

## Interreg V-A Latvia – Lithuania Programme 2014-2020

### LLI-291, «Enhancement of Green Infrastructure in the Landscape of Lowland Rivers»

## ENGRAVE



## Examples of green infrastructure planning and development in England

Training “Nature aspects in landscape and green  
infrastructure planning”, Biržai, 14.11.2018

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# Study visit to the United Kingdom

## Aims of visit:

- planning approaches,
- cooperation with different stakeholders
- the practical river restoration activities.

Surroundings of Manchester and Liverpool cities

September 25<sup>th</sup> -29<sup>th</sup>, 2018



Peak District National Park (Photo: R.Cassidy)



# Green Infrastructure in the United Kingdom

EU GI strategy and Target 2 of the EU Biodiversity Strategy are conserved and enhanced through the biodiversity, environment, and marine plans and strategies in each of the four countries.

All of the devolved biodiversity and GI strategies are supported by stakeholders partnerships involving a wide range of government, conservation agency, NGO, academic and business organisations.



# Green Infrastructure in the United Kingdom

- ‘*green infrastructure*’ **in the past** – tend to focus on urban green spaces (any vegetated areas of land or water within or adjoining an urban area)
- ‘*green infrastructure*’ **now** – a network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities
- Wider action for networks of green or blue natural and semi-natural areas tend to be covered by biodiversity, environment or marine plans and strategies in each of the four countries of the UK
- National planning policy at the level of the devolved governments provides specific guidance on the integration of green infrastructure principles.

*‘green infrastructure’* - different meanings in different contexts



# Financing of green infrastructure in the UK

Green infrastructure initiatives are financed through a mix of public funds and private initiatives:

- Agri-environment measures funded through CAP Rural Development Programmes;
- Conservation and restoration projects through LIFE-Nature;
- National and state funding for environmental projects.

