ambition on net zero in many areas. This acts as a driver for local plan policy but creates policy areas that could be addressed nationally.

> "I think we've almost given up on government and just going for it ourselves really, that's the only way to do it."
>
> **Local authority roundtable participant**

Key enablers for 'frontrunner' authorities include the prioritisation of climate change from local authority leadership, resourcing of specialist skills and knowledge, and confidence within planning teams to push forward ambitious approaches. Skills and capacity are clearly barriers, but local authorities are sharing knowledge and best practice both through informal networks and existing organisational structures. Drawing on resource and knowledge through organisations such as net zero hubs, regional planning structures and climate commissions have been a key enabling factor, and allowed cost efficiencies (e.g. through joint evidence commissions).

Authorities also raised the issue of the political sensitivities around climate change and the vulnerability of communities to future flood risk, which acts as a barrier to action on adaptation.

Case studies

Four case studies were undertaken to further understand the way that policy levers for sustainable spatial planning are utilised in practice by LPAs, and the outcomes these achieve in relation to planning for net zero and climate resilience. These case studies were selected to support a comparative review of the barriers and enablers affecting policy approaches at a local level. They aim to broadly reflect examples of success and failure, through two case studies concerning flood risk (adaptation), and two concerning net zero buildings policies (mitigation). These examples were identified through existing knowledge of local plan policy approaches and discussion with the advisory panel. The case studies selected are as follows:

1. Bath & North East Somerset (B&NES) Local Plan Partial Update - Sustainable Construction Policy
2. West Oxfordshire District Council's Area Action plan for Salt Cross Garden Village – Net Zero Carbon Development Policy
3. East Riding of Yorkshire Local Plan review – Flood Risk Assessment and site allocations for Goole
4. East Lindsey District Council – Flood Risk Assessment and Skegness Gateway LDO.

Each case study has been informed by:

- A desk-based review of publicly available documentation relating to the case (including local plan core documents, examination documents, evidence supporting policy and

Box 6

Case Study 1 Summary

Bath & North East Somerset Local Plan Partial Update – Sustainable Construction Policy

In response to Bath & North East Somerset (B&NES) Council's Climate Emergency declaration, the Local Plan Partial Update (LPPU) sought to update local plan policies to align with a local target for carbon neutrality by 2030.

A new sustainable construction policy seeks to achieve net zero operation of new buildings through the application of standards including limits on space heating and the use of an energy use metric. This approach is different to building regulations, which are based on carbon reduction. Another difference in policy approach is that the energy use applies to regulated and non-regulated energy use, whereas the building regulations apply only to regulated energy use.[35] The approach has two advantages. Firstly, it moves away from using Part L building regulations as a baseline, which are subject to change and therefore do not provide a fixed measure, and secondly, 'energy metrics are more technically robust and designed to lead to better building outcomes with improved focus on fabric and ability to monitor performance.'[36]

B&NES Council justified the policy approach through a comprehensive evidence base. Two key pieces of work were the modelling of housing typologies to demonstrate the policy standards were achievable, and the viability assessment which demonstrated that the cost of implementing sustainable construction methods would not impact overall viability of development. Through the plan examination, the Inspector heard objections to the specific standards set in the policy from local landowners and national housebuilders on the grounds of deliverability, viability, and consistency with national policy. There were also examination participants engaged in support of the policy approach, including local and national environmental organisations.

The point on consistency with national policy became a key issue in the examination of the policy. A significant factor in this was the weight to be given to the 25th March 2015 WMS on Plan Making, which signals amendments to the Planning and Energy Act 2008 to curtail local authorities' powers to set local energy efficiency standards above the equivalent of the (now withdrawn) Level 4 of the Code for Sustainable Homes. However, the WMS has been superseded through the recent update to Part L of the building regulations and government plans to introduce the Future Homes Standard, and amendments to the Planning & Energy Act were never enacted. The Inspector therefore found that the 'the relevance of the WMS 2015 to assessing the soundness of the Policy has been reduced significantly'[37] and found the policy sound.

Box 7

Case Study 2 Summary

Salt Cross Area Action Plan, Net Zero Carbon Development Policy

West Oxfordshire District Council's (WODC) Local Plan (2018) allocates land for a Garden Village near the village of Eynsham, 9 miles north west of Oxford. WODC bought forward an Area Action Plan (AAP) to provide a framework for the development, which will deliver 2,200 homes, 40 hectares of business land, two primary schools and supporting infrastructure. WODC set a strong commitment to an 'exemplar' development which aligned with its climate emergency declaration, for which the commitment to be net zero carbon was a key ambition.

Policy 2 of the AAP, 'Net Zero Carbon Development', set a requirement for development to 'demonstrate net zero operational carbon on-site through ultra-low energy fabric specification, low carbon technologies and on-site renewable energy generation.'[38] This would be achieved through a series of KPIs relating to building fabric, space heating demand targets, overheating, energy use intensity targets set for different uses, expectation for fossil fuel free development, zero operational carbon balance (with energy requirements generated by on-site renewables), embodied carbon and measurement and verification requirements.

During the examination of the AAP, Policy 2 was scrutinised for consistency with national policy and policy justification. As with the B&NES case study, the policy consistency point rested largely on the interpretation of the weight to be given to the 2015 WMS on Plan Making. Grosvenor Developments Ltd, the lead developer for Salt Cross, argued that the 2015 WMS represents an extant expression of national policy, and although local authorities are able to set targets further than national standards, this is limited to the equivalent of level 4 of the code for sustainable homes.[39] WODC's argument was that the national policy context has overtaken the 2015 WMS and related Planning Practice Guidance, and should therefore be given very little weight.

The evidence to support the policy approach tested the implications (including capital and running costs) of four carbon scenarios for new buildings at the Garden Village. The report concluded that zero carbon homes are technically feasible and viable at Salt Cross Garden village and recommends key performance indicators (KPIs) for policy inclusion in the AAP to meet climate change targets. Grosvenor challenged this policy approach at examination, finding it to be 'highly prescriptive and overly rigid.'[40]

On the national policy consistency point, the Inspectors' conclusions were consistent with Grosvenor's, finding that the 2015 WMS remained current national planning policy. The Inspectors also found that the policy was not justified, agreeing it was overly

prescriptive and that the typologies tested as part of the evidence base could not be relied upon in the absence of a detailed site masterplan. The Inspectors recommended main modifications to Policy 2 significantly adjust the policy approach: *'to remove references to absolute requirements and KPIs that must be met and instead to reframe as standards for consideration as part of an energy statement.'*[41]

proposals, recordings of examination hearing sessions and press articles).

- Four semi-structured interviews (one per case study) were held with six planning professionals engaged directly in the case study subject. Interviews were recorded and transcribed and fed into the full case study write up, findings and analysis.

Due to the ongoing 'live' nature of the case studies, contributions from interviewees remain non-attributable. Findings from the interviews are embedded into the commentary and analysis of the case study findings.

A summary of the case studies is provided in boxes 6 to 9, with key findings summarised briefly below, highlighting some of the enablers and barriers identified through the evidence review.

Mitigation

In drawing comparisons across the Salt Cross and B&NES policies which seek to achieve net zero development, there are two distinct factors that influenced the different outcomes through plan examination.

In the respective examinations, PINS reached starkly different conclusions on the weight to be afforded to the March 2015 WMS on Plan Making. This is significant because the interpretation of this WMS is a deciding factor in considering whether LPAs can set local energy efficiency standards above those set nationally through building regulations.

In B&NES, the Inspector concluded that the WMS had been 'overtaken by events'[42] and therefore the B&NES Sustainable Construction Policy is not inconsistent with national policy. In Salt Cross, the Inspectors reached a different conclusion, finding that the WMS represented current national planning policy, and therefore the policy approach proposed by West Oxfordshire District Council was in conflict.[43]

More discreet differences between the two policies and the outcomes of the examination are found in the policy approaches and their justification, with the Inspector in West Oxfordshire concluding that the proposed policy approach was overly rigid and prescriptive.[44] The interview participant for this case study challenged this view and felt that it is a sound approach for effective policies to set mandatory requirements, unless the evidence demonstrates these are not achievable.

The Salt Cross and B&NES case studies highlight the enabling factors that need to be in play to

Box 8

Case Study 3 Summary

East Riding Local Plan Update

The East Riding of Yorkshire is characterised by its relationship with water, which presents significant challenges in relation to flood risk and coastal erosion. The flood risk arising from tidal and fluvial sources means around a third of the East Riding authority area is in Flood Zone 3a. The authority is also subject to other sources of flood risk including surface and groundwater flooding.45

The East Riding Local Plan was adopted in 2016. The spatial strategy was formed around the authority's existing 'defined Settlement Network', to focus development within the boundaries of existing towns with existing services, jobs, and transport connections.46 This focused growth in the settlements within that form part of the wider City of Hull conurbation, and the principal towns of Beverley, Bridlington, Driffield and Goole. In total, the local plan allocated 1,950 homes for Goole.

The location of the town of Goole means it is particularly exposed to risk of flooding from multiple sources. Goole is bounded on three sides by water courses that are heavily tidally influenced (the River Ouse to the east, the River Aire to the north, River Don to the south plus the Knottingley and Goole Canal runs through the docks to the River Ouse)47.

The East Riding of Yorkshire began working on the local plan review in 2018. An update to the Strategic Flood Risk Assessment (SFRA) was undertaken as one of the first steps of the local plan update, which quickly identified the need for a Level 2 SFRA for Goole and Hedon. Through close partnership working with the Environment Agency (EA), the SFRA drew on updates to the Upper Humber model, ensuring the most up to date data on climate change projections and breach modelling was available. The resulting modelling in the event of overtopping or breach of flood defences demonstrates that the frequency of overtopping is likely to increase in future due to the impacts of climate change, and that in the event of a breach of defences, 'nearly all of Goole and the surrounding area is potentially at risk of flooding' to an extent that would result in a danger to life across the town,48 with the speed and depths of water ingress posing a high level of risk in these scenarios.

In response to this evidence, East Riding Council reviewed the spatial strategy for the local plan review, removing housing allocations in Goole due to flood risk, and instead creating a new strategic allocation for homes in the town of Howden, within the same 'sub area' as Goole, to meet localised housing need.49

The flood risk evidence has also led East Riding Council to reassess opportunities for Goole's regeneration in the context of reduced housing growth. Extant planning permissions for 800 homes will be built out over 10-12 years, providing new homes for

the town, which will also provide flood mitigation measures negotiated with the EA. The Council are keen to ensure that Goole still has opportunities for development, focusing on regeneration of the town centre, emphasising the role of the town as the sub-area's hub for retail and employment and securing £25 million investment from the government's Towns Fund.

The local plan Update was submitted to PINS for examination in March 2023.

Box 9

Case Study 4 Summary

East Lindsey District Council and the Skegness Gateway Local Development Order

Skegness is a coastal town in the district of East Lindsey on the Lincolnshire coast. Despite being one of the country's most popular holiday resorts, it is affected by high levels of deprivation, partly due to the reliance of the economy on tourism which creates many seasonal and part time jobs. The East Lindsey coastline is low lying and flat and particularly vulnerable to both fluvial and tidal flood risk, which will increase in the coming decades due to sea level rise.

The local plan for East Lindsey District Council (ELDC) was adopted in 2018. The plan's spatial strategy responds to the high risk to property and life from flooding by restricting housing growth in the 'coastal zone' to achieve a 'zero population growth scenario.'[50] Of an overall housing requirement of 7,819 homes for the district, the plan makes provision of 1,200 homes with extant permissions in the coastal zone. The plan was found sound at examination, with the Council and Inspector agreeing to an early review to consider the impact of the strategy on housing delivery.

An Issues & Options consultation for the local plan partial review was held in early 2021, which anticipated an increase in housing need due to changes to the government's standard methodology. As part of the consultation, ELDC sought views on the distribution of housing and coastal development under the heading of 'looking at whether we still need a coastal / inland split.'[51] No update on the progress of the local plan review has been published since.

More recently, ELDC published notification of the Skegness Gateway LDO for consultation in December 2022. The proposed LDO would grant planning permission for a range of uses including 1,000 dwellings, around 50,000 sqm of commercial and industrial uses, a local centre with retail and hospitality units, a college and primary school, a crematorium

and tourism accommodation at a 136-hectare site to the west of Skegness. The LDO, once adopted, will be valid for ten years.

An LDO must be adopted through a resolution by the LPA, and the Secretary of State notified upon adoption.[52] A local authority does not need to consult with or acquire permission to adopt an LDO from the Secretary of State, meaning that LDOs come in to force immediately once approved by the LPA.

The site for the proposed LDO is within Flood Zone 3 and the LDO submission was accompanied by a site-specific flood risk assessment. This demonstrates that widespread flooding would occur in the event of flood defence breach or overtopping, both in the present day and climate change scenarios.[53]

The approach to managing flood risk proposed through the LDO is based on the use of raised site levels and flood compensation areas, which would store water in the event of flooding and divert this from vulnerable parts of the site.[54] Flood risk mitigations are proposed such as minimal sleeping levels, 'sacrificial' ground floor uses (i.e. garages and hallways with no 'habitable' accommodation), structural reinforcements (so property can withstand breach events), protected car parking to reduce potential risk from 'floating' vehicles, strong anchoring of caravans to avoid flotation, and flood warning and evacuation plans.[55] Despite these mitigations, the FRA concludes the residual flood risk remains of 'constant' duration and 'high' significance.[55]

The EA have objected to the Skegness Gateway LDO on the grounds that the modelling demonstrates significant risk and 'anyone caught in such a flood would face a very real danger to life.'[57] The EA has requested that the site is bought forward for consideration through the local plan review process, so that the proposal can be properly considered against other options for supporting sustainable development in the coastal area of the district.

Skegness Gateway has demonstrable local political backing. Matt Warman, MP for Boston and Skegness, and ELDC Cabinet Members have featured in photoshoots and press statements,[58] and the project has also been mentioned in the House of Commons.[59]

establish net zero planning policies in local plans. These include political and corporate support at the authority (e.g. expressed through a climate emergency declaration) and access to the resources, skills, and knowledge to bring forward a strong evidence base and policy approach (including within the planning policy team). Other enabling factors include partnership working and information exchange with other local authorities and organisations, use of industry guidance and standards (e.g. from LETI and the UK Green Building Council) to support and justify policy approaches, and demonstrable local support.

The case studies on mitigation also identify areas where national policy and guidance could better support LPAs to achieve net zero policies, including a mechanism for carbon accounting, clarity on the weight to be given to climate change in the planning balance, and capacity for policy monitoring and implementation. These are discussed further in Chapter 3.

Adaptation

The East Riding Local Plan review and the Skegness Gateway Local Development Order (LDO) case studies highlight significant variance in local authority responses to planning for future flood risk due to climate change.

The East Riding case highlights how evidence demonstrating considerable future risk to the existing settlement of Goole has led to a reconsideration of the local authority's spatial strategy and de-allocation of land for housing in high-risk locations. In East Lindsey, comparable levels of flood risk have been disregarded by the Council in pursuit of a large-scale urban extension to Skegness through a LDO.

The East Riding case study points to some of the enablers that support pragmatic planning responses that account for adaptation to future flood risk, which rests on a culture of acceptance of flood risk evidence and decision making informed by understanding of potential risk. A strong partnership and ongoing working relationship with the Environment Agency (EA), access to up-to-date models that account for climate change, and the specific geography of the authority that allowed other options for accommodating housing growth to be considered are all influencing factors in this case study.

In contrast, the proposed Skegness Gateway LDO demonstrates that deregulatory mechanisms in the planning system provide an avenue for LPAs to circumnavigate local plans and flood risk evidence and pursue unsuitable development in high-risk locations.

Both case studies highlight challenging tensions between the need for deprived communities in vulnerable locations to secure investment and regeneration and the context of constrained housing growth due to climate change.

