



THE BRUNTWOOD INITIATIVE FOR SUSTAINABLE CITIES AT THE UNIVERSITY OF MANCHESTER

Climate change is one of the greatest challenges of the 21st century.
Our cities and towns must be prepared to adapt.

Eco Cities is a joint initiative between the University of Manchester and Bruntwood, drawing on the expertise of the Manchester Architecture Research Centre, Centre for Urban Regional Ecology and Brooks World Poverty Institute. The project will focus on the response of urban areas to the impacts of climate change, looking particularly at how we can adapt our cities to the challenges and opportunities that a changing climate presents.

Eco Cities seeks to provide Manchester, by the end of 2010, with its first blueprint for an integrated climate change adaptation strategy. This will be based on leading scientific research, extensive stakeholder engagement, and best practice examples of new programmes successfully piloted during a three-year period.

A Global Challenge

Climate change is now accepted as a major global challenge that is with us and is set to intensify. There is strong scientific evidence to suggest that our changing climate is the result of human behaviour, in particular our carbon dioxide emissions.

It is clear that aside from the need to reduce the emissions of greenhouse gases to limit the extent of future climate change, we must look at how we can respond to projected climate change impacts to ensure that our towns and cities remain 'liveable'.

Cities have a crucial role to play in a future where climate change becomes part of everyday life. For the first time in history, over half the world's population now lives in urban areas. As centres of population and commerce, cities are responsible for large volumes of greenhouse gas emissions. As societies look to reduce their emissions of greenhouse gases, the way that people travel, live and work in cities is likely to evolve. Also, cities and their residents are vulnerable to the impacts of climate change including flooding and heat waves. We will need to develop ways to respond and adapt to these impacts and build an environmentally sustainable future.

Eco Cities is designed to be an international initiative, reflecting the global scope of the climate change agenda. The project seeks to position Manchester at the centre of a global network of individuals and organisations with an interest in climate change adaptation.

Together, we will share best practice on how cities are designed, built and managed in the face of a changing climate. Manchester will benefit from mutual learning with partner cities, and lessons will be shared on issues such as managing flood risk and adapting to higher temperatures.

The Eco Cities project will facilitate the development of climate change adaptation strategy blueprints in at least two partner cities.

Climate change impacts in Greater Manchester

Climate change research provides an indication of how Greater Manchester will be affected in the future by climate change.

- Rainfall patterns are expected to change dramatically as we move through the 21st Century. The winter months will become wetter with up to 30% more rainfall. However, it is thought that summers will become drier, with as much as 60% less rain.
- Temperatures are expected to increase by up to 6°C by the end of the century, with peak temperatures reaching 34°C.
- Weather patterns will become more extreme. There will be more intense rainstorms, heat waves and droughts.

These changes in Manchester's climate will lead to a number of impacts. These include:

- Increased flooding.
- Higher risk of drought during the summer months.
- Ground instability with threats of landslides and subsidence.
- Increase incidence of heat waves in urban areas.
- Greater threat of damaging storms.

Eco Cities will ask:

- How do we develop new low-carbon buildings and adapt existing properties to be more resilient to future temperature increases and more extreme weather?
- As the world warms, how do we keep the temperatures in our homes, workplaces and public spaces comfortable, without accelerating climate change via energy-hungry technology?
- As the risk of flooding intensifies, how can cities and their residents be made less vulnerable to this threat?

For further information visit: www.ecocitiesproject.org.uk

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