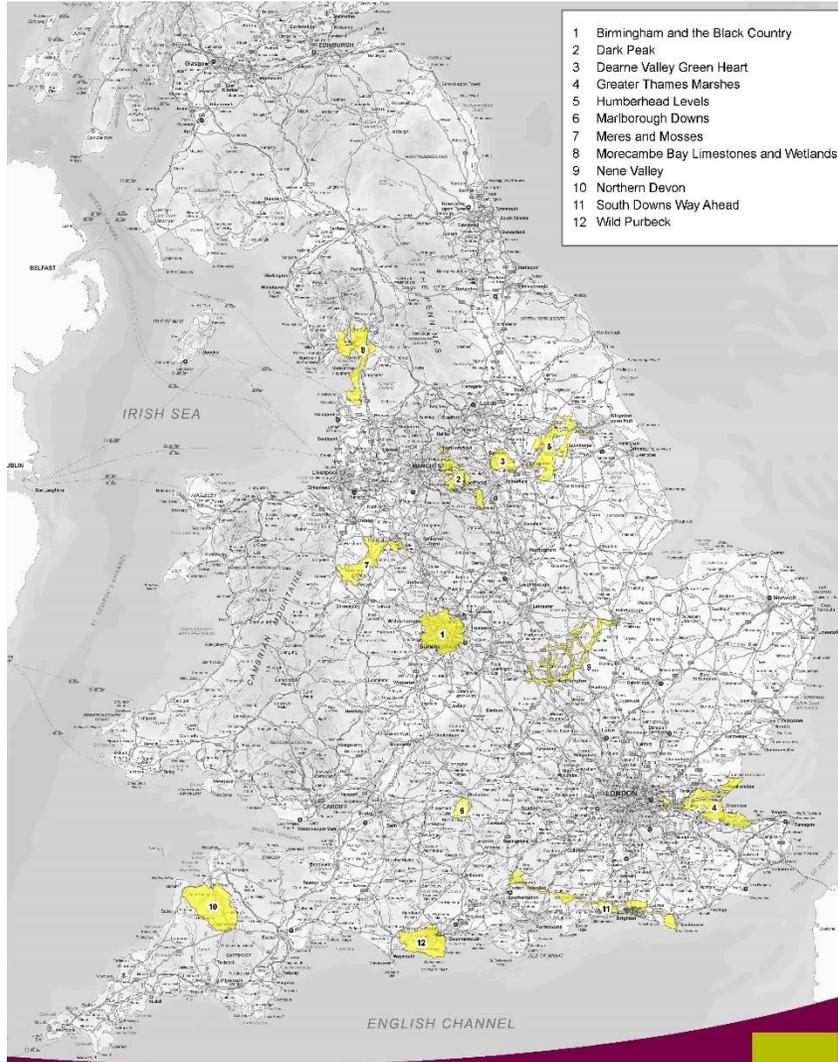


# Green Infrastructure in England

- 'The National Planning Policy Framework' (2012) provides advice and guidelines for planning. It recommends the development of green infrastructure and ecological corridors.
- '*Biodiversity 2020: A strategy for England wildlife and ecosystem services*' published in 2011 - to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people.
- '25 Year Environment Plan' to ensure that it is the first generation to leave the environment in a better state than we inherited.
- 48 Local Nature Partnerships (LNPs) have been established around England to provide a local approach to managing the natural environment in a strategic and integrated way.



# Nature Improvement Areas in England



12 Nature Improvement Areas were established in England in 2012 to create joined-up networks of individual parcels of land recognised for the value of their nature.

- 1 Birmingham and the Black Country
- 2 Dark Peak
- 3 Dearne Valley Green Heart
- 4 Greater Thames Marshes
- 5 Humberhead Levels
- 6 Marlborough Downs
- 7 Meres and Mosses
- 8 Morecambe Bay Limestones and Wetlands
- 9 Nene Valley
- 10 Northern Devon
- 11 South Downs Way Ahead
- 12 Wild Purbeck





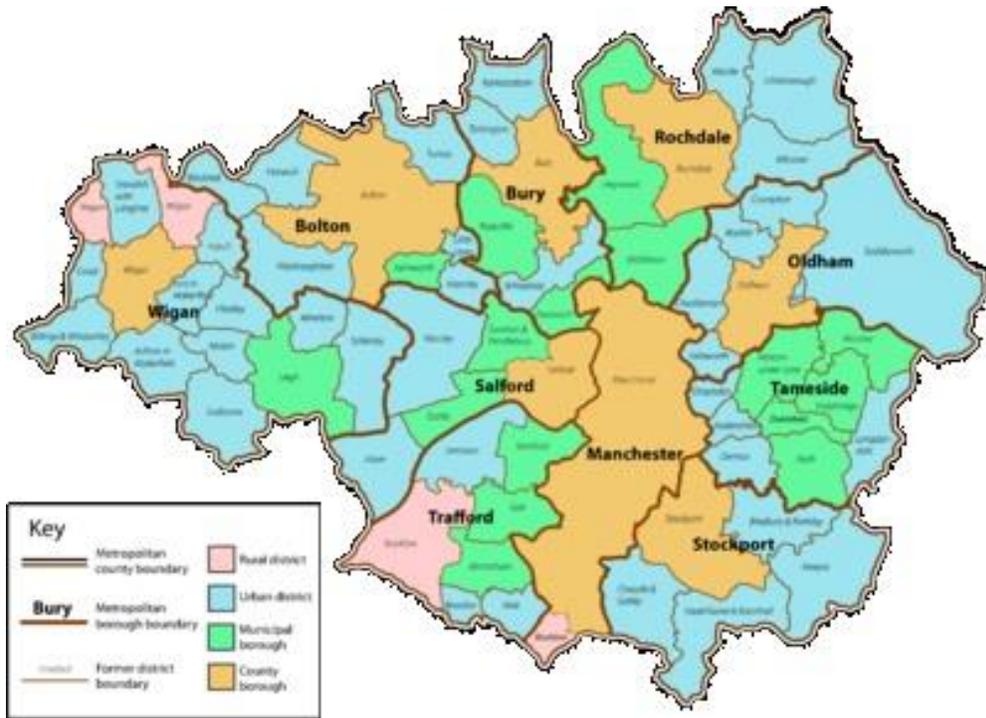
# Good practise principles for GI planning

1. Create and enhance connectivity within and across urban and rural domains;
2. Value GI benefits holistically including all contributions to human wellbeing in terms of ecosystem services;
3. Manage a variety of GI landscapes to optimise ecosystem services;
4. Assess and manage GI as part of an economic growth strategy;
5. Design planning strategies and policies to protect and enhance GI at multiple scales;
6. Use collaborative and participatory processes;
7. Improve the evidence base of types and quality of GI;
8. Develop GI standards which can be monitored and evaluated against measurable indicators;
9. Enable Planning Authorities to fully incorporate GI value into planning decisions by providing knowledge exchange, resources and fit-for purpose tools and mechanisms;
10. Move away from planning goals driven by a focus on short-term economic activity (e.g. GDP) to long-term sustainability goals incorporating impacts on natural capital stocks.



