

#### Policy BCS13

Development should contribute to both mitigating and adapting to climate change, and to meeting targets to reduce carbon dioxide emissions.

Development should mitigate climate change through measures including:

- High standards of energy efficiency including optimal levels of thermal insulation, passive ventilation and cooling, passive solar design, and the efficient use of natural resources in new buildings.
- The use of decentralised, renewable and low-carbon energy supply systems.
- Patterns of development which encourage walking, cycling and the use of public transport instead of journeys by private car.

Development should adapt to climate change through measures including:

- Site layouts and approaches to design and construction which provide resilience to climate change.
- Measures to conserve water supplies and minimise the risk and impact of flooding.
- The use of green infrastructure to minimise and mitigate the heating of the urban environment.
- Avoiding responses to climate impacts which lead to increases in energy use and carbon dioxide emissions.

These measures should be integrated into the design of new development.

New development should demonstrate through Sustainability Statements how it would contribute to mitigating and adapting to climate change and to meeting targets to reduce carbon dioxide emissions by means of the above measures.

#### Explanation

4.13.6 In order to demonstrate compliance with this policy, Sustainability Statements proportionate to the scale of development proposed should be submitted with planning applications. These statements should set out a comprehensive approach to mitigating and adapting to climate change which, in addition to the use of renewable and low-carbon energy (Policy BCS14), the use of sustainable design and construction measures (Policy BCS15), and a response to the risk of flooding (Policy BCS16), should include measures to adapt to the effects of climate change such as the following:

- Site layouts, design and construction can contribute to adaptation to climate change by making optimal use of opportunities for natural ventilation and solar heat gain.

- Green Infrastructure including small scale features such as trees, green walls and roofs, landscaping and water features, planned as an integral part of site layouts and building designs, can help to absorb heat and mitigate the urban heat island effect while reducing surface water run-off, providing flood storage capacity and helping biodiversity to adapt. In this respect, sustainable drainage systems (SUDS) as sought by Policy BCS16 can serve a dual purpose.
- Development should avoid adapting to the impacts of climate change in ways that would increase the city's CO<sub>2</sub> emissions, such as by the widespread use of mechanical ventilation.

4.13.7 Promoting walking, cycling and public transport is key to mitigating climate change, and new development in Bristol will be expected to maximise opportunities for transport by these means. Further details on transport criteria for development will be included in the Site Allocations & Development Management DPD.

#### Policy Delivery

This policy will be delivered through the development management process, by means of the requirement for Sustainability Statements and the Implementation of Policy BCS14, Policy BCS15 and Policy BCS16. Further guidance will be offered in a supplementary planning document on mitigating and adapting to climate change.

For larger schemes, BREEM for Communities provides an effective tool for assessing the performance of new development against the requirements of this policy.

Targets	Indicators
To reduce CO <sub>2</sub> emissions in accordance with targets set out in the LAA.	CO <sub>2</sub> reduction from Local Authority operations (National Indicator 185)
	Per capita reduction in CO <sub>2</sub> emissions in the LA area (National Indicator 186)
	Planning to Adapt to climate change (National Indicator 188)

**Sustainable Energy**

- 4.14.1 This policy sets out a requirement for development to minimise its energy requirements and incorporate renewable and low-carbon energy supplies to reduce its carbon dioxide (CO<sub>2</sub>) emissions. The policy also sets out broad criteria to be considered in assessing proposals for renewable and low-carbon energy development. In doing so the policy addresses objectives 1, 7 and 10 of the Core Strategy and responds to Issues 11 and 12.

**Context**

- 4.14.2 The development of renewable and low-carbon energy is a key means of reducing the city's contribution to climate change. Renewable and low-carbon energy encompasses a wide range of technologies, including combined heat and power (CHP); combined cooling, heat and power (CCHP); district heating; energy from waste; biomass; wind (large and small scale); solar thermal; photovoltaics; geothermal sources and heat pumps.
- 4.14.3 The Bristol Citywide Sustainable Energy Study provides a resource assessment of the capacity for these various technologies in the city. As a largely urban area, the study finds that Bristol has relatively few opportunities for the development of large-scale renewable or low-carbon energy installations requiring extensive land areas such as wind farms. However, certain opportunities have been identified, particularly for energy from waste, biomass and wind. The study identifies Avonmouth as a potential location for the development of these technologies, and suggests that there may also be opportunities for single wind turbines elsewhere. The presence of national and international sites of biodiversity importance in the Avonmouth area will require careful consideration to avoid any significant adverse effects arising from such development.
- 4.14.4 Given the relative lack of opportunities for large-scale renewable and low-carbon energy generation, the Bristol Citywide Sustainable Energy Study has identified that district heating using CHP/CCHP, in which a network of heat users are linked to one or more plants producing both heat and electricity, will likely be the most effective means of providing low-carbon energy in Bristol. Based on the densities of existing development and projected future growth, the study suggests Heat Priority Areas in which development could be required to contribute towards the delivery of a district heating network.

**Policy BCS14**

Proposals for the utilisation, distribution and development of renewable and low-carbon sources of energy, including large-scale freestanding installations, will be encouraged. In assessing such proposals the environmental and economic benefits of the proposed development will be afforded significant weight, alongside considerations of public health and safety and impacts on biodiversity, landscape character, the historic environment and the residential amenity of the surrounding area.