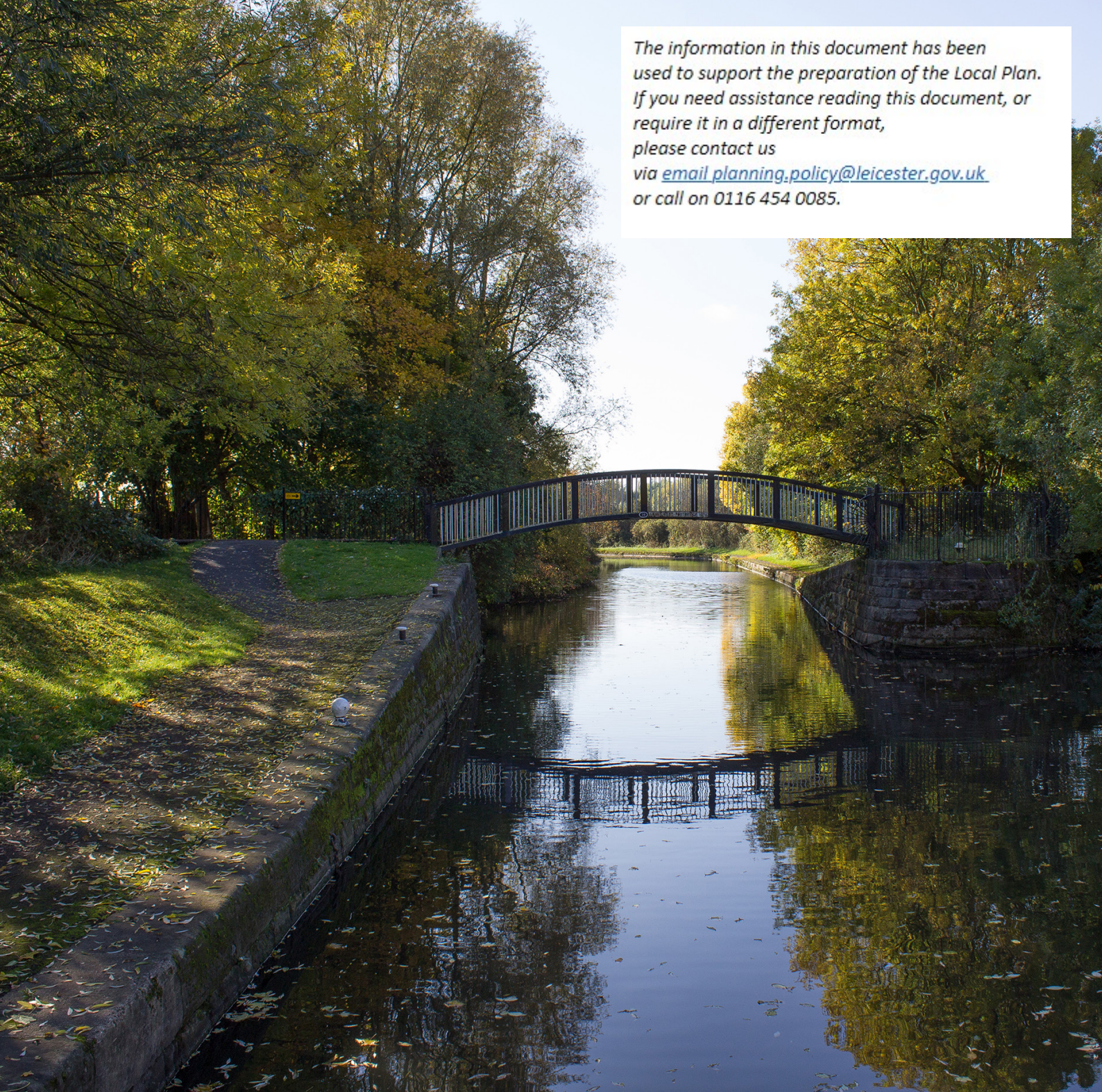


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**Leicester Local Plan  
2020 to 2036**

# **Climate Change Topic Paper**





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2020 to 2036

# **Climate Change**

## **Topic Paper**

Submission document  
September 2023

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## 1. Introduction

1.1. The UN defines climate change as long-term shifts in temperatures and weather patterns. These shifts may be natural, due to changes in the sun's activity or large volcanic eruptions. However, since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels like coal, oil, and gas. The impacts of climate change can include extreme weather, flooding, and altered habitats.