# Regional level: Great Manchester

**General goal:** the economic value of green infrastructure in terms of five benefits: economic growth and investment; increasing land and property values; labour and land productivity; tourism; and health and wellbeing.

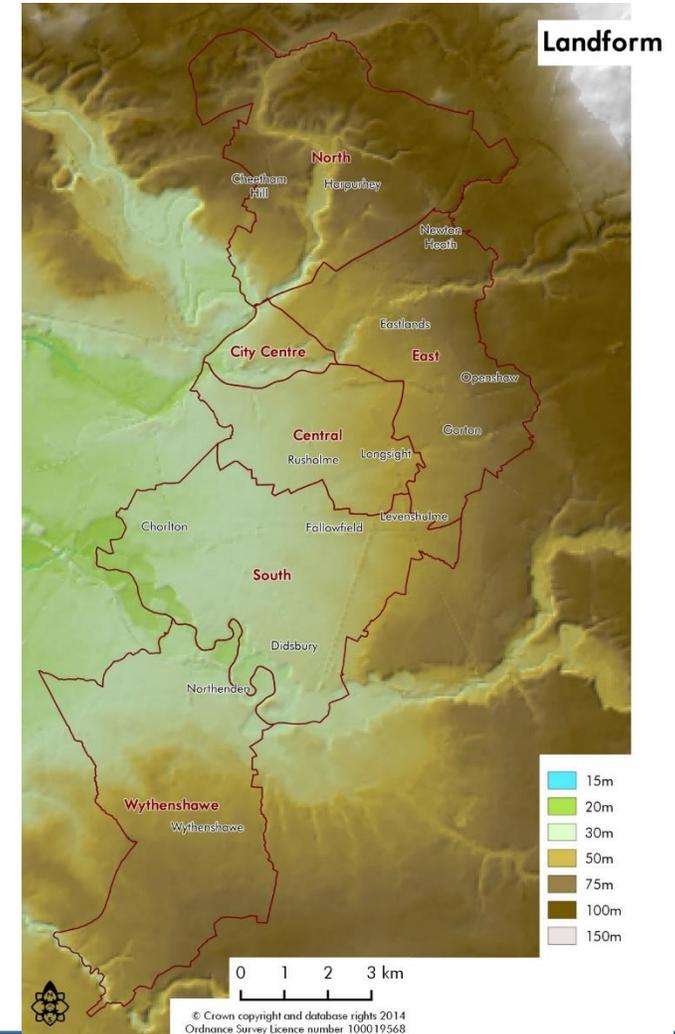


Greater Manchester Green Infrastructure Assets

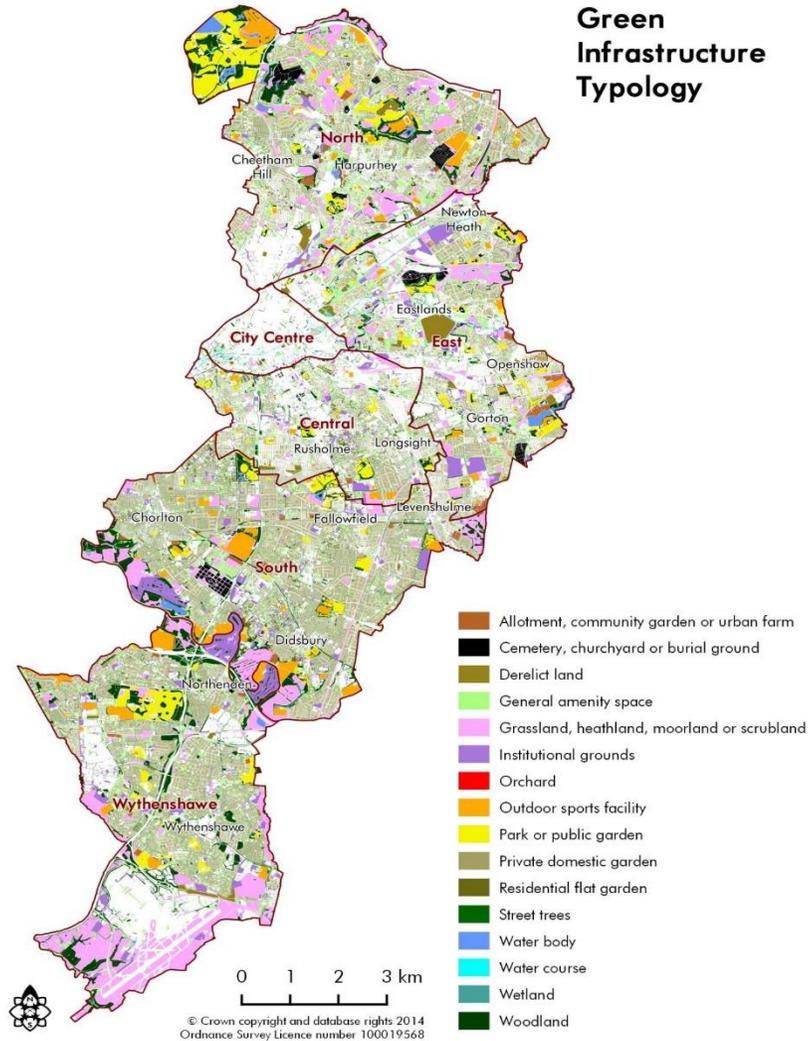


# Regional level: Great Manchester

- Implementation