Whilst both the B&NES and East Riding case studies demonstrate good practice in harnessing the local planning system to address climate change, there is also a common factor in these two cases that the current system only enables authorities to go so far. In B&NES this is reflected in energy use and space heating standards set below the overall ambition of the authority, in order

to demonstrate deliverability in the medium term. The authority's intention is to bring forward more ambitious policy through a full local plan review. The adaptation case studies identify a lack of institutional capacity and powers at the appropriate level and scale to strategically plan for long term adaptation in vulnerable communities, particularly where radical measures such as relocation of settlements may be required in future. These are discussed further in Chapter 3.

Planning for climate change in the UK devolved administrations

As part of the research project, a high-level review of the legislative and policy frameworks for planning in the UK devolved administrations (DAs) was undertaken to identify key differences in the DA's national policy levers, draw comparisons and identify potential policy enablers. This section provides a high-level summary of the DA's national planning policy frameworks that influence the approach to planning for climate change at a local level.

There is significant variation in how climate change is prioritised and presented in these national policy frameworks.

Northern Ireland

The Strategic Planning Policy Statement (SPPS) contains an overarching section on Mitigating and Adapting to Climate Change with high level considerations for development to contribute to climate mitigation and adaptation. There is no specific subject policy on climate change in the SPPS, although there is a policy on renewable energy. Other policy sections reference climate change but these do not present direction or guidance on how climate change should be accounted for in local development plans.

Section RG9 of the Regional Development Strategy points to considerations and actions that support mitigation, but this does not have national policy status.

Scotland

National Planning Framework 4 (NPF4) gives a clear policy priority to addressing climate change, with emphasis on low-carbon development and sustainability. It includes an overarching policy principle that planning decisions will give considerable weight to the climate and nature emergencies and establishes a clear link between climate legislation and planning.

The spatial strategy is centred on consideration of the nature and climate emergencies and the need for a 'just transition.'[60] The strategy's approach is formed around compact urban growth, local living, sustainable transport, and national developments that include renewable energy, active travel network and nature-based flood management.

Climate change is prominent in the policy framework both through subject specific policies (the first

two within the framework), and through the presence of climate considerations through relevant policy areas.

Wales

Addressing climate change is reflected as part of the Key Planning Principles and the National Sustainable Placemaking Outcomes in Planning Policy Wales, although it is not an overarching or central objective but is reflected in objectives relating to environmental impact and making best use of resources.

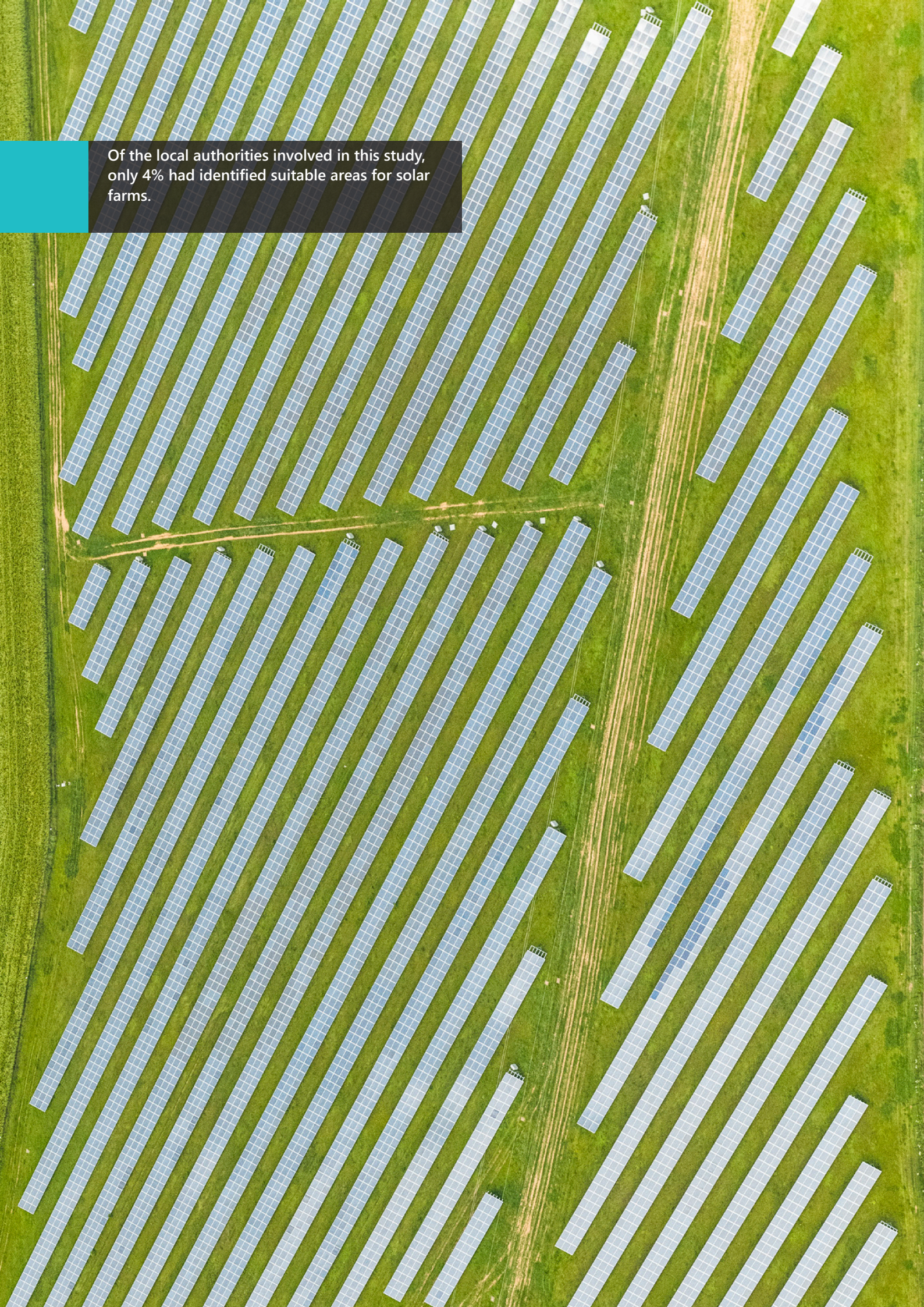
The value of placemaking and good design is central to the plan, which seeks to achieve a holistic approach to environmental, social, and economic considerations in development, including how the causes and impacts of climate change are considered. This involves the promotion of active and sustainable travel, ultra-low emission vehicles, circular economy and reuse of buildings, green infrastructure, adaptation, and protection of natural resources. The plan also promotes an energy hierarchy and use of local area energy planning to support transition to low carbon energy.

Data quality and bias

There are some risks of bias in aspects of data that have been used within the research for this project. For example, participants in the survey and workshops are likely to have been from organisations that are more focused on climate issues in planning (e.g. from 'frontrunner' authorities), and better resourced and/or motivated to engage with the research. As a result, the research may bias successful examples of practice and therefore underestimate the full scale of dysfunction in local planning response to mitigation.

Any concerns and opportunities that they have identified are likely to be relevant to all sectors of the planning profession and may have a more profound impact on organisations that are less well-resourced or proactive.

Additionally, time and resource constraints meant that we have not been able to include within the report every single comment or suggestion made by participants in the surveys and round tables, but instead have concentrated on key issues and themes.



Of the local authorities involved in this study, only 4% had identified suitable areas for solar farms.

3. Analysis of Findings

Overarching institutional and cultural issues

Overall, the research data confirms the view represented in the evidence review: that there is a major gap between the recognised potential of spatial planning as a public policy response to climate change and its actual performance on the ground.

This is a particular problem for England, although all the jurisdictions of the United Kingdom have room for improvement. The data indicates that this dysfunction has multiple dimensions. However, the root of many of these problems lies in a failure to prioritise effective national policy development and this in turn points to an institutional culture inside national government which appears to have two significant components.

First, the planning system in general is not seen as a key public policy solution but as a problem. This assumption has led to a failure to exploit the potential of planning to deliver on, for example, renewable energy deployment. The negative assumptions about spatial planning as a regulatory tool appear to be deep seated despite a lack of tangible data to support them. The effect of this assumption has been the de-prioritisation of national policy development and the absence of a holistic approach to the multiple benefits which effective mitigation and adaptation can bring to a range of other public policy outcomes including health and well-being. It has also led to major reduction in resources for the planning service, reducing the system's ability to respond to the climate crisis.[61]

The second part of this institutional culture has been a failure, represented in successive administrations, to provide specific political prioritisation for the role of planning in addressing established climate policy objectives including the net zero targets which flow from the 6th carbon budget, or to follow through the deep and wide-ranging implications of the net zero commitment. The analysis of the NPPF along with data from the survey, roundtables and case studies confirm that this lack of priority from the centre has led to a broader cultural understanding amongst the planning service in local government that action on climate change is not as significant as, for example, delivering a quantum of housing units. One high-level illustration of how that impression is transmitted is the recent technical changes to the NPPF[62] which included provision on housing and beauty but not, for example, on overheating, carbon assessment or energy performance standards, despite widespread cross sector calls for clarification in the case of the latter two issues. This aspect was also highlighted by participants in our survey and stakeholder roundtables.

> "At present there is still too much ambiguity about the priority that needs to be assigned to policies addressing climate change,

> and how this be factored into decision making on individual applications when weighed up against other priorities. This leaves a lot of the responsibility on the shoulders of local authorities whilst leaving too much uncertainty in how they can do this."
>
> **Survey respondent**

While the analysis in this section confirms that this dysfunction has a number of detailed components it is important to reflect that many of these issues result from an institutional disengagement from harnessing spatial planning tools to address climate resilience and net zero in England. Taken together this institutional culture has had a profound effect on the performance of the English spatial planning process, creating a framework which was described both through the survey and roundtables as variously out of date, confusing and unhelpful.

These overarching cultural and institutional issues also reveal themselves in how adaptation issues play out in local communities, meaning that politically uncomfortable realities are avoided rather than confronted. The case study of the Skegness Gateway proposal in East Lindsey illustrates that the current planning system provides neither the institutional structures nor the political incentives needed to support the long-term adaptation of vulnerable communities. In short, local communities cannot deal with the challenge of sea level rise in isolation or without clear enabling powers and resources from central government.

East Lindsey Council's decision to depart from its adopted local plan (and suspend progress on its review) appears indicative of a view that the local plan process, and the evidenced response to climate risk it contained, was overly onerous and constraining of local ambitions for growth, rather than a tool that could enable long term community resilience. The use of an LDO which is not independently examined and does not have to robustly address flood risk, reveals how climate change remains a distant political concern even in those areas that are most vulnerable to future climate change impacts.

Conversely the research findings demonstrate that local political prioritisation of climate change can be a key driver for local plan policy that aims for net zero and climate resilient development. However, the research reveals that where local authorities are producing significant innovation on climate change, they appear to be delivering this despite the national policy framework rather than because of it.

Survey participants shared frustration at the lack of leadership and political commitment to realising the potential of the planning system to address climate change. This also needs to be understood in the context of spending reductions for local planning, where resource constraints act as a further disincentive to plan on a long-term strategic basis, which is already a challenge as it does not align with short term political cycles. These structural, cultural, and institutional weaknesses have undermined the local planning system at all levels and provide the context in which further analysis of these challenges are discussed in the following sections.

> "The political commitment does not exist meaning that the resources and skills are often not made available. Fundamentally, politicians do not want to make decisions about housing provision that will make them unpopular with the established communities in their area. There is a basic mismatch between the statutory requirement to make plans with the expectation of these being for 15 years and more (consistent with sustainability timeframes) and the political horizons of four or five years."
>
> **Survey respondent**

Legal and policy prioritisation and coherence

The alignment of planning and climate legislation

The Climate Change Act 2008 is the basis for the UK's approach to tackling and responding to climate change, requiring that emissions of carbon dioxide and other greenhouse gases are reduced and that climate change risks are adapted to. The Act also establishes the framework to deliver on those requirements. The Act commits the UK government by law to reducing greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050. Legally binding carbon budgets act as stepping-stones towards this target.

The research data reveals a lack of both clarity and priority in planning law and national policy in relation to spatial planning and climate change, creating an unpredictable environment for local plan development. The result is a series of inconsistent outcomes, as illustrated in the Salt Cross and B&NES case studies. It also creates uncertainty in the minds of planners at the local level as to the specific actions they need to take in relation to climate change mitigation and adaptation and their scope for action. This is illustrated by the overall lack of policy content on, for example, carbon targets in local plans.

This is perhaps unsurprising since in law there is no mechanism which ties together the provisions of the Climate Act with those of the various Planning Acts. There is currently an important duty in section 19 of the 2004 Planning Act which creates a general obligation to ensure that plan policy contributes to the mitigation of, and adaptation to, climate change. This clearly signals the priority to be given to climate change in plan-making. However, the requirement is framed in general terms, does not reference the Climate Act, and does not apply to decision taking.

In discharging the duty from Section 19, local authorities should be considering paragraph 153 of the NPPF which requires LPAs to take a proactive approach to mitigating and adapting to climate

change "in line with the objectives and provisions of the Climate Change Act 2008" and support the National Adaptation Programme.

> "There needs to be better alignment of national policy and guidance with climate commitments and legislation in order to reflect the evidence that this is an urgent issue that needs to be addressed across all sectors."
>
> **Survey respondent**

The evidence review found that, when read in combination, these requirements mean that local development plans should be able to demonstrate how policy aligns with the Climate Change Act, which commits the UK to reducing emissions to net zero by 2050. This, in turn, calls for an understanding of both the baseline carbon dioxide emissions and the effect of planning policies on emissions with concomitant requirements that new development should be net zero carbon, and robust policies supporting the decarbonisation of the transport and energy systems.

However, this policy requirement is neither clearly articulated nor prioritised. It has to be assembled through reading the 2004 and 2008 Planning Acts in combination with the NPPF and planning practice guidance. The survey demonstrates that practitioners find this approach to policy wording indirect and weak.

> "Local Plans should be designed to be compatible with net zero targets, not just '*take a proactive approach to mitigating and adapting to climate change.*' Whilst NPPF footnote 53 refers to the Climate Change Act, there is some scope for interpretation about what a "proactive approach" might actually constitute."
>
> **Survey respondent**

The NPPF does not represent a logical or coherent approach to climate mitigation. The requirement to reduce emissions in line with the Climate Change Act is reflected in a foot note and not mentioned anywhere else within the NPPF. Nor are the wide-ranging implications of delivering on net zero drawn out explicitly for how local authorities should plan for new housing, transport and energy.

The evidence review found that in plans going through the examination process the duty to reduce emissions in line with the Climate Change Act was invariably not complied with or enforced by PINS. A local plan only needed to contain a reference to the Climate Change Act and the national net-zero 2050 target for PINS to find it legally compliant, with little evidence of in-depth investigation at examination as to how the plan would play its part in delivering that target and no requirement that plans itemise and quantify how they will achieve net-zero or align with the carbon budget. Analysis by CPRE[63] of 24 plans adopted since the net zero legislative commitment found that that despite a

national policy requirement that local plans should help to achieve 'radical reductions' in emissions, there was very little evidence of radical measures in practice.

Responses to the survey confirmed the same broad finding. None of the local authority respondents reported that their adopted local plan was fully aligned with the scale of emission reduction required to reach net zero, and almost a third said that their local plan was 'not at all aligned' with this target.

Figure 6: How aligned are adopted local plans with the scale of emission reduction required by local net zero targets?

Not at all aligned	**27.5%**	Mostly aligned	**7.8%**
Slightly aligned	**33.3%**	Fully aligned	**0.0%**
Somewhat aligned	**23.5%**	Don't know	**7.8%**

The survey results indicate that meaningful action on climate change at a local level would be enabled through an update of the NPPF and a purposeful statutory planning duty. The NPPF needs to set out explicit requirements for carbon accounting of local plans and demonstrate emissions reductions in line with the Climate Change Act, outlining a clear methodology for carbon handling in the plan preparation and development management process. The evidence review also found that LPAs require the power to prioritise the aims of the Climate Change Act in planning policy and have a clear remit to base planning decisions on the legally binding Climate Change Act.