1.2. In May 2019, the UK Government declared a climate emergency, amending the 2008 Climate Change Act to set a target for emissions in the UK to become net zero by 2050. Leicester City Council declared a climate emergency in February 2019 and has committed to leading Leicester towards a more sustainable and resilient future.

1.3. Planning plays a significant role in addressing climate change. One of the three overarching objectives to achieve sustainable development, as outlined in para. 8 of the NPPF, is the environmental objective, which encompasses mitigating and adapting to climate change and moving towards a low carbon economy. Local planning policy can address climate change through policies that support sustainable approaches to building construction and design, promote low and zero carbon energy generation and use, create and maintain biodiversity, habitats, and the natural environment, and manage flood risk.

1.4. The purpose of this topic paper is to provide information on the context that has informed the development of policies that address climate change within the Leicester Local Plan 2020-2036. It sets out the international, national, and local policy backgrounds and describes the evidence produced for the local plan which has informed the scope of the policies.

## 2. Policy Context

### International

2.1. The Paris Agreement is an international accord, signed by 195 countries and the European Union in 2015, which aims to limit global temperature rise to well below 2°C and pursue efforts to keep it to 1.5°C.

2.2. The agreement includes commitments from all major emitting nations to cut climate pollution and to strengthen those commitments over time. The accord creates a framework for the transparent monitoring and reporting of progress.

### National

2.3. The Climate Change Act 2008 commits the UK to reducing its greenhouse gas emissions by 80 per cent by 2050, compared to 1990 levels. This target was made more ambitious in 2019 when the UK Government became the first major economy to commit to a 'net zero' target. The new target requires the UK to bring all greenhouse gas emissions to net zero by 2050.

2.4. Section 19(1A) of the Planning and Compulsory Purchase Act 2004 places a legal duty on local planning authorities to ensure that their development plan documents include policies that secure development and use of land that contributes to the mitigation of, and adaptation to, climate change. The Planning and Energy Act (2008) enables local planning authorities to set requirements for the provision of energy from renewable or low carbon sources, and for development to comply with energy efficiency standards that exceed the energy requirements of building regulations.

2.5. The national planning policy context for England is set out in the National Planning Policy Framework (July 2021) (NPPF). Addressing climate change is a core land use planning principle which must underpin plan-making and decision-making. To be found sound, local plans need to reflect this principle and enable the delivery of sustainable development.

2.6. Section 14 of the NPPF contains policies on how the planning systems can meet the challenges posed by climate change and flooding. It states that the planning system should take a proactive approach to mitigating and



adapting to climate change (para. 153) and should support the transition to a low carbon future by shaping places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure (para. 152).

2.7. The NPPF is supported by Planning Practice Guidance (PPG) which is updated regularly. PPG advises on how to identify mitigation and adaptation measures in the planning process to address the impacts of climate change and how these measures can be integrated into local plans. PPG also advises on which parts of a local plan's evidence base can be used to identify and assess climate risks to an area, including, e.g., the sustainability appraisal, strategic flood risk assessment, and water cycle study.

2.8. PPG advises on how risks associated with flooding should be considered and addressed within the planning process. It describes the process to be used in plan- and decision-making where flood risk is to be taken into account.

## Local

2.9. Leicester City Council declared a climate emergency in February 2019 and resolved to develop a programme of action to reduce greenhouse gas emissions and prepare for a changing climate.