  - Setting a tasks (local economy, health, water storage, flood management, climate mitigation etc.)
  - Landform evaluation (low-lying landscape, geology etc.)



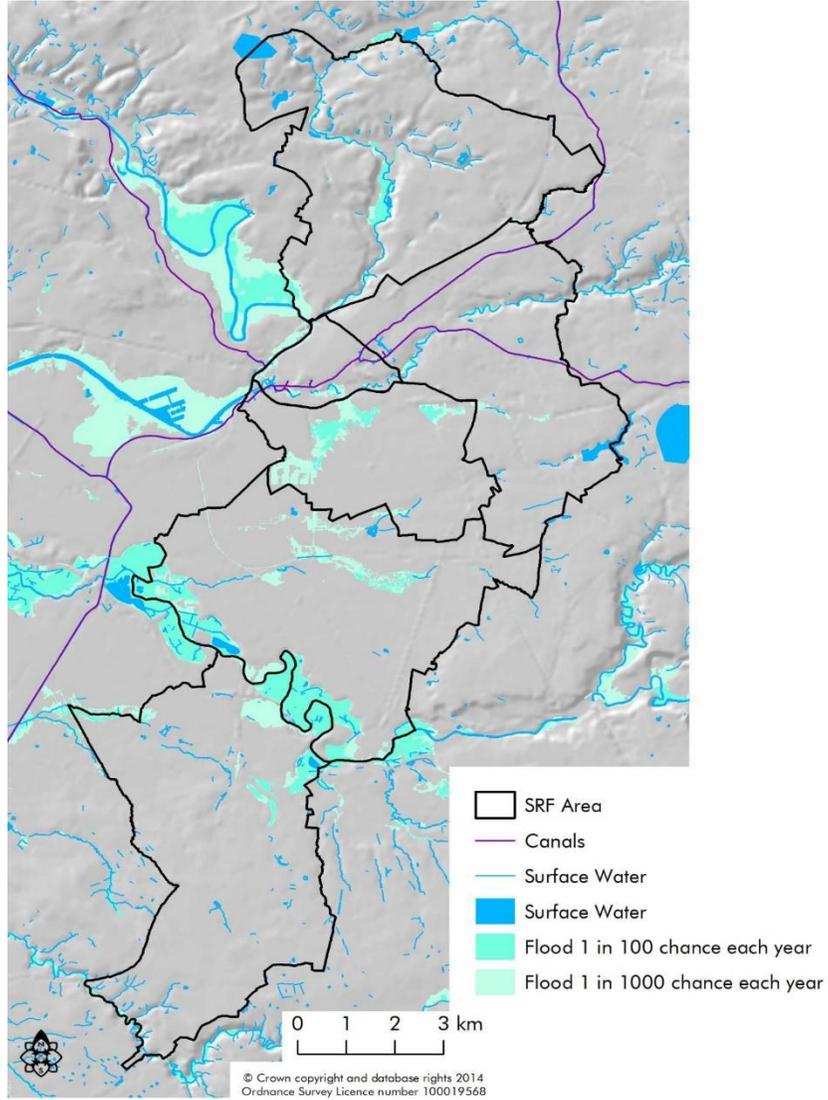
# Regional level: Great Manchester



- Making GI typology (gardens, water bodies, street trees, grasslands, forests etc.)
- Making different spatial analysis (tree canopy, open spaces etc.)



