Climate Change

4.13.1 This policy sets out a requirement for development in Bristol to take into account the impact of climate change. Development is required, by a variety of means, to both mitigate its own impact on climate change and adapt to the effects of climate change. By taking this cross-cutting approach, the policy addresses objectives 1, 5, 7, 8 and 10 of the Core Strategy and responds to issues 7, 10, 11 and 12.

Context

4.13.2 Climate change arising from emissions of greenhouse gases such as carbon dioxide (CO_2) is an overriding issue affecting everybody in Bristol. Climate change is expected to progressively lead to heating of the urban environment (the urban heat island effect) and more frequent extreme weather events. The risk of flooding is also expected to increase.

4.13.3 Bristol City Council is committed, through the Core Cities Climate Change Declaration and the Climate Change Act 2008, to an 80% reduction in CO_2 emissions by 2050. Mitigating and adapting to climate change is therefore an overarching principle of the Core Strategy. It has influenced the spatial strategy for the city, which proposes to locate development in locations accessible by a choice of means of transport. It has influenced the approach to transport outlined in Policy BCS10, which also reflects the Joint Local Transport Plan for the West of England. It must also be taken into consideration in assessing individual developments.

4.13.4 Key to achieving the required reduction in CO_2 emissions will be the use of renewable and low-carbon sources of heat and power. The Bristol Citywide Sustainable Energy Study has identified a range of resource opportunities in the city, the exploitation of which will require the implementation of standards for sustainable energy and sustainable design and construction in new development, as well a supportive approach to the delivery of new freestanding renewable development and the introduction of sustainable energy supplies to existing buildings.

4.13.5 Having recognised the need to mitigate climate change, it is also necessary to recognise the effects that climate change will have and may already be having on Bristol, and therefore to consider ways in which development in the city can adapt to the effects of climate change. There are a number of ways in which this can be achieved.

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_2 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, BREEAM for Communities provides an effective tool for assessing the performance of new development against the requirements of this policy.

Targets	Indicators
To reduce CO_2 emissions in accordance with targets set out in the LAA.	**CO_2 reduction from Local Authority operations (National Indicator 185)** **Per capita reduction in CO_2 emissions in the LA area (National Indicator 186)** **Planning to Adapt to climate change (National Indicator 188)**