2.10. Subsequent to the declaration, the City Council produced a Climate Emergency Strategy and Action Plan and a Carbon Neutral Roadmap. These documents establish the vision for Leicester to become a carbon neutral city, identify areas for action, and set out the required steps and the speed and scale of action required to achieve carbon neutrality. Through adoption of the Climate Emergency Strategy, the City Council has committed to:

- Improve existing housing, workplaces, and community buildings in the city to enable them to become carbon neutral, and energy and water efficient
- Improve environmental standards of new development towards a carbon neutral standard

- Increase renewable energy generation and encourage storage of surplus to meet peak demand
- Reduce carbon emissions from travel and transport towards our carbon neutral goals through walking, cycling, improved public transport and ultra-low emissions vehicles
- Tackle carbon emissions from the city's use of goods and raw materials, including food and waste
- Protect Leicester from increased risk of heatwaves and flooding by using nature-based solutions wherever possible
- Enhance and protect biodiversity, green spaces, and trees from climate change impacts
- Increase the amount of carbon locked up in soil, trees, and other vegetation
- Respond to climate change impacts in ways that reduce poverty and inequality, improve health and wellbeing, and stimulate the local economy and green job creation
- Engage meaningfully with residents, groups, organisations, and businesses across the city and form effective partnerships to encourage everyone to play their part in tackling the Climate Emergency

2.11. Planning policy and decision-making are essential tools in facilitating and fulfilling the above commitments. The local plan has been prepared with due regard to its central role in realising the objectives of the Climate Emergency Strategy and Action Plan.

### 3. Background and evidence reports

#### Climate Change Evidence Base Study (2015)

3.1. Together with Oadby & Wigston Borough Council, Leicester City Council commissioned Amec Foster Wheeler to produce a Climate Change Evidence Base Study in 2015. The study provides evidence that informs the planning policies on climate change and renewable energy in the two authorities' local plans. The study recommends that the local plan sets policy requiring developers to plan positively for climate change through the reduction of carbon emissions, take into account opportunities available to supply a development with renewable or low carbon sources of energy, demonstrate how the efficient use of resources will be maximised both in the construction and occupation of developments, and ensure new development is resilient to the impacts of climate change. It also recommends that local plan policy provides a positive policy framework for the delivery of renewable and low carbon energy projects, including community-led schemes, subject to the local impacts of such schemes being suitably mitigated.

#### Energy and Sustainable Design & Construction Study (2022)

3.2. The City Council commissioned AECOM to undertake an Energy and Sustainable Design & Construction Study for Leicester, which was finalised in 2022 and which builds on the findings and recommendations of the 2015 Climate Change Evidence Base Study. This work looks at anticipated changes that may arise in Leicester due to development proposed in the local plan, national policy, and wider changes. The study sets out what options are available to respond to these changes when preparing local plan policy and draws out a series of policy recommendations. Table C of the study summarises these policy recommendations and is reproduced below.

**Table C. Series of policy recommendations for Leicester's new Local Plan**

Ref	Policy recommendations	
1	Energy Hierarchy	Require all developments to follow a clear energy hierarchy.
2	Building Energy Efficiency Measures	Set a minimum target for carbon emissions reduction from building energy efficiency measures.

<b>Ref</b>	<b>Policy recommendations</b>	
3	Heating/Cooling System Hierarchy	Require all developments to follow a clear heating/cooling system hierarchy.
4	Connection to Heat Networks	Include a requirement for all suitable developments near existing or planned heat networks to incorporate the necessary infrastructure to enable future connection.
5	Low and Zero Carbon Technologies	Require all development to provide details of the low and zero carbon energy technologies installed and the estimated reduction in CO2 emissions these will deliver.
6	Cooling Hierarchy	Require all development to follow a clear cooling hierarchy.
7	Whole Life-Cycle Carbon Emissions	Introduce a requirement for development to minimise whole life-cycle emissions.
8	Existing Buildings	Positively support proposals that improve efficiencies and reduce emissions within the existing building stock.
9	Energy Statement	Include a requirement for all major developments to complete an energy statement to demonstrate compliance with the relevant policies.
10	Water Efficiency	All new developments should seek to maximise water efficiency on site
11	Sustainability Assessments	Encourage use of third-party assessments as an alternative approach to demonstrative compliance with the sustainable design and construction policies.
12	Policy Technical Guidance	Produce a technical guidance document to support developers in complying with the policy requirements.
13	Carbon Offset Scheme	Consider establishing a carbon offset scheme.