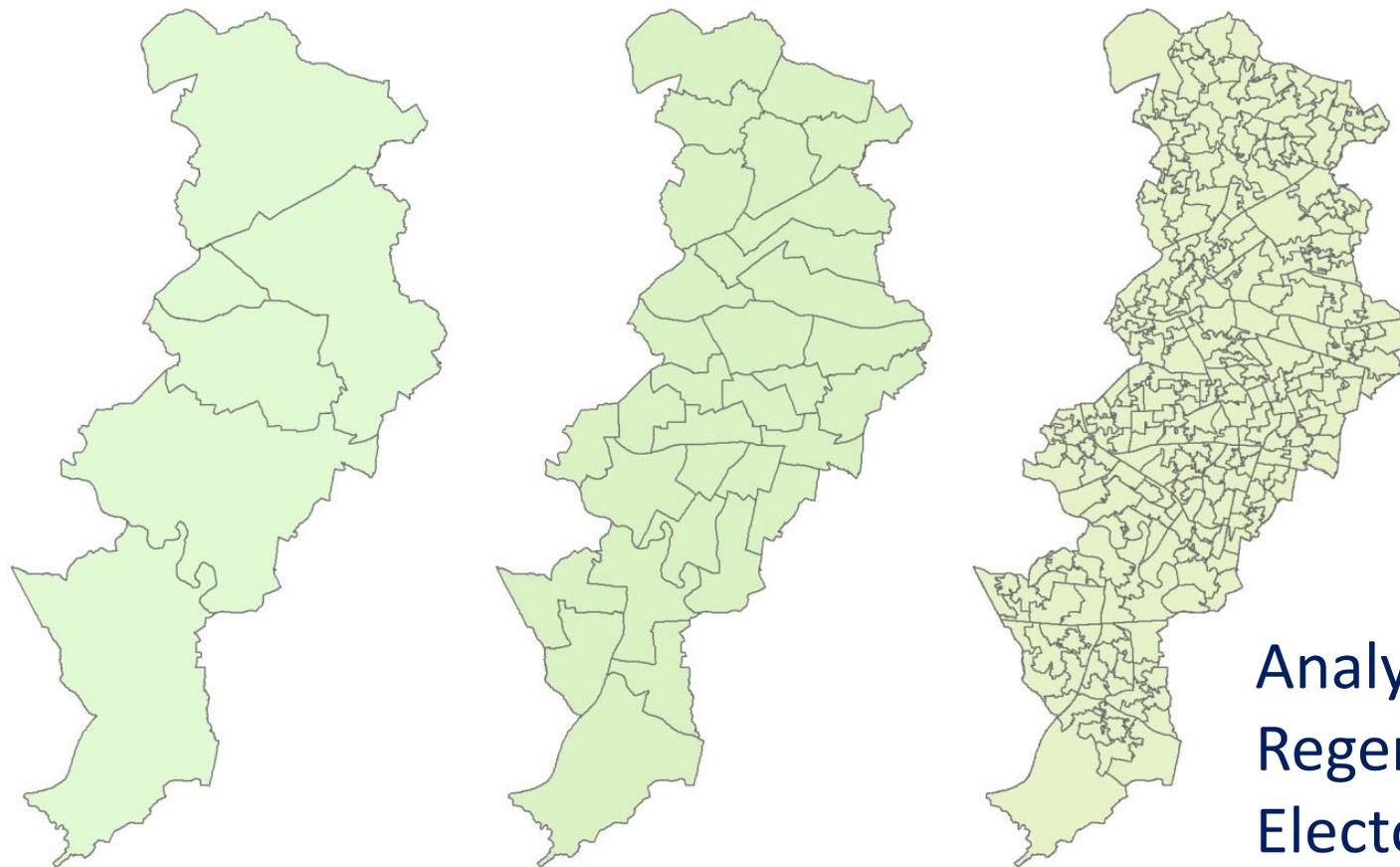
# Regional level: Great Manchester



## Blue infrastructure assessment



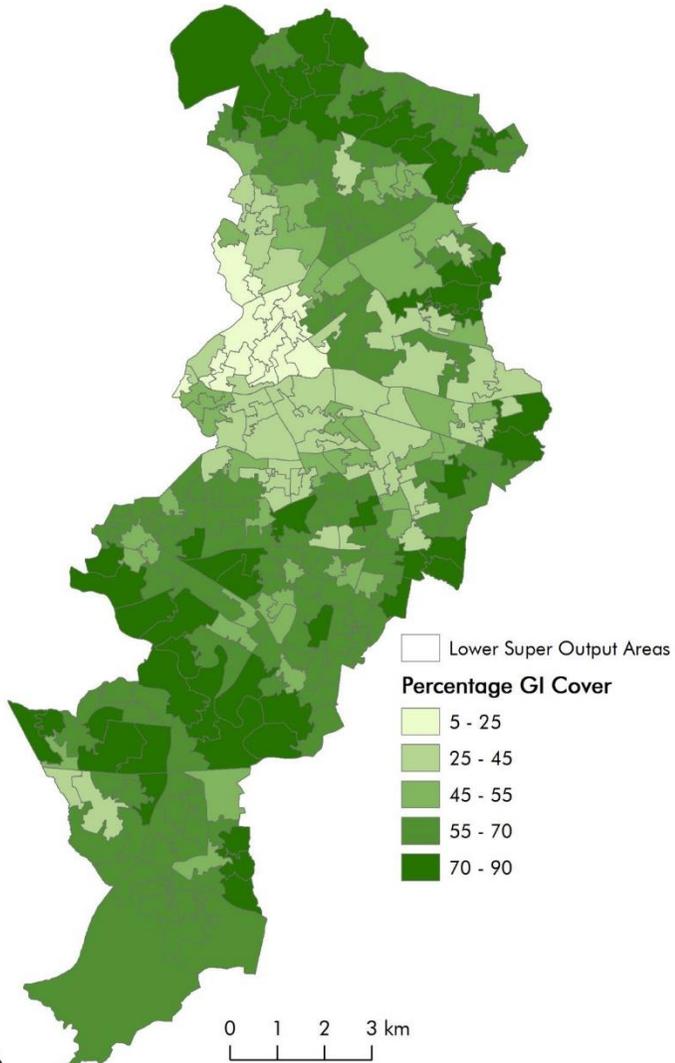