The evidence review found that if addressing climate change mitigation and adaptation remains an option rather than a duty, it is at risk of dropping back off the priority list for council spending, if the political pressure to act is reduced. Without a duty, English local authorities will remain split into leading front-runners, and lagging authorities.[64]

> "Probably the main way the planning system needs to change is to give much greater weight to climate considerations in the forward planning and development control processes, recognising the existential nature of the threats and the urgency of the need to respond to them. This is not to say that other material considerations should be discarded, rather that climate mitigation and adaptation should be afforded a higher priority relative to other considerations. This is not something LPAs can resolve on their own and requires support from central government and the Planning Inspectorate"
>
> **Survey respondent**

While the lack of clarity and priority on climate mitigation in the NPPF was a repeated issue for survey and roundtable respondents, so too were specific NPPF policy requirements, most notably the 'presumption in favour of sustainable development', which instructs LPAs to grant planning permission for development when local plan polices are deemed to be 'out-of-date'. Given that around 60% of local planning authorities are currently operating without an up-to-date plan,[65] there is a risk that the presumption to approve new housing takes precedence over other national policy considerations. This presumption contains certain safeguards in relation to flood risk, but no such provision in relation to climate mitigation.[66]

> Government guidance is too weak and vague to be of any use in appeal – the 'presumption in favour of sustainable development' is all developers need to get around any low carbon requirements.
>
> **Survey respondent**

With the current agenda of planning reform and the passage of the LURB through parliament, there is an opportunity to secure the efficient regulatory alignment of the Climate Act regime and the planning system which is necessary to drive the specific actions to deliver carbon reduction targets. Clarification of this relationship between the two regimes would create greater certainty for the planning sector. It would also influence the culture of decision making by signalling a clear shift in priorities.

Another area of planning reform that the data suggests could be harnessed to support net zero and climate resilience is the proposed National Development Management Policies (NDMPs). These have potential to put net zero at the heart of national planning policy and could be put in place much more quickly than local plan reviews, although there are some concerns that NDMPs will shift further powers from local to central government.[67]

> There should be an NDMP which both mandates and defines consideration of the government's net zero duty and framework when determining planning applications, including both the direct and indirect environmental effects of developments. This could be done by defining 'mitigation of, and adaption to, climate change' in line with the statutory climate framework; thereby confirming and clarifying the net zero duty in plan making while also extending it to decision making."
>
> **Survey Respondent**

The consequences of out-of-date national planning policy and guidance

In June 2022, changes to Part L of the building regulations were bought into force, requiring new homes to achieve a 31% CO_2 reduction (based on 2013 standards). Government proposals for the Future Homes Standard mean the building regulations are due to tighten again from 2025, seeking at least 75-80% carbon reduction based on 2013 building regulations.[68] However, even with compliance to the 2025 standards, buildings will still contribute to climate change as the standard does not achieve net zero or address unregulated energy, embodied carbon or operational performance.[69] As a result, many local authorities are eager to establish more ambitious requirements for new developments to be net zero carbon, in line with their climate emergency declarations, and have been commissioning evidence and sharing best practices to support such policies.

Despite these efforts at a local level, the case studies and roundtables found that the 2015 Written Ministerial Statement[70] (WMS) on Plan Making continues to create confusion regarding whether, where, and how local authorities can exceed national standards and adopt binding zero carbon policies for new development. The uncertainty about whether such policies align with national policy is caused by outdated content in the NPPF and PPG, which constitutes poor 'policy housekeeping' whereby contradictory statements from DLUHC are considered current policy, and inconsistent interpretations from the Planning Inspectorate (PINS).

This issue is outlined clearly through the case studies on climate mitigation policies, which demonstrate the urgent need for clarity on the power of local authorities to set local energy efficiency standards that go beyond building regulations and the uncertainty facing local authorities in terms of examination outcomes. Whilst Cornwall and B&NES have had their zero-carbon building policies approved (with the WMS given less weight), Lancaster City Council and West Oxfordshire have had similar policies found unsound by PINS due to the different weight given to the 2015 WMS. Local authority survey respondents and participants of the roundtable events expressed frustration that national policy was hindering local progress and creating a significant barrier.

> "Local authorities that have developed policies for high energy efficiency standards in housing have been treated inconsistently by PINS. To challenge or remove the most forward-thinking net zero policies for energy efficient housing is nothing short of madness in an energy crisis and could result in costly retrofits being needed in the future. What's more, the justification from PINS for challenging robust net zero policies has been supposed conflict with an out-of-date 2015 written ministerial statement. The inconsistency is undermining local confidence to act decisively on net zero."
>
> **Survey respondent**

Decision making by PINS is effectively ensuring that occupants of new housing in Lancaster for example will have to spend more on their heating bills than people in similar homes in Cornwall or Bath. This has severely hampered efforts of the more proactive councils to improve the energy performance of new buildings. Clarity is required to establish the principle that building regulations and national policy are minimum standards, but local authorities are encouraged to go further where their local circumstances demonstrate this is deliverable.

Ensuring all relevant areas of national planning policy robustly secure opportunities to address climate change

The NPPF contains a range of policy with direct relevance to climate change including:

- Economic development.
- Housing provision.
- Creating development strategies and sustainability appraisals.
- Promoting sustainable transport.
- Renewable energy generation.
- Fossil fuel development.
- Conserving the historic environment.

The NPPF review revealed that the NPPF does not currently address the policy implications of meeting objectives such as the net zero commitment. The text incorporates general objectives to reduce emissions but no explicit objective targets for emission reduction nor supports policy strong enough to achieve this objective.

There is evidence of tensions[71] between economic growth, transport objectives and carbon emissions as part of the assessment of a Local Plan's soundness (with lack of explicit reference to climate considerations in the 'test of soundness') and the testing of 'reasonable alternatives', with economic growth, in practice, being prioritised over climate action.

A lack of joint working between different government departments and a disconnect between their priorities[72] means that objectives of, for example, the Department for Energy Security and Net Zero, are not always reflected in planning guidance produced and updated by the Department for Levelling-Up, Housing and Communities. This suggests that much more effective and joined up cross departmental working, as well as with local government and the devolved administrations, is required to ensure that the planning system embeds and gives priority to the UK's legally binding net zero target and the UK Government's target to decarbonise power by 2035.

National policy mechanisms can actively work against local authorities cutting emissions[73], including national policy priorities that lock-in carbon emissions, funding models that hinder low carbon choices (e.g. use of the Green Book and the Treasury's five case model), power gaps in place-based systems and entrenched or siloed decision-making that pitches low carbon options against other priorities. Additionally, key incentives to increase housebuilding, including the New Homes Bonus and the Housing Infrastructure Fund are not contingent on carbon reductions being demonstrated.

Local authorities are under huge pressure to maintain a five-year supply of housing and to ensure housing delivery, and it is a significant factor in planning decisions. Failure to demonstrate sufficient housing brings the risk of developers being able to build on land outside areas designated in the local plan. This pressure means that planners are often unwilling to push for anything seen as "extra" or "nice to have" and risk the development not being built. The 2022 NPPF consultation is proposing to introduce some flexibility on this to ease the pressure on local authorities.

> "The planning system must be reformed to ensure it plays its full part in contributing to net zero and in empowering local planning authorities to make policies and decisions in line with net zero."
>
> **Survey respondent**

Ensuring the legal duty to address climate change is not eroded through viability considerations

The research found that current rules and guidance around development viability were hampering efforts to address climate change through local planning. 65% of survey respondents quoted development viability as a barrier to achieving net zero through the planning system.

Figure 7: Is development viability seen as a barrier or enable to achieving net zero emissions (% of survey respondents)?

Barrier	**65%**
Enabler	**16%**
Neutral	**19%**

A viability assessment is a process of assessing the elements of cost in the development process from land to construction and any policy requirements or affordable homes or design standards. Viability is affected by land values (and the demand for homes) and so in low demand areas viability is more of a constraint and can normally expect to lever lower levels of affordable homes. It is accepted that where policy requirements are clear developers will adjust by paying less for land in order to preserve their profit margins. This only operates where developers are clear that such policy cannot be challenged later in the process and where there is sufficient value in the land.

Under the NPPF, viability assessments must be made at the Plan stage, so "planning applications that comply with them should be assumed to be viable". Developer returns of 15-20% are assumed, before any additional "planning obligations" or conditions are added . These conditions include factors such as affordable homes, transport infrastructure and educational provision. However, this system allows zero carbon policies and other climate adaptation and mitigation requirements to be

seen as additional policy requirements rather than intrinsic elements of design. Local Plans can only stipulate net zero aligned polices in their Local Plans if it is demonstrated through evidence to be viable and deliverable.

The NPPF requires that planning policy requirements should not make development financially unviable. The need to deliver housing to address the housing crisis is an important issue and fundamental purpose of the planning system. However, the assessment of economic viability is too narrow and too focused on short-term residual valuation factors. It does not consider the costs of retrofitting new buildings in the future to bring them to zero emissions, the negative social, health, economic and environmental externalities of un-mitigated climate change or the value created by carbon mitigation and adaptation policies, for example improved health outcomes, reduced domestic heating bills, and savings to the NHS arising from higher energy efficiency standards.

Survey respondents reported that it is often difficult for LPAs to justify any costs of climate policy requirements which might compromise the delivery of development and result in failing the five-year supply or Housing Delivery Test. Due to the influence of land and property values on viability outcomes, less affluent areas risk being less able to demonstrate deliverability of climate change policies, which could lock in higher carbon impacts and more expensive energy costs in the long term, and further exacerbate inequalities.

> “Viability tests result in limited ability to require strong energy efficiency and energy generation standards in less affluent areas like North Yorkshire.”
>
> **Survey respondent**

The assessment of viability requires reform so that the value of carbon mitigation and adaptation measures are recognised within the viability process. The factors in viability assessments need to be widened from simply the costs of development, and instead needs to more effectively factor in the value created (e.g. viability assessments could include the costs of not doing the measures which mitigate and adapt to climate change and the co-benefits delivered such as the health benefits of delivering higher energy efficiency standards).

The evidence review revealed concerns about how viability considerations impact net zero, and found calls to reform the system so that net zero becomes as fundamental a consideration when determining the viability of a project as the provision of roads and schools. In that sense the requirement for new development to be net zero might be treated like fire safety, as a baseline requirement when determining the viability of a project.

Enabling local innovation

The case studies and stakeholder workshops demonstrate that the cultural and political prioritisation of climate change at local authority level is a key enabler, and a common factor across the ‘vanguard’ local authorities that are taking forward ambitious policy approaches to climate

change in their local plans. Vanguard authorities should be supported in developing ambitious and robust climate policy, recognising their potential to create innovative pathways to a net zero future.

Ensuring development regimes and regulatory structures are in alignment with the Climate Change Act

The research found numerous areas where emissions relating to spatial land use are not assessed or regulated and escape from the system in the way it is currently configured:

- Operational emissions from development (buildings constructed to national standards will continue to emit carbon beyond 2025).
- The levels of embodied carbon in construction.
- Embodied carbon 'lost' through demolition (much of which does not need planning permission).
- Emissions arising from fossil fuel, road building and aviation proposals, including National Infrastructure Projects.
- Emissions arising from permitted development.

To play an effective role in regulating emissions from the development of land, the planning system should be reviewed to either capture these emissions or regulate them through other mechanisms. Other areas where carbon emissions appear not to be effectively counted or regulated include emissions arising from agriculture, forestry and land management. These sectors fall outside of the scope of the planning system and therefore we have not commented on them further (see Chapter 4 – recommendations for areas outside of town planning).

Guidance on specific policy actions

Plans should be assessed against local carbon budgets and a carbon accounting regime

The case studies on mitigation identify areas where national policy and guidance could better support LPAs to achieve net zero policies. This included a mechanism for carbon accounting. In the Salt Cross example, policy changes were made through examination without regard to the carbon impact of those changes. Compliance with the net zero 2050 target (and local ambition to achieve net zero by 2030) provided a strong rationale for the chosen policy approach by the local authority. However, the carbon impacts of the Inspector's proposed modifications to the policy were not quantified. The Inspectors are satisfied that the modifications 'do not change the central focus of the Area Action Plan.'[74] However, without understanding the carbon implications of policy changes, it is difficult to understand local authorities' alignment with the carbon budget.

Local plans should be able to demonstrate how policy contributes to the Climate Change Act national carbon budget target regime, and this, in turn, calls for an understanding of both the baseline carbon dioxide emissions, the effect of future development planned for in the local plan, and the actions needed to reduce emissions over time.[75] The survey revealed that a third of local authorities don't know what their baseline emissions are for their area, and only 13% were able to quantify the carbon emissions that their local plan would create.

Figure 8: Do local authorities know what the baseline carbon emissions are for their area?

Yes	**70.8%**
No	**29.2%**

Figure 9: Are local authorities able to quantify the carbon emissions their local plan would create?

Yes, we have already done this	**12.5%**
Yes, we can do this, but haven't yet done it	**25.0%**
No	**31.3%**
Don't know	**31.3%**

Carbon budgets allocated at a regional or local authority scale, derived from the overall national carbon budget, would provide the basis of robust carbon accounting through which compliance of plans and proposals can be measured against. Allocating this centrally against a national methodology would remove the risk of inefficiencies and inconsistency, in much the same way that local authority housing targets are derived from a 'standard method'.

> "The story of climate change action is a story of how collective responsibility is broken down into smaller responsibilities. We've got the international agreements, and this is broken down at national level, where there is a net zero commitment and there are carbon budgets. In order for the national objectives to be achieved, it needs to be broken down into smaller chunks of responsibilities."
>
> **Case study interview participant**

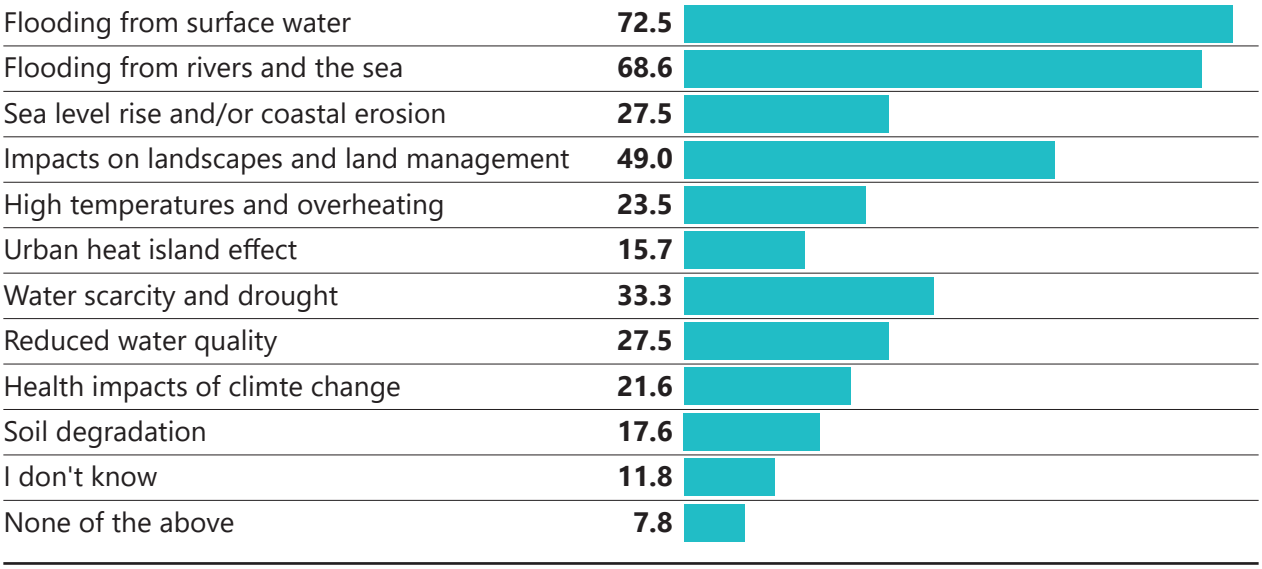
A requirement for local plans and decision making to be tested against a carbon accounting regime linked to specified carbon budgets should be included in the NPPF, with clear parameters set within the Planning Practice Guidance (PPG). This should include requirements for annual monitoring of

carbon performance in the Authorities Monitoring Report (AMR) against the carbon budget.