3.3. The study advises that the Climate Change and Flood Risk chapter of the Regulation 18 draft of the Local Plan be revised in consideration of its findings and recommendations.

### **Strategic Flood Risk Assessment (2022)**

3.4. In accordance with NPPF requirements, a Strategic Flood Risk Assessment (SFRA) was prepared by an independent environmental consultancy to form part of the evidence base for the local plan, to inform and help shape strategic policies, and to manage flood risk from all sources. The SFRA analyses flood risk in Leicester and, in combination with the sustainability appraisal, enables site allocations to be directed to locations at lower risk of flooding. It also provides high level guidance for sites which are subject to application of the Exception Test. The SFRA makes numerous recommendations in relation to new development and its impact on flood risk. These findings and recommendations have been taken into account in the drafting of the plan's strategic policies.

### **Water Cycle Study (2020) and Update (2023)**

3.5. The City Council commissioned JBA Consulting, an environmental and engineering consultancy, to undertake a Water Cycle Study (WCS) for Leicester. The WCS was completed in 2020. In 2023, an update to the WCS was completed, also by JBA Consulting. The WCS and its update examine the water quality, supply, and sewerage issues faced by Leicester and provide evidence that helps to ensure planned growth for the city occurs within environmental constraints and with the appropriate infrastructure in place in a timely manner so that planned allocations are deliverable. The WCS and its update have been factored into the selection of site allocations. The allocations being brought forward as part of the local plan will have minimal impact on the environment, water quality, water resources, infrastructure, and flood risk, while also ensuring the city's housing and employment need is met. The recommendations of the WCS and its update have helped shape the drafting of the climate change and flood risk policies in the local plan.

## **4. Addressing climate change in the local plan**

4.1. In declaring a climate emergency in 2019 and adopting a Climate Emergency Strategy and Action Plan and a Carbon Neutral Roadmap, Leicester has acknowledged the urgency of climate action and made it a clear priority for the city. However, the scale of development required by Leicester to meet its housing and employment need adds complexity to the challenge of addressing climate change.

4.2. The local plan objectives inform and support the plan's overarching vision. Objective 2 is to "prepare for, limit, and adapt to climate change". Climate change is a core issue within the local plan which reflects its prioritisation by the City Council. Addressing climate change is threaded through the plan and policies in various plan chapters aim to mitigate and adapt to the challenge. The Climate Change and Flood Risk chapter policies do not stand alone in addressing climate change but work in combination with all the plan policies.

### **Climate Change and Flood Risk chapter policies**

4.3. Drawing from the evidence and recommendations made therein, significant revisions have been made to the Climate Change and Flood Risk chapter since the Regulation 18 stage of the local plan preparation process. The chapter now contains a suite of policy measures that are robustly supported by evidence and will help Leicester to mitigate and adapt to the effects of climate change. The chapter policies address the following areas:

- Supporting the reduction of overall energy demand
- Supporting the reduction of greenhouse gas emissions
- Supporting the generation and use of decentralised zero and low carbon energy in place of fossil fuel sourced energy
- Supporting more efficient use of water
- Reducing, mitigating, and adapting to flood risk

4.4. How the chapter policies address these areas is set out below:

## **Supporting the reduction of overall energy demand**

4.5. In order for Leicester to become a carbon neutral city, a major reduction in energy demand is needed. Planning policy is pivotal in reducing the city's energy use. Improved energy efficiency measures in the construction and operation of development can be achieved through policy requirements.

4.6. Policy CCFR01 sets an energy strategy for development that will help minimise operational energy use and manage energy demand in development. The policy also sets a requirement for passive, fabric, and energy efficient design measures to achieve an emissions reduction that goes further than Part L of the 2013 Building Regulations. This ensures energy efficiency in new development will be optimised. Although this requirement adds cost to the standard build cost assumption, the Whole Plan Viability Assessment (including CIL) – May 2022 Refresh tested the policy (see paras. 8.44-8.51 of the Viability Assessment) and found that it does not unduly affect overall viability. Supporting text for Policy CCFR01 highlights the role that existing buildings can make towards reducing overall energy demand through improved insulation and retrofit. Policy CCFR02 expects development to achieve high levels of energy efficiency and promotes the use of circular economy principles during construction which also helps reduce energy demand. The Energy Statement required by Policy CCFR03 will evidence a development's reduced energy demand.