# Regional level: Great Manchester



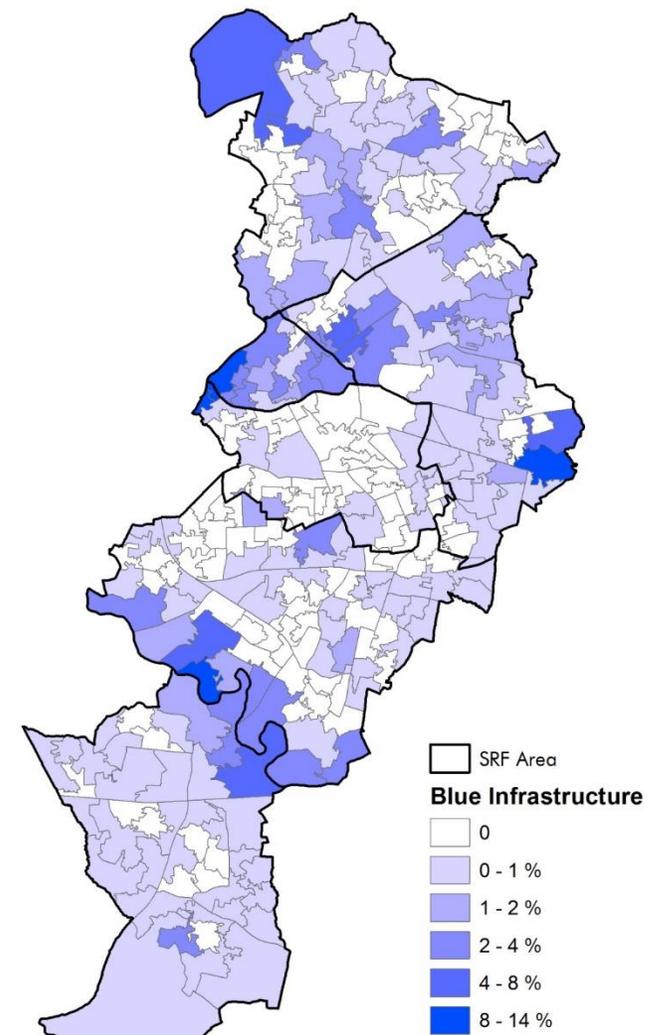
Analysis units from left to right: Strategic Regeneration Framework Areas; Electoral Wards; and Lower Super Output Areas