A framework of adaptation measures should be included in the NPPF, with clear parameters set within the PPG

The NPPF requires local authorities to ensure local plans contribute to climate adaptation. However, the survey results suggest that many of the local plans currently in production are not considering adaptation measures comprehensively. Out of all the adaptation measures, only flood risk appears to be well understood and addressed consistently. Processes, data inputs, standards and best practice are well defined for flood risk at all stages of the planning process (although the NPPF could be more directive in relation to longer term adaptation measures expected in areas of high levels of flood risk) but are more weakly defined for other aspects of climate adaptation, such as overheating and coastal change.

Figure 10: Percentage of local plans addressing identified climate adaptation themes



Participants at the adaptation roundtable felt that a requirement for local plans and decision making to be tested against a framework of adaptation measures should be included in the NPPF, with clear parameters set within the PPG so that performance can be measured against defined targets. These could create alignment between the planning system and national adaptation and resilience strategies (such as the National Adaptation Framework and the emerging Defra resilience indicators). These should present minimum standards that local authorities must adhere to as a baseline standard, with the ability to go further where local evidence indicates this is necessary. There should be a requirement for annual monitoring of performance in the Authorities Monitoring Report (AMR) against the adaptation targets.

Detailed methodologies and guidance

This section considers the research findings in terms of the adequacy of detailed methodologies and guidance from government to deliver and implement appropriate local planning strategies and policies in response to climate change.

Our review of the NPPF and other national policy levers revealed detailed methodologies and robust language in some areas of national planning policy, for example in how local authorities must plan for housing, but a lack of methodologies with clarity and detail as to how local authorities should address climate mitigation and adaptation. The evidence review, stakeholder workshops and survey revealed the same broad findings of a lack of detailed guidance and methodologies from government. Official guidance within the NPPF and Planning Practice Guidance website tends to not be detailed enough to be helpful to LPAs, nor in some cases represents current best practice (as recognised by LPAs and national planning stakeholders), nor is always kept up to date.

The following sections highlight areas where gaps in methodologies and guidance were highlighted through the research:

A national definition of net zero buildings

In the absence of clear methodologies, standards and guidance from government, LPAs rely on third-party tools or spend considerable effort and resources developing their own approaches. This places the onus on the local authority for preparing individual sets of evidence to justify climate policies, and risks leading to multifarious and inconsistent approaches and expectations across authority areas. This increases the system cost of developing robust climate policies and building zero carbon, climate adapted buildings[76] and deters planning authorities from advancing ambitious, robust policies.

The case studies reveal that tools with cross-sector backing such as guidance by LETI[77] have been used to inform net zero policies (including those recently adopted by Cornwall and B&NES), but there is appetite for a clearer and more standardised understanding of net zero buildings. The forthcoming UK Net Zero Carbon Buildings Standard[78] could form the basis of voluntary net zero policies for LPAs. However, these standards outstrip those set through Planning Practice Guidance and building regulations, which are not keeping pace with best practice.

These tools should be referenced and supported by the NPPF and PPG, in the same way that existing assessment frameworks such as Building for a Healthy Life[79] (to assess good design) are currently included.

Assessing the carbon impact of plans and proposals

To support local plans and decision making to be tested against a carbon accounting regime linked to specified carbon budgets, there should be a requirement for local plans to be supported by quantified carbon reduction evidence, and greater weight given to carbon calculator tools in the decision-making process.

The 2023 NPPF consultation proposes forthcoming consultations on a carbon assessment process, to apply to plan-making and planning applications. Such a methodology or tool is greatly needed. The Tyndall Centre Carbon Budget Tool[80] could assist LPAs in understanding their baseline carbon budgets.

> "A clear methodology for carbon handling in the plan preparation and development management process needs to be developed. It's welcome that a question on carbon accounting was included in the recent NPPF consultation but government must take a lead in developing a workable methodology."
>
> **Survey respondent**

Quantifying carbon within sustainability appraisals and/or environment outcome reporting

The evidence review found no evidence of local plans considering different spatial options for development and the lowest carbon option being chosen and there is no requirement within the NPPF to quantitatively model the carbon emissions arising from a favoured development strategy within a sustainability appraisal.

The survey stressed the need for better national guidance on how to holistically assess what spatial strategy option is the best in terms of emissions. The spatial implications of proposed growth options need to be modelled, across alternative locations and at different densities, allowing local authorities to model the carbon footprint that would be generated by new development. This would allow LPAs to understand the least carbon-intensive options for new growth in their local plan. Bioregional[81] have developed a tool which might fulfil this need.

> "Bioregional created evidence bases and policy wording for net-zero local plans for Central Lincolnshire and Greater Cambridge. As part of this extensive work, we modelled the spatial implications of proposed growth, creating a tool that allows local authorities to model the annual carbon footprint that would be generated, depending on where development takes place and what policies are applied to it. Our tool gives local authorities the ability to dial up or dial down their policy choices and rearrange the spatial distribution of the new development.

> The key takeaway is that zero-carbon policies have the potential to create a large positive impact."
>
> **Survey response from Bioregional**

The LURB includes provisions for a new kind of environmental assessment known as Environmental Outcomes Report (EOR). The intention is that EORs will replace the existing system of Sustainability Appraisals (SA), Strategic Environmental Assessments (SEA) and Environmental Impact Assessments (EIA). Consultation is ongoing as to how EORs might work in practice.

Current proposals for EOR don't appear to assess climate change impact, and it's not clear where this will be reported in local plan process. The process for assessing social, economic, health and environmental impacts alongside each other may also be removed.

It should be ensured that carbon assessment is required as part of the Environmental Outcomes Reporting regime, and that assessment of the climate implications of plan and significant decision making is made mandatory.

Assessing individual and cumulative carbon impacts of high carbon proposals

LPAs require a clearer policy framework and methodology indicating how they should assess the carbon emissions from development proposals to ensure they are compatible with the climate change act. This is a particular problem in respect of significant individual proposals which can lock in high emissions for decades, such as fossil fuel extraction and processing, aviation, and road building proposals.

Adaptation

Regarding flood risk, government guidance provides detailed methodologies, processes, data inputs, metrics and policy safeguards to enable flooding impacts to addressed reasonably competently by the planning system (although there is still scope for improvement as discussed elsewhere in Chapter 3). Additionally, the EA provides expertise LPAs can call on when needed, albeit not in respect of all sources of flooding.

In other areas of climate adaptation, including overheating and the relocation of communities, guidance is insufficiently developed. Local authorities lack clear targets, standards, or data inputs to assist in assessing vulnerability, setting policies, or assessing proposals. In respect of the relocation of communities, key guidance on when and how to relocate communities, and how to plan for them in the meantime is missing. Furthermore, outside the issue of flooding, no official competent bodies like the EA exist to give advice.

Embodied carbon

Addressing climate change through building design has traditionally focused on reducing carbon emissions from operational energy consumption. However, as buildings become more energy efficient, (and electricity generation has decarbonised), the operational carbon of new buildings will represent a smaller proportion of a buildings overall carbon impact. This means that embodied carbon will represent a higher proportion of whole life carbon[82] and become increasingly important to address in local plans to achieve net zero developments.

National policy levers make no explicit mention of embodied carbon and do not support LPAs in regulating this area. The evidence review pointed to low levels of understanding about the embodied carbon impacts of new buildings and lack of a commonly agreed approach to measuring embodied carbon emissions. As a first step, local authorities should encourage the measurement of embodied carbon emissions, based on a consistent scope and datasets. Government should also develop planning policy as to how embodied/whole life emissions should be addressed and adopt or identify preferred methodologies and targets.

National Model Design Code

The National Model Design Code[83] (NMDC) is produced by DLUHC and provides detailed guidance on the production of local design codes, design guides and design policies. It forms part of the government's planning practice guidance. The NMDC has been criticised[84] for having insufficient emphasis on the need to place zero carbon at the heart of the coding process. The NMDC mentions climate change but does not reflect the overarching nature of the issue, or the extent to which practice must change to reach net zero emissions.

The RTPI has recommended[85] that the NMDC should provide clearer guidance and templates on the systemic relationship between different aspects of sustainable design characteristics, such as energy, transport, and green infrastructure, their impact on carbon, and how they should be addressed through good design at the local level.

> "To ensure they reach their full potential as an integrative planning tool, design codes will need to support delivery of existing strategies and set out design-led development principles for topics such as green and blue infrastructure, energy, transport, carbon and land use."
>
> **RTPI 2022**

Transport decarbonisation

From June 2022, the Building Regulations[86] require all new build homes with associated parking and buildings undergoing a change of use, to install of EV charging infrastructure during construction.

New non-residential properties, such as retail and commercial builds, will also have to install charging infrastructure. Our survey identified planning support for EV charging infrastructure as a policy area where the planning system was more effective in addressing climate mitigation (although only a third of respondents thought it was effective).

Whilst National Planning Policy sets out aspirations to support walking and cycling and promote sustainable patterns of development, the objectives do not set specific targets to deliver the outcomes needed.

The NPPF does not require that local authorities' transport policies should cut or measure transport emissions arising from new development, sets no modal shift targets that local authorities should aim for and makes no commitment to constraining the growth in vehicle mileage.

Figure 11: How effective is the planning system in supporting electric vehicles and supporting infrastructure?

Extremely effective or somewhat effective	**36%**
Not very effective or not at all effective	**38%**
Neutral	**27%**

The NPPF is unclear how the carbon and climate impacts of significant proposed transport infrastructure is to be assessed (for example significant new road building or airport development) and presently offers no methodology for local authorities to follow in assessing such proposals.

The survey highlighted that there needs to be a more joined up approach between land use planning and transport planning. 'Vision-led approaches' to proposals involving transport should be supported by the NPPF and guidance, building on the work of the Department for Transport, as part of the local authority toolkit on transport decarbonisation,[87] and National Highways in Circular 01/2022.[88] The DfT quantified carbon measure should be supported in the PPG in order for it to be used as part of transport assessments of Local Plans and development proposals.

> "Rather than assuming that a high number of new car journeys are inevitable as we build the homes we need, we should start from understanding the types of communities we want and need to build, including the aim of reaching our net zero and other targets. This would lead to a much needed, more joined up approach between land use and transport planning."
>
> **Survey respondent**

Respondents to our survey commented that it needs to be possible to refuse planning permission due to lack of sustainable transport. The importance of walkable proximity (aligned with the

20-minute neighbourhood concept) needs to be embedded in national policy and guidance, which should support LPAs to measure proximity in a reliable and standardised way. This would enable local authorities to incorporate proximity as a determining factor in site allocations and determining planning applications. The TfL Public Transport Access Level[89] (PTAL) or Leeds City Council's walkability heatmap[890] could be used as templates for a robust methodology. Other areas where national guidance could strengthen the policy approach to sustainable transport include:

- 'Active travel' should be referenced and defined in the NPPF.
- Minimum density guidance to ensure development is able to support public transport and reduce walking and cycling distances to services.
- Maximum car parking standards for all new development should be introduced.

The evidence review found that decarbonisation of local transport networks is being obstructed by centralised approaches to funding and decision-making (such as the use of Web-based Transport Analysis Guidance – WebTAG - which prioritises economic considerations, particularly journey times, over emissions reductions or broader sustainability objectives and favours roads, further increasing the reliance on private transport).

> "Increasing devolution of transport funding and wider enabling powers, similar to London, is critical to enabling the coordination and delivery of transport networks that are appropriate for local areas. This would include the power to access transport funding using alternative justifications other than WebTAG)."
>
> **UK100, 2021**

Similarly, it does not appear that the current[91] or proposed[92] assessment process for significant road projects allows robust assessment of their cumulative carbon impact or considers their cumulative alignment with our carbon reduction commitments.

The Road Investment Strategy[93] sets out the government's investment plans for the strategic road network. Whilst this strategy discusses the electrification of vehicles to remove their tailpipe emissions, and the commitment to end the sale of new petrol and diesel cars and vans by 2040, it is not clear whether an assessment has been carried out of the cumulative carbon impact of the road investment strategy. In this respect, the Welsh government has taken a different approach which promises to bring road investment into closer alignment with its carbon reduction goals.[94]

Neighbourhood Planning

The NPPF states that Neighbourhood Plans can shape, direct and help to deliver sustainable development, by influencing local planning decisions as part of the statutory development plan.

There is however no reference to climate change adaptation, mitigation or the Climate Change Act in the Neighbourhood Plan sections of the NPPF or PPG or any encouragement for neighbourhood planning groups to address these considerations, who have a lack of clarity as to the extent to which they can develop climate policies.

There is a significant opportunity through neighbourhood planning to spread public understanding of the climate crisis, build consent for the changes we need, and add to national mitigation and adaptation efforts, given that over 2,800 neighbourhood plans have so far been created, many of which will be updated over the next five years.

Powers to deliver

This section considers the research findings and their implications in relation to the powers, resources and tools available to local authorities to deliver and implement appropriate local planning strategies and policies in response to climate change, in order to achieve net zero targets and secure climate resilient communities.

Planning at the right scale

The research found that the planning system in England is not operating at the appropriate scales to facilitate a comprehensive and strategic approach to addressing climate change through long term planning for development and land use.

England is the only nation in the UK without a national spatial plan or spatial expression of development priorities. Whilst the approach differs in terms of detail across the three devolved nations, each of them has a spatial expression of development priorities at a national level contained in a national policy document.

The approach to regional planning is more varied across the four nations. Northern Ireland is a two-tier system with no provisions for regional planning. In Scotland and Wales, areas for regional plans are signalled within the national plans, although these are recent documents, so preparation is in early stages. In England only a few Mayoral authority areas have a statutory requirement to produce spatial development strategies, and it is well documented that the adoption of strategic planning (outside London) since the abolition of Regional Spatial Strategies in 2010 has seen very low take up, with many efforts ending in failure.[95]

The fact that the boundaries of local authorities in England have not been reviewed since the 1960s and no longer align with functional economic and environmental geography creates a further structural flaw in the system's ability to plan strategically for climate change. This is most evident in the mismatch between LPA boundaries and, for example, EA catchment planning which limits the potential to mitigate downstream flooding through the management of upland flood catchments.

The survey demonstrated support for strategic planning to consider land use requirements beyond the boundaries of individual local authorities, and highlighted transport, large-scale renewables and

carbon sequestration as examples of issues that need to be planned for above the 'local' level.

The evidence review highlighted transport as a key issue that needs to be planned for strategically, but the complex regulatory framework makes this challenging to achieve. Potential for the expansion of franchising powers outside of Mayoral Combined Authorities may support more authorities to deliver strategic transport provision within the framework of an area-wide transport plan. Increasing transport funding through regional devolution, supported by enabling powers, has significant potential to facilitate the coordination and delivery of strategic transport networks.

> "There is a need for greater onus on regional planning to address larger scale, cross-boundary issues like large scale renewables, energy planning or water resources. These are big issues that cannot be efficiently dealt with at the local, district level alone."
>
> **Survey respondent**

The two adaptation case studies highlight how the LPA level of plan making leaves a deficit in terms of strategic consideration of the long-term viability, security and safety of communities in the locations most vulnerable to climate change impacts.

In East Riding, flood risk evidence has been given appropriate weight and has informed a change to the district's spatial strategy. The authority has developed a plan that balances the need for regeneration and meeting housing need against the risks posed by future flood risk up to 2039. However, there is no statutory mechanism to support longer term strategic planning for climate adaptation that will start to consider longer term viability of communities across the Humber region. This is not a challenge that local authorities currently have the means to address individually. The authority is also faced with the dilemma of needing to support regeneration in a context where new development is often seen as an essential springboard for securing new investment in services and infrastructure. Deprived coastal communities need an alternative, managed pathway to climate adaptation or they are at risk of a gradual retreat of new investment and dependence on upgrading increasingly expensive flood defences.

