

Green infrastructure to combat climate change

part of the
**North West Climate
Change Action Plan**

Green infrastructure has been defined in North West England as the region's life support system - the network of natural environmental components and green and blue spaces that lie within and between our cities, towns and villages and provide multiple social, economic and environmental benefits¹.

A key benefit of green infrastructure is in helping us to combat climate change².

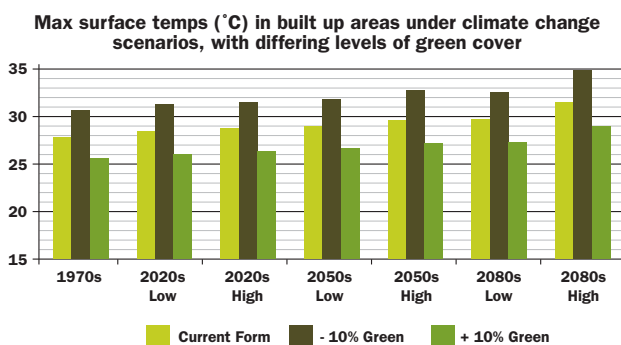
communityforestsnorthwest
supporting the mersey, red rose and pennine edge forests

Green infrastructure and climate change - an overview

Did you know?

The European summer heatwave of 2003 claimed 52,000 lives⁴. By the middle of the century such extreme temperatures will be normal, whereas by the end of the century they will seem mild⁵.

Increasing green cover by 10% in urban areas could keep extreme surface temperatures at current levels up until the end of the century, despite climate change⁶.



A 10% increase in green cover could also reduce the volume of surface water runoff in extreme rainfall events by 14%. Whilst this does not fully counter the increase in rainfall with climate change, it makes a significant contribution to surface water management and reducing flood risk⁶.

Green infrastructure can help us to both mitigate and adapt to climate change.

Mitigation refers to reducing greenhouse emissions and concentrations in order to limit the severity of future climate change.

The mitigation role of green infrastructure is limited but important, and includes:

- Carbon storage and sequestration
- Fossil fuel and material substitution
- Food production
- Reducing the need to travel by car.

Adaptation recognises that there is now some inevitable climate change locked into the system. It seeks to build capacity and take action to respond to the likely impacts.

In the UK, where climate change scenarios³ suggest warmer wetter winters and hotter drier summers, with more extreme events such as heatwaves, droughts and heavy rainfall, **the adaptation role of green infrastructure is perhaps more significant**. It includes:

- Moderating urban temperature extremes to ensure that towns and cities continue to be attractive and comfortable places to live, work, visit and invest
- Reducing flood risk and managing surface water
- Allowing species to move northwards to new 'climate spaces' through a more permeable landscape
- Providing a recreation and visitor resource for a more outdoors lifestyle, and helping to divert pressure from landscapes which are sensitive to climate change.

¹ www.greeninfrastructurenw.co.uk

² www.naturaleconomynorthwest.co.uk

³ www.ukcip.org.uk

⁴ www.earth-policy.org/Updates/2006/Update56.htm

⁵ Stott, P.A., Stone, D.A., Allen, M.R. (2004).

Human contribution to the European heatwave of 2003. Nature, 432 (7017), 610-614.

Green infrastructure in the North West Climate Change Action Plan

The potential for green infrastructure to mitigate and adapt to climate change impacts in North West England is being explored by Community Forests North West⁷ through the North West Climate Change Action Plan⁸.

The stages to this work will be informed by an expert advisory panel and stakeholder workshops.

Climate change, risks, opportunities and priorities

Climate change projections will be used to identify risks and opportunities which green infrastructure can help to both reduce and realise. These will be prioritised for North West England.

Evidence base of research, policy and delivery

An evidence base⁹ will be created to hold a review of key research findings relevant to the climate change role of green infrastructure, supportive policies, and delivery projects.

Green infrastructure climate change assets

The most critical areas of the North West for the various climate change roles of green infrastructure will be identified and mapped. This will highlight where green infrastructure needs to be safeguarded and managed, if it exists, and enhanced and created, if it does not exist¹⁰.

Detailed study of two strategically important areas

The climate change roles of green infrastructure will be investigated in more detail in two key areas. These could: have a specific climate change risk or opportunity which green infrastructure can help address, be critical areas for the climate change roles of green infrastructure, be areas which are subject to change or investment.



North West Green Infrastructure Climate Change Action Plan

The work will lead towards the development of a plan, with actions which can be delivered by partners and stakeholders across the region to ensure that the climate change benefit of green infrastructure is maximised.

⁶ Gill, S.E., Handley, J.F., Ennos, A.R., Pauleit, S. (2007). Adapting cities for climate change: the role of the green infrastructure. *Built Environment*, 33 (1), 115-133.

⁷ www.cfnw.org

⁸ www.climatechangenorthwest.co.uk

⁹ Available from www.greeninfrastructurenw.co.uk

¹⁰ The Mersey Forest is exploring how best to manage trees and woodlands for their climate change roles as part of its contribution to the European ForeStClim Interreg IVB project (www.forestclim.eu)

A call for action!

Public and private stakeholders in the North West and beyond are already developing policies and delivering projects which impact both positively and negatively on our green infrastructure.

It is essential that changes, where they occur, maximise the role of green infrastructure in combating climate change.

Please contact us for more information and to get involved in developing and implementing the emerging North West Green Infrastructure Climate Change Action Plan.

Your support is crucial in ensuring that the Action Plan can and will be delivered.

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