# Regional level: Great Manchester



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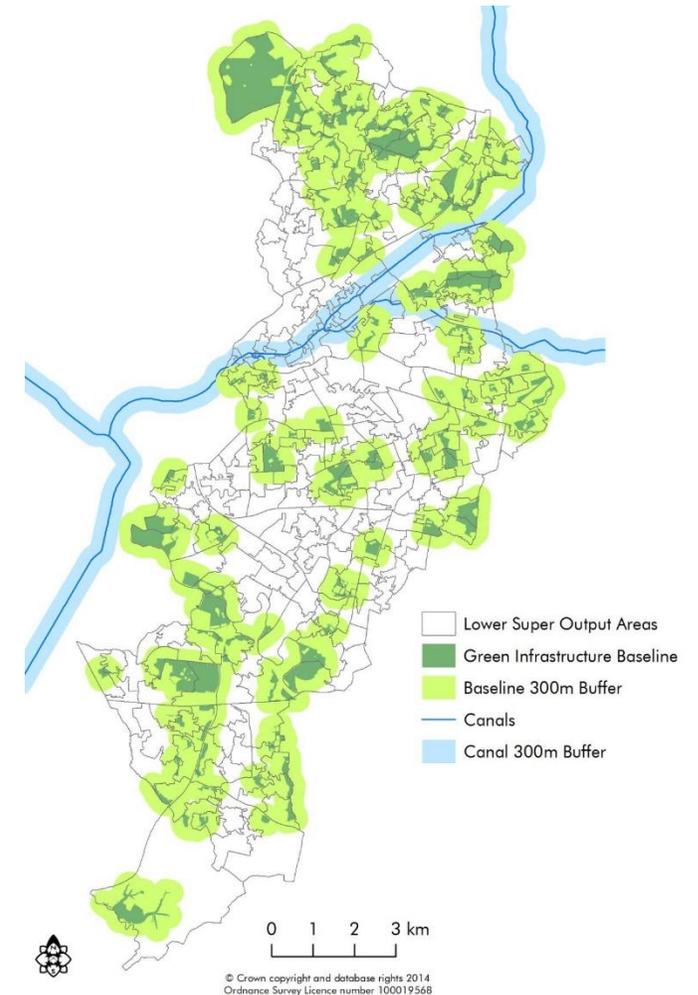
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# Regional level: Great Manchester

## Benefit analysis:

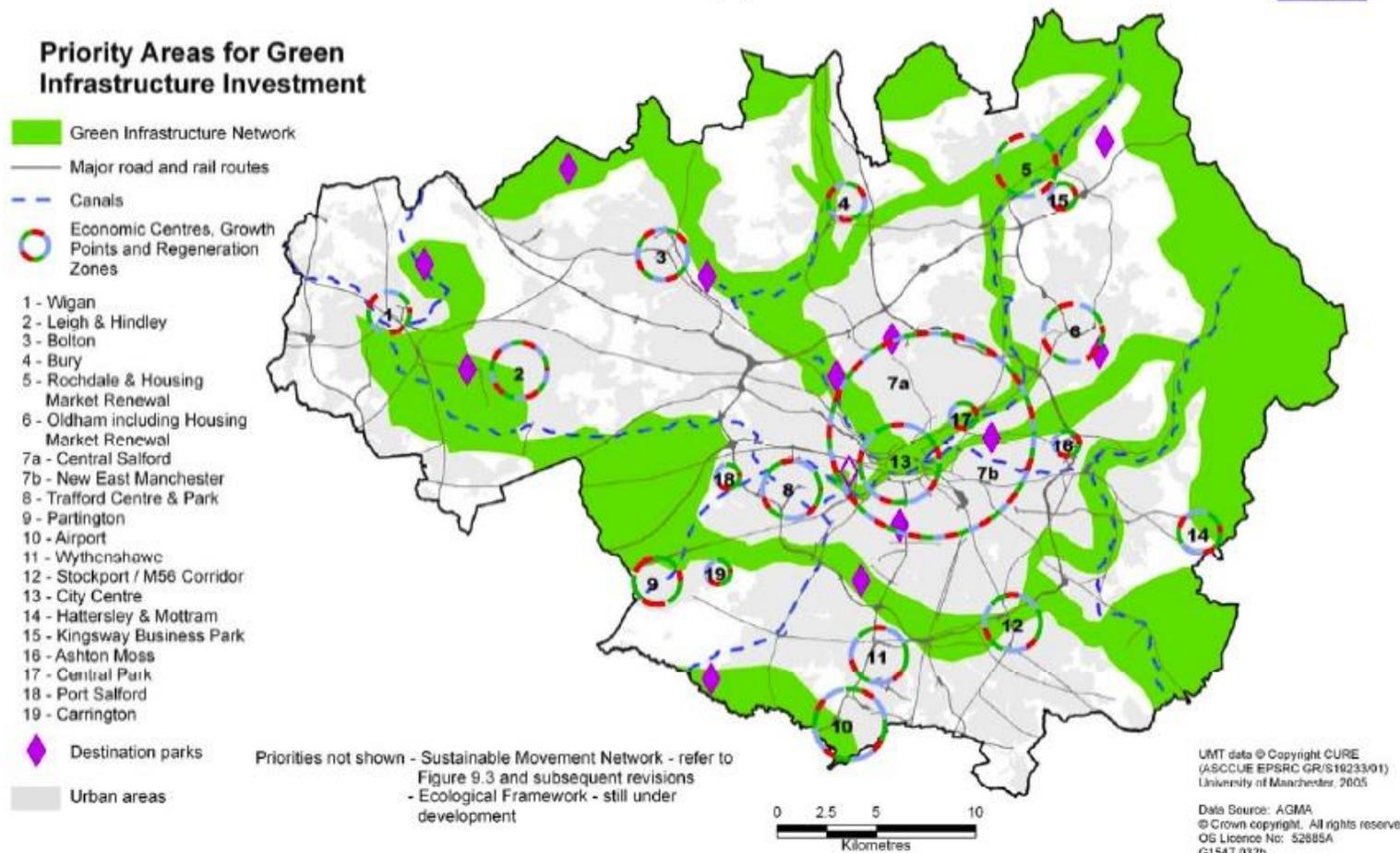
- Economic growth and investment
- Property values (also links to land productivity)
  - ✓ Commercial and industrial
  - ✓ Residential
- Visitor attraction and tourism
- Health and wellbeing (also links to land productivity)
  - ✓ Physical activity
  - ✓ Mental health