A key justification for Skegness Gateway in East Lindsey is the high level of deprivation in the town, and an underlying assumption that regeneration depends upon new development coming forward (particularly housing).[96] This is seen in the suggested interdependence of the Towns Fund proposals and the Skegness Gateway LDO, implying a reliance on infrastructure improvements bought forward through development to support wider regeneration objectives.

This presents a significant challenge to the current planning system and is cause to reflect on the stark choices facing deprived communities in vulnerable locations. Consideration must be given to the appropriate scale that climate adaptation should be planned for, and the appropriate tools, resources and powers that may be necessary to achieve the radical changes that may be required, such as investment in significant flood infrastructure upgrades or the relocation of existing settlements, which may require new delivery tools such as Resilience Development Corporations.

> We can see that within the next 200 to 300 years some settlements may have to be abandoned. Then it has to be a national programme of investment in infrastructure to enable that to happen, because it cannot be done at the district or even county level, you just couldn't do it. It's not fair on the politicians to ask them to do that, and indeed they can't, and they won't do it, because they don't want to, and they are representing their constituents who don't want it to happen either."
>
> **Case study interview participant**

The case studies also highlighted that the processes and programmes currently engaged to address climate adaptation do not have the necessary weight and consistency to meaningfully inform decision making and plan making at the local level:

- The National Adaptation Strategy is being updated, but it could be given an enhanced status in planning decision making with the same weight as, for example, the National Model Design Code.
- National planning policy could be more directive in relation to longer term adaptation measures expected in areas of high levels of flood risk.
- Shoreline Management Plans are out of date and availability of up-to-date flood risk modelling for climate change is uneven across England.
- Programmes such as Humber 2100 are non-statutory and vulnerable to under-resourcing and delay. It is also unclear what status regional adaptation strategies would have in relation to local plans and planning decisions.

Finance and resources

The evidence review found that local authorities are constrained by the architecture of government funding, which tends to be short term, poorly designed and competitive. These by their nature fail to facilitate long term and transformative investment, develop skills, and contribute to cutting emissions, and will tend to support those local authorities with more resources to access them. New funding streams must be equally accessible over the long term to all local authorities, or targeted to those evidenced to be at highest risk of climate change, to ensure a levelled up and just transition.

Strengthening the primacy of local plans

Another regulatory weakness demonstrated through the East Lindsey case study is a local authority utilising an LDO to circumnavigate the checks and balances (and consultation) of the planning process and undermine their own local plan. The Planning Advisory Service guidance on the use

of LDOs states that '*the input of development management officers is imperative to ensuring that all of the issues that would be considered as part of a planning application are dealt with.*'[97] There is an assumption here that the LDO process will be utilised in compliance with existing local planning strategies and policies, but there is no requirement to justify proposals (as would be required for a site allocation or planning application) or demonstrate their alignment with national planning policy (as would be required of a local plan or through a planning appeal).

> "LDOs are without doubt a really, really good tool for councils to have in enabling development on sites which are challenging, and perhaps might not be immediately attractive to investors and developers … It's when you use the local development order in such a way that it conflicts directly with your spatial strategy, that it becomes challenging."
>
> **Case study interview participant**

LDOs can be referred to the Secretary of State by third parties, and this may be done on the grounds that the proposals are contrary to national or local planning policy, but the system would be more effective and robust if they were checked for policy alignment prior to adoption.

Empowering local policy on climate change

As discussed earlier in Chapter 3, the confusion caused by the 2015 WMS on Plan Making provides an example of the challenges faced by local authorities when they lack the power to address climate change through their local plan policy. Survey respondents felt that powers to set targets for carbon emissions and energy use in local plans are required to ensure development aligns to local and national net zero targets.

The evidence review highlights other policy areas where enabling powers would support local authorities to address climate change more comprehensively. These include:

- Coordinating the delivery of net zero heat zones.
- Securing zero carbon (and banning fossil fuel) technologies in new and existing buildings.
- Powers to require connections to district heating systems.
- Powers to refuse consent for fossil fuel extraction.
- Powers to refuse consent for development of carbon-based energy infrastructure (where it does not align with the national carbon budget).
- Ability to set mandatory local adaptation and resilience standards.

Monitoring arrangements to support policy implementation

The adoption of net zero buildings policies in local plans is a milestone for LPAs but wider challenges

around authority resources and expertise risk undermining the successful implementation of the policy approaches. This requires knowledge of how to assess and monitor technical details of proposals for policy compliance across policy and development management functions, and stronger enforcement powers and capacity to ensure climate policies are implemented.

The evidence review found that the system of assessing, monitoring and enforcing the energy and carbon performance of buildings requires a radical overhaul to make it fit for purpose. This could be achieved (in part) through requiring developers to submit in-use energy and carbon data from new developments (for example from smart meters installed in new buildings). Participants at the stakeholder roundtables felt that authorities annual monitoring requirements could be usefully adapted to capture monitoring against climate change indicators, which in turn would help incentivise strong policies to address emissions reductions and resilience.

Case study interview participants described the current monitoring system as problematic, with the 'performance gap' a particular challenge. Clear procedures and practice, such as application checklists and developing monitoring templates may help support authorities with monitoring and implementation, but ultimately this needs to be adequately resourced alongside capacity to undertake post-construction checks and enforce on-compliance. This issue also relates to the broader skills challenge across the construction industry, and the need to ensure building practices are bought up to date with the requirements of energy efficient design.

Utilising the planning system to enable retrofit

The research also suggests the planning system could be utilised more effectively to facilitate the significant challenge of retrofitting existing buildings and infrastructure both for adaptation to more extreme climate events and to enable de-carbonisation. Retrofit programmes that are targeted for delivery alongside infrastructure and energy network developments or other upgrades and improvements could be facilitated through provision of appropriate resources and powers.

Another example of how the planning system could more proactively accommodate retrofit through planned development was shared by one of the case study interview participants, who considered that permitted development could be reviewed to capture the 'golden opportunities' of development to secure futureproofing. An example was shared of householder extensions being required to leave or create space for heat pump, solar panel or Mechanical Ventilation with Heat Recovery (MVHR) installations, to protect against household modifications making such adaptations impossible in future.

Skills and capacity in the planning service

The crisis in capacity and skills in local authority planning departments is well documented,[98] and the difficulties of navigating the considerable challenge of planning for climate change in the context of these resource constraints is unsurprisingly a key theme emerging from the research. The scale of budget cuts (estimated 42% reduction since 2010)[99] must be understood in context of the increasing policy 'burdens' on local authorities to manage, and the loss of in-house skills and knowledge needed

to support action on climate change. Planners need to be able to understand, and defend, climate-resilient and net zero aligned policies with knowledge, skill, and confidence, but there is now a lack of expertise in planning departments, very little training available, and authority officers are routinely working under such pressure that time available to develop knowledge is limited.

The research is clear that LPAs need to be resourced properly to meet the climate challenge and enable the planning system to generate more climate resilient outcomes. Skills and knowledge gaps are reported across planning functions including policy, development management and building control. A quarter of planners left the public sector between 2013 and 2020. 82% of local authorities had difficulties hiring planners in the last 12 months.[100] Lack of 'in house' knowledge in planning departments also breeds increased level of dependence on external actors to guide decisions and policy formulation on climate change topics, both at government agencies (such as the EA, which faces its own capacity challenges) and private consultants, which has cost implications for local authorities and marginalises their planners.

A long-term strategy for skills and resources is desperately needed, but this must be aligned to much clearer expectations around the role and expectations of local planning in addressing climate change (as discussed under 'legal and policy prioritisation and coherence'). Local authorities are severely hindered in seeking to identify and fill skills and resource gaps, when there is considerable uncertainty around the skills required to deliver effective local plan policy on climate change. Flowing from increased clarity on specific policy actions, a wide range of measures are required to address the crises in resources. These include greater funding to establish relevant skills within planning teams, appropriate guidance, climate literacy training of all officers involved in plan making and decision making (including planning, conservation, highways, housing and economic development), and greater education for elected members and senior council officers. The 'pipeline' of skills development also needs consideration, ensuring that training and education in relevant professions embeds knowledge of the climate change implications for planning and development.

The commitment and drive of planners remains a key enabler

Whilst there's no question the capacity issues outlined above are a significant barrier for local authorities, the research offers more hopeful conclusions in considering the significant levels of commitment, drive and ambition of planning professionals. During the stakeholder roundtable for local authorities, the shared enthusiasm and intent of officers offered a window on the potential for local planning to be reinvigorated through centralising climate change as a primary objective. This potential needs to be capitalised on through a long-term strategy for funding, resourcing, and securing skills for local authority planning departments to address climate change.

> "We are a small local authority but the authority's brought in extra staff in order to specifically deliver planning policy for climate change, so that the skills and capacity are there. We are really lucky in that. And we are also really lucky in that we have a significant lead member and chief exec leadership in terms of

> climate change, and a really strong cross-service climate hub which supports each other and has been really supportive in the delivery of climate policy."
>
> **Stakeholder roundtable participant**

Shared resources and partnership working

The research, both through the case studies and the stakeholder roundtables, revealed that networks of partnership and information exchange act as enablers for local authorities working to establish ambitious climate change policies in local plans. This is happening both through formal regional structures (such as combined authorities, regional climate commissions, net zero hubs and shared planning services), and informal connections between authorities.

Through these networks, B&NES were able to utilise technical expertise from supporting organisations (such as the South-West Net Zero Hub) and evidence developed elsewhere (including for the London Plan and Cornwall Climate Emergency DPD). This demonstrates the importance of the 'frontrunner' councils sharing learning and resources and suggests an opportunity for more formalised structures to support local authorities develop robust net zero planning policies. This could be particularly important to help bridge the gap between local authorities that have prioritised (and resourced) climate change, and other authorities facing challenges in relation to access to expertise and resources. This could also offer an opportunity to feed learning and best practice back to central government to inform national policy and guidance. Local authorities expressed particular interest in a central repository of up-to-date policy, evidence, and implementation advice.

There is also potential to bring together local authorities to pool resources and draw on shared evidence and information (e.g. modelling energy efficiency for common housing typologies), which could be selected to reflect local circumstances. This would need to be supported by more localised evidence responding to individual circumstances and policy priorities, but for initial evidence could provide efficiencies across authority boundaries.

Awareness, training and empowerment of other stakeholders

Targeted training on specific climate change policy issues for Planning Inspectors

PINS is a key stakeholder in the English planning system. One of its core roles is to examine and approve local plans developed by LPAs and make sure that they are compliant with national planning policies. Inspectors examining local plans are independent and impartial. When considering the consistency of a local plan's proposed policies with national policy, the Inspector must take account of the evidence presented in that individual case and reach a conclusion on that basis.

The research reveals that PINS is seen by many authorities as a barrier to implementing climate change and net zero emissions policies. But, as the independent 'regulator' of local plans, they also represent a significant potential enabler. A common area of concern from the research is the perceived lack of understanding of climate change at PINS, demonstrated by the conclusions of Inspectors at local plan examinations (with some survey respondents commentating that PINS does not have a firm grasp of what is necessary to achieve net zero emissions), and the priority that appears to be given to climate change. This has manifested in two major ways: a general lack of challenge from Inspectors over the climate policy content of Local Plans, and an inconsistency of approach at local plan examinations, such that it would be a 'matter of guesswork for a council to steer a policy successfully into place.'[101]

In a review by CPRE[102], none of the councils studied were required to carry out substantive modifications to their local plans to ensure they achieved radical reductions in greenhouse gas emissions, and only one plan contained a quantified, strategic policy to achieve the council's net zero carbon target, suggesting a light touch and less rigorous approach to examining this topic by PINS compared to other policy areas, such as housing. This report also highlights examples of PINS watering down and modifying progressive climate change policies, as with the Salt Cross example.

> "Local authorities are wary of the threat of legal challenge, this means to make confident use of their powers, they have to undertake rigorous legal checks, which slows delivery, adds expense and makes some of them risk averse."
>
> **Climate Change Committee, 2020**

It is crucial for PINS to lead the way and be an enabler rather than a barrier in relation to net zero when examining local plans. They should be proactive and support LPAs who are developing net zero policies and enable them to be included within local plans, rather than LPAs having to fight for their inclusion at every examination. They should furthermore ensure that all local plans meet statutory duties around climate mitigation and adaptation. Plans which fail to meet these tests should be found unsound.

The research suggests that the 'knowledge and skills gap' seen at LPAs extends to Planning Inspectors. The government should ensure that Planning Inspectors are resourced adequately to support LPAs through local plan examinations and to process applications faster, including having access to training in climate change and net-zero buildings and planning policy. This will help in the implementation of net-zero policies and ensure that local authorities and Planning Inspectors have the knowledge and resources to implement ambitious targets to reduce carbon emissions.

Climate change awareness at Senior Officer and Council Leadership level

There is plenty of regional, local and community will and ambition to act on net zero. More than 300 local authorities have set a net zero target and/or declared a climate emergency, including 182 with targets of 2030 or sooner[103], which is far more ambitious than the UK's 2050 date. The

case studies demonstrated that a climate emergency declaration, as an expression of political and corporate support, was an enabling factor that allowed B&NES to establish net zero planning policies in their local plan.

Often, local leaders are best placed to engage with communities and businesses on net zero, to understand the challenges and opportunities their areas face in transitioning to net zero and delivering locally tailored net zero and climate resilience interventions. The importance of this relationship is apparent when it is estimated that 30% of the greenhouse gas emissions reductions to reach net zero rely on local authority involvement, and 82% of emissions are within local authorities' scope of influence.[104]

However, local authorities currently face a lack of clarity over their role, a disjointed and short-term approach to funding, and require further support to build the capacity and capability needed locally to deliver a successful transition. While there is considerable momentum at local government level, there is a lack of shared understanding of where these good intentions would be most effectively directed.[105]

The Independent Review of Net Zero[106] concluded that government must coordinate and place trust in local leaders and communities, to deliver a place-based, place-sensitive, locally led transition to net zero, and galvanise the ambition of communities and ensure they feel the economic and social benefits of action on climate change. To do so needs a reformed relationship between central and local government and a planning system that is fully aligned with net zero.

Not all local authorities are at the forefront of climate action. There are still some local authorities that have not declared a climate emergency. Almost a third of local authorities who responded to the survey declared that their local plan was "not at all aligned with the scale of emission reduction required by their local net zero targets". Putting the climate emergency at the heart of everything local authorities do is crucial to address climate change, and some local authorities will require a change in culture to achieve this goal. The roundtables identified that even in 'frontrunner' authorities, the prioritisation of climate change from local authority leadership was a key enabler. Climate literacy training for senior leadership is recommended for every local authority, ensuring that those with the most power and influence have a shared understanding of the causes and impacts of greenhouse gas emissions, and a shared vision for tackling it, and that the prioritisation of climate change is embedded within local authority corporate strategies and local plans.

Embedding climate adaptation and mitigation responses across local authority functions

Embedding climate adaptation and mitigation responses across local authority functions is needed to achieve joined up approaches. If this does not happen, then different local authority departments have the potential to become barriers to achieving net zero. For example, the survey highlighted Local Highways Authorities as being a potential barrier if their functions are not aligned to that of the LPA.

> "Although we have proactive policies to enable the delivery of modal shift options, there isn't enough stimulus or incentive beyond the planning system to bring about effective change. Highways Authorities are nowhere near visionary enough to see past the car as the transport of choice, and rarely encourage innovation."

Survey respondent

> "Proactive Highways Authorities who were supportive of prioritising sustainable transport would help with modal shift to sustainable and active alternatives. This is easier in a Unitary Authority and needs more emphasis and join up in two-tier authorities."