4.7. The above-mentioned energy efficiency policy measures will also help development to become more resilient to a warming climate.

## **Supporting the reduction of greenhouse gas emissions**

4.8. Para. 152 of the NPPF states that the planning system should contribute to radical reductions in greenhouse gas emissions in line with the objectives of the 2008 Climate Change Act. Therefore, policies which proactively aim to drive down the greenhouse gas emissions associated with development, both during the operational life of the development but also during the construction and end-of-life phases, are essential components of local plans.

4.9. Policy CCFR01 sets an energy strategy for new development to follow that will contribute towards the reduction in greenhouse gases emitted by development. The policy sets carbon emissions reduction targets that go further than the standards required by the 2013 Building Regulations, and

which are to be achieved through passive, fabric, and energy efficient design measures alone. Policy CCFR02 provides that opportunities to minimise the whole life cycle carbon emissions of development must be pursued. The Energy Statement required by Policy CCFR03 will evidence a development's reductions in carbon emissions achieved from each part of the energy strategy along with the reductions achieved in embodied carbon emissions. Policy CCFR04 will reduce greenhouse gas emissions through the creation and promotion of a hierarchy that prioritises zero and low carbon sourced heating/cooling technologies above fossil fuel sourced heating/cooling technologies, which are to be avoided where possible.

### **Supporting the generation and use of decentralised zero and low carbon energy in place of fossil fuel sourced energy**

4.10. As described above, the City Council supports reducing the city's overall energy demand. In conjunction with this objective, the City Council supports obtaining as much as possible of the city's remaining energy need from decentralised zero and low carbon energy sources in order to progress the transition towards carbon neutrality. This objective reflects national planning policy which states that plans should identify opportunities for development to draw its energy supply from decentralised renewable or low carbon energy supply systems and that, when determining planning applications, local authorities should expect new development to comply with local requirements for decentralised energy unless it can be demonstrated that it is not feasible or viable (NPPF, paras. 155. c) and 157. a)).

4.11. The energy strategy for new development contained in Policy CCFR01 has a provision for development to use zero or low carbon decentralised energy and a provision for the maximisation of opportunities to produce and use renewable energy on site. More detail on what is expected in relation to this part of the energy strategy is provided in Policy CCFR04, the supporting text for which describes a heating and cooling hierarchy that prioritises on-site and decentralised zero and low carbon energy above all other heating/cooling system and technology permutations. Leicester has an extensive existing district heating network which is a source of low carbon heat. Policy CCFR04 expects development within a specified distance of the network to connect to it or to be ready to connect to planned expansions of it. Policy CCFR02 supports the objectives of CCFR01 and CCFR04 by placing an expectation on development to use low carbon heating sources and to be powered by



renewable energy generated on site where possible. Policy CCFR05 supports increasing renewable and low carbon energy generation through positively planning for the delivery of renewable and low carbon energy projects.

### **Supporting more efficient use of water**

4.12. As part of Leicester's Climate Change Strategy objective to improve existing housing, workplaces, and community buildings to enable them to become carbon neutral, they must be water efficient. Leicester is in the Severn Trent Water area (excluding the Chester zone) which is classified as being an area of serious water stress. Climate change is forecast to increase pressure on water resources and potentially increase the likelihood of a supply-demand deficit. The Water Cycle Study and its update recommend that the local plan adopts the tighter water efficiency standard of 110 litres per person per day, as described in Part G of the 2013 Building Regulations, and that an efficiency target be applied to non-domestic development aligned with the BREEAM New Construction Standard.

4.13. Per the recommendations of the Water Cycle Study and update, Policy CCFR01 adopts the optional standard of 'Part G' of the 2013 Building Regulations (or equivalent future legislation), restricting new development to a maximum of 110 litres per person per day. Policy CCFR01 also requires non-domestic development to meet the maximum credits available under BREEAM Wat01 or an equivalent best practice standard.

