

11. Environmental Management, Minerals and Waste

Relevant Evidence Base

- West Midlands Climate Change Partnership Climate Change Adaptation and Resilience Study Summary Report - Halcrow (2010).
- Coventry City Council Low Carbon Energy Study – AECOM (2010)
- Coventry City Council Climate Change Strategy (2012)
- Delivering a More Sustainable City Supplementary Planning Document. (2009)
- Evidence base to support planning policies relating to sustainable buildings and low carbon/renewable energy (2015)
- Additional evidence; Coventry District Energy City Centre Phase 1 district network (2015)
- West Midlands Low Emissions Towns and Cities Programme (2014)
- Draft Surface Water Management Plan Risk Assessment (2012)
- Draft Local Flood Risk Management Strategy (2016)
- Preliminary Flood Risk Assessment, Coventry City Council (2011)
- Strategic Flood Risk Assessment Report - JBA Consulting (2015)
- Water Cycle Study – AMEC (2015)
- Coventry University, SuDs Technical Feasibility Report (2012)
- A GIS based decision to support methodology at local planning authority scale for the implementation of sustainable drainage, Coventry University - Dr. Warwick, F (2014).
- Coventry Municipal Waste Management Strategy, 2008-2020.
- Guide for Mineral Safeguarding in England' produced by the British Geological Survey (BGS) (2007)
- Draft West Midlands Local Aggregates Assessment (2015)

Introduction

Climate change and its potential impact on the urban and natural environment is recognised as one of the most significant challenges facing all communities across Coventry and beyond. In the Coventry context, it is essential that the way in which the city develops over the plan period and beyond is set within the context of mitigating the impacts of climate change and adapting to the effects on the local environment.

The key components of how Coventry can develop a more sustainable future include the following policy areas:

- Planning for Climate Change;
- Water Quality and Flood Risk;
- Air Quality;
- Minerals and Waste.

Coventry's Climate Change Strategy sets out several objectives to reduce carbon emissions. Objective 1 directly relates to how all future development in the city must contribute to achieving this, which states:

"to have a joint programme, working with other organisations in the city, to reduce carbon dioxide emissions by 27.5% by 2020. The 27.5% target is based upon a 2005 baseline and is equivalent to the national carbon dioxide emissions target of 34% by 2020 which has a 1990 baseline leading to the difference in percentages".

Planning for Climate Change

Infrastructure and buildings are the key components of a successful city. As the effects of climate change become more apparent, these important elements of the city will need to be adapted to work in equilibrium with more pronounced extreme weather conditions. Planning for climate change adaptation should therefore become part of every development. Adaptation methods can include, but are not limited to:

- Using materials so they can adapt to extreme weather, for example, using lighter coloured materials to reflect sunlight thus cooling buildings;
- Incorporating thermal mass, shading devices and night time cooling strategy into building design in order to prevent overheating;
- Installing sustainable drainage systems such as permeable paving and infiltration devices. These reduce the risk of flash flooding. Depending on the particular type used, SUDS can also have other benefits such as a reduction in water pollution and a decrease in the urban heat island effect.

National planning policy acknowledges that planning has a key role to play in minimising vulnerability and providing resilience to the impacts of climate change and that local authorities should adopt proactive strategies to mitigate and adapt to climate change. It is important that buildings are designed to ensure resilience not just in the short term but throughout the anticipated lifetime of the building. This should include designing buildings to keep cool and warm without using power through the use of appropriate construction materials, layout and building orientation and the use of green infrastructure for urban cooling, shading, heating and night time cooling. Consideration should also be given to the need for water conservation through a range of water efficiency measures such as the use of low water sanitary equipment, grey water recycling systems and rain water harvesting from water butts to large storage systems.

Policy EM1: Planning for Climate Change Adaptation

1. All development is required to be designed to be resilient to, and adapt to the future impacts of, climate change through the inclusion of the following adaptation measures:
 - a) using layout, building orientation, construction techniques and materials and natural ventilation methods to mitigate against rising temperatures;
 - b) optimising the use of multi-functional green infrastructure, including tree planting for urban cooling, local flood risk management and shading,

- c) incorporating water efficiency measures, such as the use of grey water and rainwater recycling, low water use sanitary equipment
 - d) minimising vulnerability to flood risk by locating development in areas of low flood risk and including mitigation measures including SUDS in accordance with Policy EM4;
 - e) Where applicable, maintain and enhance the canal network to reflect the canals' role in urban cooling.
 - f) seek opportunities to make space for water and develop new blue infrastructure to accommodate climate change.
2. Applicants will be required to set out how the requirements of the policy have been complied with including justification for why the above measures have not been incorporated.
3. Where justification for non-compliance with the requirements is based on viability, this will need to be clearly demonstrated through an open book financial appraisal.

Some of the measures identified in this policy also fulfil other functions. For example, the appropriate provision of green infrastructure also has an important recreational and ecological role. This supports the provision of multi-functional green spaces and supports the most efficient use of developable land. Adapting to the future climate should therefore be seen as important in the delivery of well-designed sustainable communities.

It is recognised that the scale and nature of certain developments may mean some of the adaptation measures listed would not be suitable. For example, extensions or change of use proposals may not present the opportunity to incorporate green infrastructure. Where this is the case, applicants should demonstrate that they have sought to maximise resilience to the impacts of climate change in other ways, particularly in respect of Building Regulation requirements and water conservation.