Survey respondent

Specific local authority skills gaps identified in the evidence review include housing energy efficiency retrofit, low carbon heating, and low carbon transport and decarbonisation. Aside from planners, training (including climate literacy) of highways, conservation, housing and economic development officers has been highlighted as crucial to achieve this joined up approach. Conservation officers have a particular opportunity to proactively support emission reductions in historic and traditional buildings and to signpost homeowners to appropriate advice.

> "Listed buildings are often refused consents when wanting to 'go green'. There will be no point in protecting the heritage of a building if it is unusable due to climate change. At the moment, policy is heavily weighted towards the heritage of a building or area. This should be amended to include a focus on climate impacts including retrofitting and renewables."

Survey respondent

Local Area Energy Planning[107] (LAEP) is seen as one corporate response to climate change which has the potential to bring local authorities and other stakeholders (such as Distribution System Operators and transport stakeholders) together to understand how spatial planning and infrastructure plans overlap and interact.

LAEP's can support investment decisions by identifying a set of feasible decarbonisation pathways for an area and can act as an accelerator for the zero-carbon transition by increasing confidence in

the 'direction of travel' for network infrastructure. Innovative concepts such as 'smart' local energy systems can also play a role in unlocking opportunities through a better understanding of local systems and decarbonisation options.

> "Many areas want to undertake Local Area Energy Planning, an approach that aims to identify the most effective route for an area to decarbonise its energy supply, which can be a foundational building block for net zero plans however, there is currently a lack of guidance from central government on who should undertake this planning and how."
>
> **Rt Hon Chris Skidmore MP, 2022**

Working jointly to address flood risk

The NPPF is clear that development should be safe from flood risk and coastal change for its lifetime. Evidence on climate adaptation should reflect these time horizons (planning practice guidance defines development lifetimes as 75 years for non-residential and at least 100 years for residential development). Spatial planning (often conducted in England through Local Plans that look ahead to a maximum 15-year time horizon) must be more capable of longer-term thought processes.

There is no one agency responsible for all sources of flooding which is a practical barrier to climate adaptation. Therefore, data and evidence on flood-related climate impacts, which is dynamic (i.e. risk and vulnerability will change over time in relation to flood plains), must be drawn from a wide variety of sources and bodies, not just the EA,[108] and relies on effective joint working. These include strategic flood risk assessments, flood risk management plans, shoreline management plans, coastal erosion data, surface water management plans, natural flood management maps, drainage and wastewater management plans, river basin management plans and local water cycle studies. Due to the demanding nature and geographical extent covered by much of this data, regional and sub-regional strategic planning should play a supportive and coordinating role in its collation and dissemination, reducing the risk of LPAs duplicating or recommissioning evidence that already exists, and saving precious resources.

Much of this information is technical in nature, and not all is accessible to the public. It is vital that planners are aware of regular updates to the climate science (such as climate change allowances in relation to flood risk) and are empowered to make full use of existing online tools and knowledge partnerships. All parties should seize the digital opportunity to make this evidence accessible to the public. LPAs should then use this evidence to assess options and then develop policies that are consistent with achieving carbon reduction targets.

The evidence review identified areas where a case could be made for expanding powers over land uses to deal with climate change, one example being how planning could be positively used for

upland catchment planning to integrate the regulation of land uses in order to reduce flood risk and build resilience. This would require the expansion of control over agricultural land use and forestry and is particularly relevant to places such as Cumbria or the vulnerable coastal strip from the Humber to the Thames.[109]

Community empowerment and support

Ensuring an inclusive and just transition to net zero is a pervasive challenge, aiming to address inequality and prevent leaving people behind. Research[110] consistently shows that climate change impacts disproportionately affect vulnerable populations who contribute less to carbon emissions. Tackling the root causes of climate change can serve to further climate justice and equality. However, the transition to a net zero built environment has the potential to worsen inequalities depending on who can access and benefit from these changes. The recent energy crisis, for example, has highlighted the urgent need to address fuel poverty. Public engagement and equity are long-standing concerns for planners, but the imperative for climate change makes them even more crucial.

The NPPF expects the planning system to be genuinely plan-led through the creation of up-to-date local plans. These are meant to provide a positive vision for the future of each area; a framework for addressing housing needs and other economic, social, and environmental priorities; and a platform for local people to shape their surroundings. Importantly, plans should be shaped by early, proportionate, and effective engagement between plan makers and communities, local organisations, businesses, infrastructure providers and operators and statutory consultees. The government considers that effective engagement (often also referred to as participation) is essential for achieving high quality, beautiful and sustainable buildings and places.[111]

The reality is that many communities have little or no knowledge not only of the planning system but of the real opportunities that exist to make places better.[112] Opportunities to influence the planning process are, for most people, limited, which raises questions as to how democratic the planning system really is. There are multiple disincentives to participate in planning, most notably the requirement for a measure of technical expertise, knowledge, and resources, including the ability to communicate in the highly specialised and technical language of planning. People must have the right skill set and have access to resources such as time, the internet and (if they are to enlist qualified support) funding. Individuals need to feel they are likely to have a sufficient influence on the decision-making process to make up for the high costs of engagement. In other words, they need to feel a 'return'. [113]

The research has indicated support for de-escalating the planning system from its adversarial and legalistic way of operating and be much more conducive to citizen involvement in meeting the challenges.

> "There needs to be a greater focus on engaging the public and helping them to engage with these issues. Ensuring that the community is brought alongside the planning process as it

develops and feels meaningfully engaged rather than having the process 'done to them' will be critical to success. Local authorities need to take a collaborative approach to planning - working with the key stakeholders in order to ensure buy in."

Survey respondent

The Salt Cross case study shows that net zero standards for new development are becoming a key aspect of community acceptance of development. This could provide a helpful incentive for developers and LPAs seeking to engage with communities and achieve support for proposals for new development and provide a mandate for action. Similarly, the B&NES experience demonstrates the importance of community support, where the presence of local groups in support the policy approach at examination supported the Council. Place-based action on net zero will not only lead to more local support but can deliver greater economic and social benefits at lower cost.

" Support for the policy was expressed by representatives of two local action groups and one Parish Councillor. Their statements centred around the issue of community support, highlighting that initially there was much local opposition to the allocation of land for the garden village development, but once allocated the community had engaged with the Council to shape proposals. The local desire for the garden village to be an exemplar in terms of environmental performance was very strong and was part of the narrative that had led to more acceptance of the principle of development."

Salt Cross case study analysis

Empowering people with the skills to make their case must go hand in hand with enhancing their knowledge of the challenges and opportunities which will shape the future. New technology could transform the way that people engage with the planning system, by giving them better access to information and providing new tools to help create and express community visions. However, capitalising on these new technologies is a major challenge in the context of local authorities no longer having the resources to fund community development activities and local community hubs, and funding being reduced or stopped for key services designed to offer help to those who cannot afford to pay for advice, such as Planning Aid. Resources for Neighbourhood Planning do exist, but this is only one part of the planning system.

Local authorities could address climate change more comprehensively if they had the power to require appropriate developments to be connected to a district heating system.

There is a need for greater onus on regional planning to address cross-boundary issues including the management of water resources for natural flood management.

4. Recommendations

The recommendations of this report are founded on an assumption, supported in the evidence review and by international best practise, that effective planning is crucial to tackling the climate crisis. This is primarily because the system represents a spatial approach to the multiple and complex actions necessary to transform our built environment and energy systems and embed adaptation measures. It does this in a localised and democratic context by both creating an opportunity for planned approaches to development and acting as a gateway consent mechanism for the multiple responses to climate change identified in, for example the climate change risk assessment process.

Based upon the analysis in Chapter 3, the recommendations reflect two very different orders of actions which would need to be taken to secure effective responses from the planning system. The first set (recommendations 1-7) relate to systemic change to the system surrounding political prioritisation and professional culture change which are crucial in securing lasting change in a highly centralised planning system. The second set of recommendations (8 onwards) relate to specific measures designed to address a range of problems from policy objectives to clarity around data and methods to the skills and morale of the planning service. The recommendations are expressed in the relation to the six analytical themes described in Chapter 3 and include an indication of the time scale necessary for their implementation.

The case studies on climate mitigation demonstrate how unclear guidance from the centre (such as the 2015 WMS on Plan Making) can delay and deter robust climate action by local authorities, in this case the creation of binding zero carbon standards for new development. Equally within a centralised system, a clear vision of how the planning system should address climate change, clear and ambitious guidance from the centre and easily deployable methodologies and standards can rapidly accelerate action on the ground.

The table below presents the recommendations categorised by their response to overarching cultural and institutional issues and the six themes addressed through Chapter 3 of the report:

1. Legal and policy prioritisation and coherence.
2. Guidance on specific policy actions.
3. Detailed methods and guidance.
4. Powers to deliver.
5. Skills and capacity in the planning service.
6. Awareness, training and empowerment (stakeholders).

Ref.	Recommendation	Timescale	Stakeholders
Legal and policy prioritisation and coherence			
1	Legislative changes to ensure the Town Planning Acts are in full regulatory alignment with the mitigation and adaptation actions which flow from the Climate Change Act. This would include the relevant carbon budget and the adaptation requirements which flow from Climate Change Risk Assessment (CCRA) process.	Medium term	DLUHC
2	Consistent alignment of planning policy and decision making with the legislative framework for tackling climate change, including the net zero duty. The NPPF should: • Be reviewed to set out a clear vision for net zero and ensure all relevant areas of national planning policy robustly secure emissions reductions in alignment with the Climate Change Act and more explicitly reference Schedule 19 of the Planning and Compulsory Purchase Act 2004. • Make clear the primacy of the local plan in relation to other planning policy tools such as LDOs and require that local plans be kept up to date and reviewed every five years. • Make clear the primacy to be afforded to climate change in plan making and decision making. • Enable spatial planning at strategic geographies that reflect climate mitigation and adaptation challenges. • Include explicit requirements for carbon accounting of local plans and demonstrating emissions reductions in line with the Climate Change Act and national Carbon Budgets. • Set out explicit requirements and expectations for local plans to achieve specific climate adaptation targets and transition to a net zero future. • Include reference to reducing carbon emissions and supporting climate adaptation in the definitions of the test of soundness and sustainable development. • Be clear that national policy and standards on climate change are a minimum baseline and enable local authorities to set more ambitious targets where this is justified. • Remove existing restrictions for onshore wind deployment.	Medium term	DLUHC, SoS

Ref.	Recommendation	Timescale	Stakeholders
3	The 2015 Written Ministerial Statement on Plan Making should be revoked immediately and replaced with a statement which confirms that planning authorities can set energy efficiency targets that go beyond those set within building regulations.	Short term	SoS, DLUHC
4	Ensure good 'national policy housekeeping' – ensuring that the NPPF and PPG are kept up to date to reduce uncertainty for local planning authorities and the planning inspectorate.	Short term	DLUHC, PINS
5	Reform the viability process so that net zero becomes a baseline requirement when determining the viability of a plan or project.	Medium term	DLUHC
6	Ensure development regimes (e.g. National Policy Statements for Energy, Aviation and National Networks, Permitted Development Rights, investment zones, freeports and Local Development Orders) and regulatory structures are in alignment with the Climate Change Act to ensure all carbon emissions associated with the use of land are captured / assessed by the statutory planning system or other regulatory regimes and ensure that carbon assessment is required as part of the forthcoming Environmental Outcomes Reporting regime. These regimes should also be reviewed to ensure consideration of climate adaptation.	Medium term	DLUHC
Overarching institutional and cultural issues			
7	Embed knowledge of climate change and spatial planning in the decision-making culture of all government departments at officer and ministerial levels and ensure that cross government working delivers effective and joined up adaptation and mitigation responses.	Short term	DLUHC, DESNZ
Guidance on specific policy actions			
8	The government should disaggregate the national carbon budget to local authority scale, providing local planning authorities with the evidence and methodology through which compliance of plans and proposals can be measured.	Medium term	DLUHC, DESNZ
9	Local plans and decision making should be tested against a holistic framework of adaptation and resilience measures, incorporated into the NPPF, with clear parameters set within the PPG so that performance can be measured against defined targets.	Medium term	DLUHC , Defra, Environment Agency, Natural England,

Ref.	Recommendation	Timescale	Stakeholders
Detailed methodologies and guidance			
10	A national standardised definition of net zero buildings should be incorporated into the PPG. The forthcoming UK Net Zero Carbon Buildings Standard should be approved to be used where appropriate.		
11	Stronger Planning Practice Guidance to support local authorities with plan making for climate adaptation and mitigation is required in specific policy areas, including: • Sustainability appraisal. • Embodied carbon. • Operational emissions. • On-site renewables. • Resource efficiency. • Allocation of land for adaptation measures. • Housing typologies and net zero requirements. • Onshore wind (inc. demonstrating community support). • Food production and farming. • Battery storage. • Local area energy plans.	Short term	DLUHC, Local authorities, Developers, PINS, Environment agency
12	Other nationally prescribed methodologies that inform and influence local planning need to be updated to properly account for (and prioritise) climate change considerations, so that external agencies are not undermining local efforts to drive climate focused plans. This includes transport modelling approaches (e.g. WebTAG) and guidance to enable transport decarbonisation .	Medium term	DfT, National Highways, Treasury
13	Harnessing the potential of design codes and neighbourhood planning to address climate change by updating the NMDC and Neighbourhood Planning guidance to reflect climate change as the central objective and reflect ways that design considerations can enable mitigation and adaptation.	Medium term	DLUHC, LGA

Ref.	Recommendation	Timescale	Stakeholders
Powers to deliver			
14	The current legal and policy framework requires new tools to secure multi-agency responses to address significant adaptation challenges and enable spatial responses to climate mitigation at the appropriate scale, including: • Statutory mechanisms to secure appropriate weight for national and regional adaptation planning. • A statutory mechanism that reintroduces a requirement for spatial planning at strategic geographies that reflect climate mitigation and adaptation challenges. • The introduction of resilience development corporations to support long term adaptation of the most vulnerable communities . • Upland catchment planning to integrate the regulation of land uses in order to reduce flood risk and build resilience.	Long term	DLUHC, Defra, Environment Agency
15	Empowering local policy on climate change by creating enabling powers for other policy areas which would support local authorities to address climate change more comprehensively. These include: • Coordinating the delivery of net zero heat zones. • Securing zero carbon (and banning fossil fuel) technologies in new and existing buildings. • Powers to require connections to district heating systems. • Powers to refuse consent for development of carbon-based energy infrastructure.	Medium term	DfT
16	Embed policy support and enablers for retrofit into the NPPF and permitted development rights (e.g. future proofing homes for boiler replacement, energy efficiency, clearer guidance for historic buildings).	Medium term	DLUHC
17	Stringent annual monitoring requirements for climate indicators as part of the Authorities Monitoring Report (AMR).	Medium term	DLUHC, LPAs, Developers
Skills and capacity in the planning system			
18	A long-term strategy for funding and resourcing and securing skills required for local authority planning departments to address climate change is urgently required, enabling delivery of updated national policy and guidance through up to date local plans.	Long term	DLUHC, LPAs

Ref.	Recommendation	Timescale	Stakeholders
19	Establish a national platform to bring together shared learning, data, resources and information exchange on net zero and climate resilience planning policy and implementation. The national platform should provide a framework to support regional net zero hubs, which could provide the mechanism for sharing practice at a localised level.	Short term	Local authorities, National umbrella and advocacy organisations, Net zero hubs, Regional climate committees
Awareness, training and empowerment of other stakeholders			
20	Targeted training on specific climate change policy issues for key stakeholders including Planning Inspectors, senior council officers and council leaders. The PINS Knowledge Library, including the Inspector Training Manual, should be kept up to date (prioritising sections on zero carbon housing standards) and aligned with Climate Change Act requirements and any changes to the NPPF and PPG related to climate adaptation and mitigation.	Short term	PINS, Combined authorities, County councils, LPAs
21	Embed and align climate adaptation and mitigation responses across local authority functions to achieve joined up approaches. This is required to ensure that all local authority departments (e.g. planning, transport, conservation) prioritise addressing climate change, and don't become barriers to achieving net zero or climate adaptation.	Short term	Combined authorities, County councils, Local authorities,
22	Improving public engagement with the planning system, empowering people to engage with climate change issues. Ensuring that the community is brought alongside the planning process as it develops and feels meaningfully engaged will build support and be critical to success. Local authorities and other general planning advisory services will require adequate resourcing to enable this to happen successfully. New technology could be used to transform the way that people engage.	Medium term	DLUHC Local authorities Private sector

Recommendations for areas outside of town planning

This report examines the barriers and opportunities to incorporating climate mitigation and adaptation measures in spatial planning at the local authority level in England. Our analysis has revealed carbon emissions associated with the use of land which fall outside of the town and country planning regime, but which also appear to fall outside regulation through other mechanisms. We also identified regulatory processes which could contribute more to emission reduction. These areas were outside of the scope of this research, but the analysis suggests that further work should be undertaken to ensure their activities and outputs are compatible with net zero targets:

	Regulatory regime, system or body	Further research or change suggested
1.	Marine Planning Regime and fossil fuel licensing regimes	Offshore fossil fuel proposals and extraction licences should be carbon audited and demonstrate emissions reductions in line with the Climate Change Act. The roles and objectives of fossil fuel licencing bodies should be revised where they do not adequately reflect the commitments made in the Climate Change Act.
2.	Defra	The regulation of emissions arising from agriculture, forestry and land management.
3.	National Highways, Road Investment Strategy, National Infrastructure Planning	Highways England should have a duty to support transport decarbonisation and modal shift, like the duty being given to Ofgem in regulating the energy market. New road building proposals should be carbon audited and the road investment strategy should be consistent with the Climate Change Act.
4.	Listed Building legislation	The Listed Buildings and Conservation Areas Act 1990 should be updated to include a reference to the Climate Change Act.
5.	Electricity Grid	Accelerating the decarbonisation of the grid by supporting decentralised energy generation at all scales is key to reaching net zero. Enabling planning policy changes are required to achieve this, as discussed elsewhere in this document (e.g. a more permissive regime for onshore wind). Other changes are required, outside of the planning regime, including accelerating grid reinforcement so that it has capacity to enable renewable projects to connect in a timely manner consistent with the national target for decarbonising the power system by 2035, subject to security of supply.

