

Green infrastructure to combat climate change

part of the
**Northwest Climate
Change Action Plan
and GRaBS project**

Green infrastructure has been defined in Northwest 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.

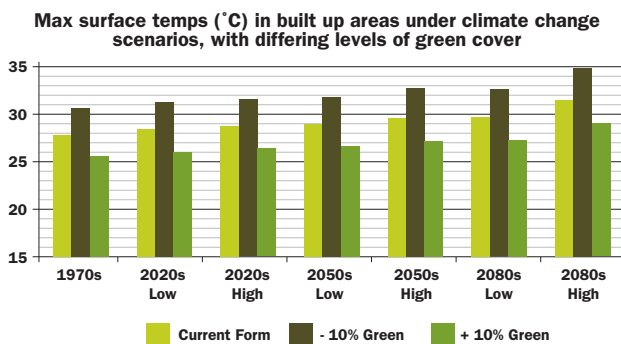
A key benefit of green infrastructure is in helping us to combat climate change².

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 substitution
- 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 projections³ 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:

- Managing high temperatures
- Managing water supply
- Managing riverine flooding
- Managing coastal flooding
- Managing surface water
- Reducing soil erosion
- Helping other species to adapt
- Managing visitor pressure.

¹ www.ginw.co.uk

² www.naturaleconomynorthwest.co.uk

³ <http://ukclimateprojections.defra.gov.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 - combating climate change in England's Northwest

The potential for green infrastructure to mitigate and adapt to climate change impacts in Northwest England is being explored by Community Forests Northwest, on behalf of the Northwest Development Agency, through the Northwest Climate Change Action Plan⁷. This is being undertaken as part of the 'Green and Blue Space Adaptation for Urban Areas and Eco-towns (GRaBS)' project⁸.

A key aim of GRaBS is to ensure existing and new mixed use urban development is adapted to the impacts of climate change through improving local and regional planning policy to put in place green and blue infrastructure.



Our work in Northwest England includes:

Raising awareness and improving understanding amongst stakeholders and the wider community of how green infrastructure helps to combat climate change

We will share best practice from Europe and promote work within the Northwest. We will also continue to update our online evidence base⁹ which reviews key research findings, supportive policies, and innovative delivery projects.

Highlighting where green infrastructure is most critical in the region for combating climate change

This will include sharing a risk and vulnerability assessment tool developed by the University of Manchester to aid the strategic planning of climate change responses.

Embedding the importance of green infrastructure in combating climate change into key policies within the region

Developing a Northwest 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.climatechangenorthwest.co.uk

⁸ The GRaBS project (www.grabs-eu.org) has been made possible by the Interregional Cooperation Programme INTERREG IVC, financed by the European Union's Regional Development Fund.

⁹ www.ginw.co.uk/climatechange/search_start.php

A call for action!

Public and private stakeholders in the Northwest 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 Northwest Green Infrastructure Climate Change Action Plan.

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

For more information see

www.ginw.co.uk/climatechange or contact:

Susannah Gill at The Mersey Forest

susannah.gill@merseyforest.org.uk

Tel: 01925 859610