



# Making space for wildlife in a changing climate

Information for local authorities in the South East

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## Advice to Local Planning Authorities in the South East on biodiversity adaptation to climate change through planning

### Introduction

Climate change is the biggest long term threat to our natural environment and is one of the biggest challenges facing society. The planning process can play a crucial role in reducing the scale of climate change through mitigation, and in helping us to adapt to changes that are now 'locked in' to the system. This document aims to show how the planning system can help the natural environment, and the flora and fauna it supports, adapt to our changing climate and how the natural environment can in turn help us adapt to the challenges ahead.

### Climate change in the South East

The UK Climate Impacts Programme<sup>1</sup> released a set of climate change projections in June 2009 (UK Climate Projections 2009<sup>2</sup>). The projections outline the likely changes as hotter, drier summers and warmer, wetter winters to which both biodiversity and society will have to adapt. The key changes projected for the South East by 2080<sup>3</sup> are that:

- It will be warmer all year round. Mean temperatures for summer are likely to rise by between 3°C and 4.9°C and for winter between 2.6°C and 3.7°C.
- There will be a change in the distribution of rainfall. Winters will be wetter and summers will be drier. Precipitation is likely to decrease by between 15% and 29% in summer and increase by between 18% and 30% in winter.

- Sea level rise modelled for London is between 30.5 cm and 43.3 cm.

We may also see an increase in frequency and intensity of extreme weather events.

### Climate change impacts on biodiversity and 'ecosystem services'

Development, agricultural changes, habitat destruction and pollution have all had an impact on our biodiversity. Climate change will exacerbate these existing pressures and exert additional pressures such as: changes to the ranges of many species; changes in species abundance; and changes to the timing of seasonal activity. In fact, there is evidence that many species are already responding to climate change<sup>4</sup>.

The vital services that the natural environment provides to society (ecosystem services) will be directly affected by climate change and indirectly affected by non-sustainable adaptation actions that society might take. Ecosystem services include: flood management, urban cooling and shade, water quality and storage, pollination, soil formation and increasingly important carbon storage. If society and the economy are to adapt to climate change, it is crucial to minimise the effects of the damaging impacts to the underlying environment.

<sup>1</sup> <http://www.ukcip.org.uk/>

<sup>2</sup> <http://ukclimateprojections.defra.gov.uk/>

<sup>3</sup> The central estimates of the low and high emissions scenarios are represented and the sea level rise modelling does not include ice sheet and glacier melt.

## Overarching principles

Adapting to climate change means making or allowing for “adjustments in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderate harm or exploit beneficial opportunities” (IPCC<sup>5</sup>). A number of overarching principles<sup>4</sup> to help biodiversity adapt through safeguarding the health of the underlying environment have been established:

1. Conserve existing biodiversity.
2. Reduce sources of harm not linked to climate.
3. Develop ecologically resilient and varied landscapes.
4. Establish ecological networks through habitat protection, restoration and creation.
5. Make sound decisions based on analysis.
6. Integrate adaptation and mitigation measures into conservation management, planning and practice.

Spatial planning can help deliver many of these principles with significant opportunities to address climate change adaptation at regional and local levels.

## Planning drivers

There are a number of key legislative and policy drivers that contain requirements for and guidance on enhanced biodiversity conservation and/or adaptation to climate change, including:

- **National legislation** (eg. Natural Environment and Rural Communities Act 2006, Climate Change Act 2008 and Planning Act 2008);
- **National Planning Policy** (eg. Planning policy statements regarding the natural environment, climate change, landscape, open spaces, flood risk etc.); and

- **Regional strategies** (eg. South East Plan policies on climate change, natural resource management and green infrastructure).

## Multiple benefits

Adaptation for biodiversity can be delivered through other Local Planning Authority duties such as: managing flood risk; landscape planning, protection and management; providing access and recreation opportunities; and providing green infrastructure. For example, green infrastructure (green spaces, sustainable urban drainage systems and green building designs) is designed to help society adapt and thrive, but it also benefits biodiversity.

Planning for, and implementing adaptation measures for biodiversity, helps society adapt to climate change sustainably by improving the quality of vital ecosystem services. This also reduces the need for hard engineering solutions, which themselves might increase the impact of climate change. Much of the work on adaptation to climate change for biodiversity also supports the continued value of landscapes in the region.

Local Planning Authorities that take action to adapt to climate change sustainably will not only benefit biodiversity, they will also help themselves to: deliver on requirements in a number of planning policy statements; deliver targets under national indicators such as NI188; and contribute to the duty on biodiversity in the NERC Act (2006).

<sup>4</sup> Conserving biodiversity in a changing climate: guidance on building capacity to adapt (Hopkins et al – Defra 2007)

<sup>5</sup> Intergovernmental Panel on Climate Change <http://www.ipcc.ch/>

## How planning can help

Biodiversity conservation, enhancement and adaptation to climate change should be incorporated at all levels of the spatial planning system.