National Planning Policy does not require local plans to measure transport emissions arising from new development or to set specific targets to more sustainable transport modes.

5. Conclusions

The spatial planning system has the potential to be a key public policy solution in implementing the wide range of complex actions necessary to mitigate and adapt to climate change. It is the only regulatory system capable of addressing the spatial components of climate mitigation and adaptation.

However, this report has found a significant gap between what is conceptually possible in planning for climate change and what is actually done in English town planning. This is because, on the one hand, the technical solutions to mitigation and adaptation are becoming more sophisticated and effective, and on the other, that the English planning system lacks the policy direction, skills, and capacity to respond. This in turn relates to deep rooted cultural orthodoxy that planning is a barrier rather than an enabler in meeting the climate challenge.

Part of the planning system's current dysfunction relates to a failure to clearly bind together the provisions of the climate and planning acts so as to provide a mutually supportive regime of both target setting and delivery. National planning policy also fails to set out a clear vision for net zero or explore the full policy implications if the net zero commitment is to be met. As a result, planning decisions routinely prioritise other considerations ahead of climate change.
Furthermore, the removal of regional spatial planning, deregulation and the expansion of PDR has eroded the capability of the planning system to address climate mitigation and adaptation issues consistently and competently.

To close this gap, we need to recognise that spatial planning is a regulatory gateway through which much of our built environment must pass, from new and expanded communities to renewable energy projects. Consequently, it offers an opportunity to disaggregate our national carbon budget to local areas, ensuring that the emission reductions we have committed to nationally, occur geographically across the country and that all policies, plans and development proposals are compatible with this commitment. It also offers an opportunity to review PDR and deregulatory processes, to ensure that development should only be exempted from regulation if it is zero carbon, sustainably located, and climate adapted. It can also ensure that appropriate adaptation strategies are implemented which reflect the nation's complex geography and diverse communities.

This research found considerable enthusiasm amongst the planning profession to fulfil this role as well as examples of local plans which seek to achieve much of this ambition. However, it also reveals that where local authorities are producing significant innovation on climate change, they appear to be delivering this despite the national policy framework rather than because of it.

Spatial planning can offer a complete vision of a zero carbon and resilient future which applies the proven solutions we have on energy, transport, flooding, and heat resilience. It can do this holistically in order that we can all live more sustainable lives, by being a coordinator, integrator, and mediator of the spatial dimensions of wider policy streams that combine to address climate change. It is one the few processes where people have a real chance to shape their own future

as it is both democratically accountable and has powerful opportunities for direct participation. Ultimately, planning can help us ensure that all our future development is fit to take its place in a resilient and net-zero emissions future.

6. Endnotes

1 *National Planning Policy Framework - Glossary. MHCLG, 2021 (gov.uk)*.

2 Ibid.

3 RTPI and TCPA, 2023.

4 *Building Act 1984 (legislation.gov.uk)*

5 *Planning Act 2008 (legislation.gov.uk)*

6 TCPA, 2018 and TCPA, 2020

7 *Town and Country Planning Act 1990 (legislation.gov.uk)*

8 *https://www.gov.uk/government/statistical-data-sets/live-tables-on-planning-application-statistics*

9 Stringer v MHLG [1970] 1 WLR 1281 [1970].

10 *National Planning Policy Framework - 3. Plan-making - Guidance - GOV.UK (www.gov.uk)* (Paragraph 35)

11 *Consultation and pre-decision matters - GOV.UK (www.gov.uk)*

12 *Decarbonisation of the power sector - Eleventh Report of Session 2022–23*, House of Commons Business, Energy and Industrial Strategy Committee. (Paragraph 33).

13 *Planning_Application_Statistics_-_October_to_December_2022_-_Factsheet.pdf (publishing.service.gov.uk)*

14 *Planning applications statistics (www.gov.uk)*

15 *Lichfields, 2022*

16 *Lichfields, 2023*

17 *Planning for the future. MHCLG, 2020 (publishing.service.gov.uk)*

18 *Planning for the future. MHCLG, 2020 (publishing.service.gov.uk)*

19 *Comparison of the planning systems in the four UK countries*. National Assembly for Wales, 2016.

20 The TCPA's work with FloodRe has illustrated just how significant the current regulatory failure in planning on climate adaptation are to both the insurance and banking sectors.

21 *GRaBS - Adaptation for urban areas (grabs-eu.org)*

22 Spatial Planning for Energy in Communities of All Landscapes (*https://ectp-ceu.eu/pan-european-guide-special/*)

23 *www.bankofengland.co.uk/climate-change*

24 Rt Hon Chris Skidmore MP, 2022.

25 *Gross value added of the construction sector in the United Kingdom from 1990 to 2022*, Statista.

26 ONS, 2022. (*ons.ogv.uk*)

27 *UK Climate Projections*. Met Office, 2018.

28 *The Sixth Carbon Budget - The UK's path to Net Zero*. Climate Change Committee, 2020.

29 Ibid.

30 Rt Hon Chris Skidmore MP, 2022.

31 *A Net Zero workforce*. Climate Change Committee, May 2023.

32 Rt Hon Chris Skidmore MP, 2022.

33 *Levelling Up and Regeneration Bill: reforms to national planning policy*. DLUHC, December 2022.

34 Planning Practice Guidance (*gov.uk*)

35 *Report on the Examination of the Local Plan (Core Strategy and Placemaking Plan) Partial Update*. Planning Inspectorate, December 2022.

36 *Topic Paper: Zero Carbon Construction*. Bath & North East Somerset Council, August 2021.

37 Report on the Examination of the Local Plan (Core Strategy and Placemaking Plan) Partial Update (para 85). Planning Inspectorate, December 2022.

38 *Salt Cross Garden Village Pre-Submission Draft Area Action Plan (AAP)* (Pg. 145). West Oxfordshire District Council, August 2020.

39 Oral statement by Charles Banner QC, on behalf of Grosvenor Developments, 6 July 2021.

40 Ibid.

41 *Note outlining main modifications required*. Mr Darren McCreery and Mr David Spencer, Planning Inspectorate, May 2022.

42 *Report on the Examination of the Local Plan (Core Strategy and Placemaking Plan) Partial Update* (Para 84). Planning Inspectorate, December 2022.

43 *Report to West Oxfordshire District Council*. (Para 124). Planning Inspectorate, March 2023.

44 Ibid. (Para. 131).

45 *East Riding of Yorkshire Council Strategic Flood Risk Assessment Level 1*. Jacobs, January 2010.

46 *East Riding Local Plan Strategy Document* (Policy S3). East Riding of Yorkshire Council, 2016.

47 *Strategic Flood Risk Assessment: Level 2: Goole*. Capita, July 2021.

48 Ibid.

49 *Report to Cabinet meeting of East Riding Council Item 5* (Pg. 49). East Riding of Yorkshire Council, 20 April 2021.

50 *East Lindsey Local Plan Core Strategy* (Page 90). East Lindsey District Council, July 2018.

51 *Issues and Options Consultation Document.* (Page 4). East Lindsey District Council, 2021.

52 Ibid.

53 *Skegness Gateway Local Development Order Statement of Reasons* (Para. 87) East Lindsey District Council, November 2022.

54 *Environmental Statement to accompany a Local Development Order* (Para. 10.6.33). Robert Doughty Consultancy, November 2022.

55 Ibid. (Para. 10.6.35).

56 Ibid. (Table 10.7).

57 Ibid. (Para. 123).

58 For example, *see press release here*.

59 *Skegness Gateway Project Sequential and Exception Test Report*. Robert Doughty Consultancy, November 2022.

60 *National Planning Framework 4.* Scottish Government, 2023.

61 *RTPI Interim State of the Profession, 2023*

62 National Planning Policy Framework. MHCLG, 2021 (*gov.uk*).

63 CPRE, 2022

64 *Power Shift: Research into Local Authority Powers Relating to Climate Action.* UK100, 2021

65 Lichfields, 2022

66 National Planning Policy Framework (Footnote 7). MHCLG, 2021. *(www.gov.uk)*

67 See for example Levelling Up, Housing and Communities Committee *letter to the SoS*, August 2022.

68 The Future Homes Standard *(gov.uk)*.

69 *UKGBC Response to MHCLG Consultation on the Future Homes Standard*. UK Green Building Council, Feb. 2020.

70 *Planning Update Statement.* Eric Pickles, Secretary of State for Communities and Local Government, 25 March 2015.

71 CPRE, 2022

72 UK100, 2021

73 Ibid.

74 *Report to West Oxfordshire District Council*. (Para 39). Planning Inspectorate, March 2023.

75 *The Climate Crisis: A Guide for Local Authorities on Planning for Climate Change*. RTPI and TCPA, 2023.

76 Including the costs for planning authorities, the planning inspectorate, and the development industry.

77 For example, see the LETI Climate Emergency Design Guide - *www.leti.uk/cedg*

78 *UK Net Zero Carbon Buildings Standard*.

79 *Design for Homes, 2020*

80 *The Tyndall Carbon Budget Tool*. Tyndall Centre for Climate Change Research.

81 *Supporting local authorities with spatial planning and carbon modelling.* Bioregional.

82 LETI, 2020

83 National Model Design Code, DLUHC, 2021. (*gov.uk*)

84 *Cracking the Code*. RTPI, 2022.

85 Ibid.

86 Building Regulations – Part S - Infrastructure for the charging of electric vehicles. (*gov.uk*).

87 *Transport decarbonisation: local authority toolkit*. Department for Transport, 2022.

88 *DfT Circular 01/2022 - National Highways and the strategic road network*. Department for Transport, 2022.

89 *Public Transport Accessibility Levels*. Transport for London (TfL)

90 *20-minute neighbourhoods*. Leeds City Council.

91 *National Policy Statement for National Networks*. Department for Transport, 2014.

92 *Draft revised national networks national policy statement*. Department for Transport, 2023.

93 *Road Investment Strategy 2: 2020 – 2025*. Department for Transport, 2020.

94 *Welsh Government response to the Roads Review*. Welsh Government, 2023.

95 The planning press has covered failed strategic planning efforts in areas including the West Midlands, West of England and Oxfordshire in recent years. For example see: *https://www.planningresource.co.uk/article/1803470/why-exemplar-joint-strategic-planning-fell-apart* (October 2022).

96 See for example the article here: *https://www.business-live.co.uk/regional-development/plans-submitted-develop-330-acres-25579803* (November 2022).

97 *Local Development Orders Guidance for councils on preparing LDOs*. Planning Advisory Service, March 2019.

98 For example see RTPI research such as the *Resourcing Public Planning* report from July 2019.

99 Ibid.

100 *RTPI Interim State of the Profession, 2023*

101 *Plan inspectors made 'inconsistent' climate decisions.* Local Government Chronicle, March 2023.

102 *Climate Emergency: Time for Planning to get on the Case*. CPRE, 2022.

103 *Mission Zero - Independent Review of Net Zero,* Rt Hon Chris Skidmore MP, 2022.

104 *Net Zero Strategy.* BEIS, 2021.

105 *Progress Report.* Climate Change Committee, 2022.

106 Rt Hon Chris Skidmore MP, 2022.

107 *The Climate Crisis: A Guide for Local Authorities on Planning for Climate Change*. RTPI and TCPA, 2021.

108 *The Climate Crisis: A Guide for Local Authorities on Planning for Climate Change*. RTPI and TCPA, 2023.

109 TCPA, 2020.

110 *Five Reasons for Climate Justice in Spatial Planning.* RTPI, 2020.

111 National Planning Policy Framework. MHCLG, 2021 (*gov.uk*).

112 TCPA, 2020.

113 *Public participation in planning in the UK: a review of the literature.* UK Collaborative Centre for Housing Evidence, 2022.

There are numerous areas where carbon emissions relating to spatial land use are not assessed or regulated and escape from the system, including operational emissions from development and embodied carbon in construction.