### **Reducing, mitigating, and adapting to flood risk**

4.14. Climate change will increase the intensity and frequency of flooding events across the UK, and indeed, is already doing so. As described in the SFRA, Leicester is vulnerable to both fluvial flooding from main rivers and ordinary watercourses and pluvial flooding from surface runoff and sewer flooding. These types of flooding can interact and have a compound effect. To the greatest extent practicable, while also ensuring that the city's housing and employment need is met, site allocations have been located in areas with the least risk of flooding. The SFRA highlights the key role Sustainable Drainage Systems (SuDS) play in the management of flood risk and recommends that potential future increases in rainfall are accommodated in the design of SuDS.

4.15. Policy CCFR06 applies the sequential and exception tests set out in the NPPF along with a requirement for flood risk assessments to be undertaken

for developments that fall into specified categories. The policy requires that development be safe for its design lifetime and must not increase flood risk elsewhere. It also provides that, where possible, development should reduce overall flood risk.

4.16. Policy CCFR06 also expects SuDS to be incorporated into all development to reduce the amount of surface water run-off and improve the quality of run-off, as well as to help manage water resources more sustainably. Inclusion of SuDS in development will also deliver co-benefits such as enhancing biodiversity and providing visual amenity. Benefits towards the natural environment will also be secured by provision d) of the policy, which aims to realise opportunities for the enhancement of watercourses for biodiversity.

### **Other local plan policies that address climate change**

4.17. Policies, or provisions within them, in the following areas will also contribute towards mitigating and adapting to the effects of climate change:

#### **Housing and central development area policies**

4.18. Policy Ho05 seeks to achieve higher housing densities in the right locations and appropriately optimise the density of development across the city. As a result, development will be more sustainable, and residents will be incentivised into using sustainable modes of travel. Policy CDA01 makes the Central Development Area the focus of major housing and employment development and will ensure dwellings, services, amenities, retail, and places of work are developed in a comprehensive and coordinated way that supports co-location and reduces travel distances.

#### **Health and wellbeing policies**

4.19. Policy HW01 promotes safe pedestrian and cycle routes and the fifteen-minute city concept as ways to encourage active travel. It also seeks to improve air quality through tree planting and encourages the growing and use of locally sourced food through the retention and provision of allotments, community gardens, orchards, innovative spaces for growing food, and the inclusion of productive trees in development.

#### **Design policies**

4.20. Policy DQP01 complements Policy CCFR01; it sets sustainable design criteria for assessing new development, including provisions on development

layout, prioritisation of public transport and active travel pathways, materials used in the construction of development, and the efficient use of resources that is aligned with the energy strategy contained in Policy CCFR01. Policy DQP04 sets requirements for landscaping in development, including provisions on SuDS, shading, and avoiding the removal of trees.

### **Open space, sports, and recreation and natural environment policies**

4.21. Green and open spaces, as well as green and blue infrastructure, are essential for absorbing rainfall and lessening the impacts of flooding, tempering urban heat island effects, improving air quality, and ensuring trees, plants, and biodiversity are present in predominantly urban environments. Policies OSSR01, OSSR02, and OSSR03 seek to retain and protect existing green wedges and open spaces as well as create open space within new development. Policy OSSR06 complements Policy CCFR06 in protecting, maintaining, and enhancing the drainage functions of the city's waterways and encourages tree planting along waterways to improve biodiversity and provide shading. Policies NE01, NE02, NE03, and NE04 seek to protect and enhance existing assets of biodiversity value, introduce biodiversity net gains, and integrate blue/green infrastructure into both new development and the wider blue/green infrastructure network.

### **Transportation policies**

4.22. Making sustainable modes of travel more convenient and attractive supports the modal shift needed to reduce the city's greenhouse gas emissions that emanate from road transport. The transportation chapter aims to meet this objective by containing policies that:

- Promote walking, cycling, and public transport as primary modes of travel
- Support low emission transport solutions
- Prioritise sustainable transport infrastructure
- Aim to increase the uptake of low emission vehicles
- And ensure the location and accessibility of development allows people to choose easily available alternative options to the car that are suitable and affordable