Local Development Frameworks (LDFs) should:

- Take an integrated approach to planning for biodiversity.
- Identify habitats and designated wildlife sites and make provision for their protection and enhancement.
- Identify opportunities to create new habitats and networks of habitats in the plan area, and support their restoration or creation through appropriate policies.
- Plan to accommodate change. In areas of coastal realignment, for example, planning to recreate coastal habitats further inland, whilst also allowing for the original habitat to be replaced.
- Recognise the impact development could have on biodiversity and its capacity to adapt to climate change.
- Include policies on the design and location of development that take a strategic approach to the conservation, enhancement and restoration of biodiversity, protecting and repairing ecological networks.
- Recognise the contribution of open space and green infrastructure to urban cooling, sustainable drainage systems and conserving and enhancing biodiversity.
- Include the known physical and environmental constraints on the development of land, such as sea level rises and flood risk, and the increases in risk that could arise from climate change.

There are opportunities for LDFs to include biodiversity adaptation to climate change through a range of documents. Key policies should be included in the **Core Strategy** to enable a fully integrated approach.

**Sustainability Appraisals** should treat biodiversity as a key consideration when assessing the effects of plans, proposals and strategies. The scoping and sustainability reports within the sustainability appraisals provide a further opportunity to integrate the 'adaptation of biodiversity to climate change' into the planning process.

**Scoping Reports** should:

- identify the relevant environmental objectives established at international, European, or national levels;
- include biodiversity and climate change in the outline of environmental characteristics and problems within the plan area; and
- ensure that biodiversity adaptation measures are integrated in the sustainability framework.

**Sustainability Reports** should:

- Set out the details covered by the plan and the scoping report, and suggest how the plan might be changed to address any deficiencies relating to biodiversity adaptation to climate change.

**Development Management** decisions should:

- be based on the overarching principles of sustainable adaptation for biodiversity to climate change and national, regional and local policies and targets on climate change and biodiversity;
- ensure that the ability of biodiversity to adapt is not compromised;
- incorporate green infrastructure in the fabric of the development;



- recognise the importance of wider biodiversity features in providing habitat connectivity and important habitats for species; and
- take the cumulative and synergistic impacts of development into account.

Planning also needs to respond to the need for the **long term planning of some adaptation**

**measures**, for example the creation of habitats, and recognise that decisions made now may have a permanent impact. The planning process should also seek **win/win** actions (which address the vulnerability of multiple assets or services) and **no/low regret** actions (costs are low, but potential benefits are high) that will benefit biodiversity alongside other gains, including sustainable development, quality of life and health.



## Tools

A number of tools exist to help planners incorporate biodiversity adaptation to climate change in plans, policies and decisions. These include **Green Infrastructure** and **Biodiversity Opportunity Areas**, both of which are well developed in the South East region.

Green Infrastructure is a coherent network of multifunctional green spaces which provide opportunities for recreation, non motorised movement, biodiversity conservation and enhancement and other wider quality-of-life benefits. Green infrastructure also has the potential to provide climate change adaptation for society by:

- reducing the likelihood and severity of drought and flooding, particularly storm water runoff and flash floods;
- supporting healthy ecosystems which provide vital services to society; and
- reducing the risks of overheating and associated health problems, particularly in urban areas, by improving micro-climates through shading and evaporative cooling.

## Contacts

An electronic copy of this document and the further supporting material including a list of contacts in the region can be found on our website at:

[http://www.naturalengland.org.uk/regions/south\\_east](http://www.naturalengland.org.uk/regions/south_east)

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The 'South East Green Infrastructure Framework – From Policy into Practice'<sup>6</sup> provides guidance on how to deliver this through the planning system.

Extensive work has been carried out in the South East to identify regional Biodiversity Opportunity Areas<sup>7</sup> which provide the greatest opportunities for habitat re-creation. These Biodiversity Opportunity Areas have been identified at a county level and provide a framework within which Local Planning Authorities can identify the areas of best opportunity for habitat creation and connectivity. These can be used to inform local identification and mapping of opportunities for biodiversity enhancement.

**A planner's checklist, good practice case studies and signposts to further information to help guide the inclusion of biodiversity adaptation to climate change in planning can be found in an accompanying electronic document at:**

[http://www.naturalengland.org.uk/regions/south\\_east](http://www.naturalengland.org.uk/regions/south_east)

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<sup>6</sup> <http://www.gose.gov.uk/gose/planning/regionalPlanning/?a=42496>

<sup>7</sup> <http://strategy.sebiodiversity.org.uk/map.php>





Towards East Head

Front cover image:  
**Riverside Country Park and Industry**  
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