7. References

Adept (2019). *Preparing for a Changing Climate: Good Practice Guidance for Local Government*

BEIS (2021). *Net Zero Strategy*

BEIS Committee (2023). *Decarbonisation of the power sector*

Capita (2021). *Strategic Flood Risk Assessment: Level 2: Goole*

Centre for Cities (2021). *Net Zero: Decarbonising the City*

Climate Change Committee (2020). *Local Authorities and the Sixth Carbon Budget*

Climate Change Committee (2022). *Progress Report*

Climate Change Committee (2020). *The Sixth Carbon Budget The UK's path to Net Zero*

Climate Change Committee (2023). *A net zero workforce*

CPRE (2020). *What's the plan?*

CPRE (2022). *Climate Emergency: Time for Planning to get on the Case*

Department for Transport (2014). *National Policy Statement for National Networks*

Department for Transport (2023). *Draft revised national networks national policy statement*

DLUHC and MHCLG (2021). *Planning Practice Guidance*

East Lindsey District Council (2018). *East Lindsey Local Plan Core Strategy*

East Lindsey District Council (2021). *Issues and Options Consultation Document*

East Lindsey District Council (2022). *Skegness Gateway Local Development Order Statement of Reasons*

East Riding of Yorkshire Council (2016). *East Riding Local Plan Strategy Document*

East Riding of Yorkshire Council (2018). *Report to Cabinet meeting of East Riding Council*

Green Alliance (2020). *The Local Climate Challenge: A New Partnership Approach*

Jacobs (2010). *East Riding of Yorkshire Council Strategic Flood Risk Assessment Level 1*

LETI (2020). *Embodied Carbon Primer*

Lichfields (2022). *Ten years of the NPPF: What do we have to show for a decade of plan making?*

Lichfields (2023). *Start me up – but then you stopped: the continuing cost of local plan delays*

Local Government Chronicle (March 2023). *Plan Inspectors made 'Inconsistent' Climate Decisions.* *Plan inspectors made 'inconsistent' climate decisions | Local Government Chronicle (LGC) (lgcplus.com)*

Met Office (2018). *UK Climate Projections*

MHCLG (2020). *Planning for the Future: Planning White Paper*

MHCLG (2021). *National Planning Policy Framework*

National Assembly for Wales (2016). *Comparison of the planning systems in the four UK countries*

The Planning Advisory Service (2019). *Local Development Orders Guidance for councils on preparing LDOs*

The Planning Inspectorate (2022). *Report on the Examination of the Local Plan (Core Strategy and Placemaking Plan) Partial Update*

The Planning Inspectorate (2022) *Note outlining main modifications required*

The Planning Inspectorate (2023) *Report to West Oxfordshire District Council*

Robert Doughty Consultancy (2022) *Environmental Statement to accompany a Local Development Order*

Robert Doughty Consultancy (2022) *Skegness Gateway Project Sequential and Exception Test Report*

Rt Hon Chris Skidmore MP (2022). *Mission Zero: Independent Review of Net Zero*

RTPI (2019). *Resourcing Public Planning*

RTPI (2020). *Five Reasons for Climate Justice in Spatial Planning*

RTPI (2022). *Cracking the Code*

RTPI and TCPA (2021). *The Climate Crisis: A Guide for Local Authorities on Planning for Climate Change*

RTPI and TCPA (2023). *The Climate Crisis: A Guide for Local Authorities on Planning for Climate Change*

Scottish Government (2023). *National Planning Framework 4*

TCPA (2018) *The Raynsford Revie of Planning: Final Report*

TCPA (2020). *Planning 2020 'One Year On': The Raynsford Review of Planning in England*

UK100 (2021). *Power Shift: Research into Local Authority Powers Relating to Climate Action*

UK100 (2023). *Powers in Place: The Handbook of Local Authority Net Zero Powers*

UK Collaborative Centre for Housing Evidence (2022). *Public participation in planning in the UK: a review of the literature*

West Oxfordshire District Council (2020). *Salt Cross Garden Village Pre-Submission Draft Area Action Plan (AAP)*

8. Glossary

Active travel: Active travel refers to modes of travel that involve a level of activity. The term is often used interchangeably with walking and cycling, but active travel can also include trips made by wheelchair, mobility scooters, adapted cycles, e-cycles, scooters, as well as cycle sharing schemes.

Area Action Plan (AAP): A Development Plan Document that provides specific planning policy and guidance for an area where significant regeneration or investment needs to be managed.

Building regulations: Technical and safety standards for how buildings are constructed and how they perform, including minimum energy efficiency standards. Separate to the planning system.

Carbon budget: A legally binding cap on the amount of greenhouse gases emitted in the UK over a five-year period, introduced through the Climate Change Act 2008. Budgets are set at a national level at least 12 years in advance. The CCC advises on the appropriate level of each carbon budget, and once they are set, the government is obliged to prepare policies to ensure the budget is met.

Climate change: The long-term change in temperature and weather patterns due to human activity, primarily due to the burning of fossil fuels that creates greenhouse gas emissions. Global temperatures are continuing to increase, with the consequences including intense droughts, water scarcity, severe fires, rising sea levels, flooding, melting polar ice caps, catastrophic storms, and declining biodiversity. Action to limit future global greenhouse gas emissions will help restrict future changes in the climate system.

Climate Change Act 2008: UK legislation that includes a target to reduce greenhouse gas emissions to net-zero by 2050.

Climate change adaptation: Adjustments to natural or human systems in response to the actual or anticipated impacts of climate change, to mitigate harm or exploit beneficial opportunities. In a planning context, adaptation can mean changes to make development resilient to flooding and extreme weather and increase preparedness for future climate hazards.

Climate change allowances: Predictions of anticipated change in peak river flow, peak rainfall intensity and sea level rise caused by future climate change. LPAs must consider local climate change allowances when preparing Strategic Flood Risk Assessments. Climate change allowances are also known as flood risk allowances.

Climate Change Committee: Independent organisation that advises the UK government on how the nation should reduce greenhouse emissions and cope with the impacts of climate change.

Climate change mitigation: Action to reduce the impact of human activity on the climate system, primarily through reducing greenhouse gas emissions. In a planning context mitigation means the creation of net zero-aligned local plans that address the spatial distribution and design of development and supports the deployment of renewable energy to reduce carbon emissions.

Climate Change Risk Assessment (CCRA): The Climate Change Act requires the UK government to produce a Climate Change Risk Assessment every five years. The CCRA assesses current and future risks to and opportunities for the UK from climate change.

Climate Emergency Declaration: An action taken by governments and scientists to acknowledge humanity is in a climate crisis.

Coastal erosion: The loss of land along the coast due to the action of waves, tides, currents, and wind-driven sea water over time. Over a

long period, it is possible that homes and even whole settlements will fall into the sea as the land retreats.

Decentralised energy: Local renewable and local low carbon energy sources.

Department for Energy Security and Net Zero (DESNZ): The UK government department responsible for energy supply security, energy markets, energy efficiency and net zero. It is the sponsor department for Ofgem.

Department for Environment and Rural Affairs (Defra): The UK government department responsible for leading on domestic climate adaptation policy and develop the NAP.

Department for Levelling Up, Housing and Communities (DLUHC): The UK government department responsible for local government and planning in England (formerly known as the Ministry of Housing, Communities and Local Government). DLUHC produces the NPPF and is responsible for building regulations. PINS are an executive agency of DLUHC.

Design Code: A set of simple, concise, illustrated design requirements that provide specific, detailed parameters for the physical development of a site or area.

Development Consent Order (DCO): Part of the NSIP regime. A DCO automatically removes the need to obtain several separate consents, including planning permission and is designed to be a much quicker process than applying for these separately. The final decision on granting a DCO rests with the Secretary of State for that field.

Development Plan: Defined in section 38 of the Planning and Compulsory Purchase Act 2004, and includes adopted local plans, neighbourhood plans that have been made and published spatial development strategies, together with any regional strategy policies that remain in force.

Embodied carbon: Carbon dioxide and other greenhouse gases associated with the extraction and processing of materials, energy and water consumption used by the factory or in constructing the product or building, the transport of materials and products, the construction of the development, maintenance over time, and demolition, disassembly waste processing and disposal at end of life.

Effective: One of the tests of soundness for a local plan. The plan should be deliverable over the plan period (minimum of 15 years in length), and based on effective joint working on cross-boundary strategic matters.

Environment Agency (EA): A non-departmental public body, established in 1996 and sponsored by Defra. Responsible for flood management, regulating land and water pollution, and conservation.

Environmental Impact Assessment: A procedure to be followed for certain types of projects to ensure that decisions are made in full knowledge of any likely significant effects on the environment.

Environmental Outcomes Report (EOR): A new system of environmental assessment which will replace the existing system of Sustainability Appraisals (SA), Strategic Environmental Assessments (SEA) and Environmental Impact Assessments (EIA).

Examination (or Public Examination): Meeting held to assess whether a local plan follows national law, policy, and procedure. It is run by PINS and provides an opportunity for members of the public to voice concerns about draft planning policies and suggest amendments, based on evidence.

Five Case Model: The approach for developing business cases recommended by HM Treasury, consisting of a Strategic Case, Economic Case, Commercial Case, Financial Case, and Management Case.

Five-year housing land supply: A calculation of whether there is a deliverable supply of homes to meet the planned housing requirement (or, in some circumstances, local housing need) over the next 5 years in a local authority.

Flood risk: The combination of the likelihood of a flood event occurring and the impact that the flood would have if it did occur.

Green Infrastructure: A network of multi-functional green and blue spaces and other natural features, urban and rural, which is capable of delivering a wide range of environmental, economic, health and wellbeing benefits for nature, climate, local and wider communities and prosperity.

Historic environment: All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged.

Housing Delivery Test: An annual measurement of housing delivery in the area of relevant plan-making authorities.

Housing Infrastructure Fund: A government capital grant programme which will help to deliver up to 100,000 new homes in England.

Intergovernmental Panel on Climate Change (IPCC): The United Nations body for assessing the science related to climate change.

Just transition: Moving to a more sustainable economy in a way that's fair to everyone.

Justified: One of the tests of soundness for a local plan. The plan should be an appropriate strategy, considering reasonable alternatives, and based on proportionate evidence.

Local Development Order (LDO): An Order made by a LPA (under the Town and Country Planning Act 1990) that grants planning permission for a specific development proposal or classes of development. LDO's are not subject to independent examination and do not have to conform to local plan policy.

Local Plan: The plan for future development in a local area, prepared by the LPA. It includes maps of where new housing, other development and infrastructure are to go, policies prescribing the sort of things that can and cannot be built, and rules on the quality of anything that is built. A planning application will be accepted much more easily if it is in line with the Local Plan. But planning permission can be given to proposals in areas not allocated in the plan if a substantial case is made.

Local Planning Authority (LPA): The council (or National Park Authority in some cases) that carries out planning functions for a local area. In areas where there is both a County Council and a District Council, it is the District Council that prepares the Local Plan.

Levelling Up and Regeneration Bill (LURB): A bill that introduces reforms to the planning system and aims to reduce geographical disparities between different parts of the UK.

Local Area Energy Plans (LAEP): A process which looks at the whole energy system of a local area, taking an evidence-based approach to identify the most effective route to meeting a net zero target.

National Adaptation Programme (NAP): In response to the CCRA, the Climate Change Act also requires the UK government to produce a National Adaptation Programme. Defra is responsible for developing the NAP.

National Model Design Code (NMDC): A toolkit produced by DLUHC to guide LPAs on the design parameters and issues that need to be considered and tailored to their own context when producing design codes and guides. It forms part of national planning practice guidance.

National Planning Policy Framework (NPPF): The NPPF sets out the government's planning policies for England and how these are expected to be applied. It provides a framework within which local plans are produced. The NPPF must be considered in preparing a local plan (consistency with it is a test of soundness) and is a material consideration in planning decisions.

National Planning Practice Guidance (PPG): The PPG adds further context to the NPPF, and it is intended that the two documents should be read together.

National Planning Statements (NPS): Comprise the government's objectives for the development of nationally significant infrastructure in a particular sector and state. Used as part of the

NSIP regime.

Nationally Significant Infrastructure Projects (NSIP): Nationally Significant Infrastructure Projects (NSIPs) are large scale developments (relating to energy, transport, water, or waste) which require development consent through a DCO. This regime was introduced by the Planning Act 2008.

Natural flood management: Managing flood and coastal erosion risk by protecting, restoring and emulating the natural 'regulating' function of catchments, rivers, floodplains and coasts.

Neighbourhood Plan: A document produced by a local community, as represented by a Neighbourhood Forum, which sets out planning policies for a local area (usually at a Parish level) and is used by the LPA when deciding whether to approve or deny a planning application.

Net zero: The point where the amount of greenhouse gases being put into the atmosphere equals the amount of greenhouse gas emissions being taken out of the atmosphere.

New Homes Bonus: a grant paid by central government to local councils to reflect and incentivise housing growth in their areas.

Operational Carbon: Carbon dioxide and other greenhouse gases are associated with the in-use operation of the building. This includes the emissions associated with heating, hot water, cooling, ventilation, and lighting systems, as well as cooking, by equipment and lifts.

Performance Gap: The difference between anticipated and actual building performance.

Permitted Development Rights (PDR): Certain changes to a building can be made without the need to apply for planning permission, under what are termed permitted development rights, although, in most cases, the risk of flooding must still be taken into account.

Planning Aid: Offers free planning advice and support to individuals and communities.

Planning condition: A condition imposed on a grant of planning permission (in accordance with the Town and Country Planning Act 1990) or a condition included in a LDO or Neighbourhood Development Order.

Planning Inspector: A planning expert employed by PINS to provide independent scrutiny of plans (such as Local Plans) before they can be adopted. Planning Inspectors also preside over Examinations of plans and decisions, and planning appeals and inquiries into decisions that have been made.

Planning Inspectorate (PINS): The national government agency responsible for planning appeals, national infrastructure planning applications and the examination and approval of Local Plans.

Planning system: The set of processes which together are intended to ensure that development happens in the right place and at the right time, to the benefit of people, the economy, and the environment. These processes are multiple, complex, and carried out by a number of different organisations – mostly public bodies.

Positively prepared: One of the tests of soundness for a local plan. The plan should be based on a strategy which seeks to meet objectively assessed development and infrastructure requirements, including unmet requirements from neighbouring authorities where it is reasonable to do so and consistent with achieving sustainable development.

Renewable and low carbon energy: Includes energy for heating and cooling as well as generating electricity. Renewable energy covers those energy flows that occur naturally and repeatedly in the environment – from the wind, the fall of water, the movement of the oceans, from the sun and also from biomass and deep geothermal heat. Low carbon technologies are those that can help reduce emissions (compared to conventional use of fossil fuels) such as nuclear power.

Resilience Development Corporations: A potential solution to the complex challenge of building resilience to the effects of our changing climate. Resilience Corporations could provide a

strong planning delivery mechanism for building resilience in the places that will be worse affected by building on the legal framework established by the New Town Development Corporations and repurposing it to meet the challenge of adaptation to the impacts of the climate crisis.

Soundness: The starting point for a local plan examination is that the LPA has submitted a sound plan. Those seeking changes to the plan are required to demonstrate why the plan is unsound by reference to one or more of the soundness criteria included in the NPPF, being 'positively prepared', 'justified', 'effective' and 'consistent with national policy'.

Spatial Development Strategy: A plan containing strategic policies prepared by a mayor or a combined authority. It includes the London Plan (prepared under provisions in the Greater London Authority Act 1999) and plans prepared by combined authorities that have been given equivalent plan-making functions.

Spatial planning: The role of the planning system as a coordinator, integrator, and mediator of the spatial dimensions of wider policy streams. The UK government has in the past defined spatial planning as something that 'goes beyond traditional land use planning to bring together and integrate policies for the development and use of land with other policies and programmes' such as sustainability, transport economy and culture, which influence the nature of places and how they function. The term somewhat fell out of use with the abolition of regional planning in 2010, but frameworks for spatial planning are being pursued by some metro mayors in England, with mixed success, through Spatial Development Strategies.

Standard Method: A formula to identify the minimum number of homes expected to be planned for, in a way which addresses projected household growth and historic under-supply.

Strategic Environmental Assessment (SEA): A procedure (set out in the Environmental Assessment of Plans and Programmes Regulations 2004) which requires the formal environmental assessment of certain plans and programmes which are likely to have significant effects on the environment.

Strategic Flood Risk Assessment (SFRA): The process of collecting information about the risk to an area from flooding from all sources, now and in the future, taking account of the impacts of climate change. It assesses the impact that land use changes and development in the area will have on flood risk.

Sustainability Appraisal (SA): A systematic process that must be carried out during the preparation of local plans and spatial development strategies. Its role is to promote sustainable development by assessing the extent to which the emerging plan, when judged against reasonable alternatives, will help to achieve relevant environmental, economic and social objectives.

Sustainable Drainage Systems (SuDS): Designed to manage stormwater locally (as close its source as possible), to mimic natural drainage and encourage its infiltration, attenuation and passive treatment.

Sustainable transport modes: Any efficient, safe and accessible means of transport with overall low impact on the environment, including walking and cycling, ultra-low and zero emission vehicles, car sharing and public transport.

Transport assessment: A comprehensive and systematic process that sets out transport issues relating to a proposed development. It identifies measures required to improve accessibility and safety for all modes of travel, particularly for alternatives to the car such as walking, cycling and public transport, and measures that will be needed deal with the anticipated transport impacts of the development.

Viability assessment: A process of assessing the elements of cost in the development process from land to construction and any policy requirements or affordable homes or design standards.

Web-based Transport Analysis Guidance (WebTAG): The guidance created by the Department for Transport on how to assess the anticipated impacts of transport policy proposals and projects.

Whole Life Carbon: This includes both embodied and operational carbon.

centre for sustainable energy

tcpa

SPATIAL PLANNING FOR CLIMATE RESILIENCE & NET ZERO