# Regional level: Great Manchester



Figure 9.5 Greater Manchester - Green Infrastructure Framework to Support Growth





# Regional level: Liverpool city region

**General goal:** to support the aspirations for the future sustainable development of Liverpool to ensure that it is one of the best places to live, work, invest and enjoy life.



Main benefits of  
green infrastructure



# Regional level: Liverpool city region

The main steps involve:

- **Typology** - to classify all of the land in the city (green roofs, agricultural land, orchards, parks, domestic gardens etc.)
- **Functionality** – to determine which polygons currently perform which of 28 functions (e.g. recreation, aesthetic, evaporative cooling etc.)
- **Linking** the functions of GI to benefits for human and other species
- **Identify** the greatest needs for each functions (setting of thresholds)
- **Targeting** – identify four categories of land:
  - ✓ Areas where GI assets and their functionality should be protected
  - ✓ areas which should be remedied by suitable creation or enhancement of GI;
  - ✓ areas where GI should also be protected if possible, because the need may increase in the future,
  - ✓ no action required



# Regional level: Liverpool city region



## Regional level: Liverpool city region

Identification of **Strategic Investment Areas** by **pinches** – location of issues, opportunities for investment and sustainable development are reduced

Pinches on sites were identified by considering:

- The functionality of green infrastructure in the area of search i.e. what is the existing green infrastructure achieving?
- The identified needs in the area of search e.g. water management or air quality issues
- If GI planning and implementation on site is a suitable solution to address the needs of the site





# Regional level: Liverpool city region

Suggested Green Infrastructure Intervention	Increase tree cover on and around site	Install green roofs	Install green walls	Functional grassland and other GI types	Water-related Interventions	Linear features and connectivity
3MG	1/4	1/4	1/4	1/4	1/4	1/4
Alder Hey Children's Hospital	1/4	1/4	1/4	1/4	1/4	2/4
Atlantic Park & Senate Business Park	2/4	1/4	1/4	2/4	1/4	1/4
Daresbury	0	0	0	0	0	0
Dunningsbridge Road (East)	1/4	1/4	1/4	1/4	1/4	1/4
Edge Lane sites	2/4	2/4	2/4	2/4	1/4	1/4
Estuary Commerce Park	1/4	1/4	1/4	1/4	1/4	1/4
Former landfill (Hedco), West Bank Dock Estate	1/4	1/4	1/4	1/4	1/4	1/4
Former St. Michael Golf Course, south side	1/4	1/4	1/4	1/4	1/4	1/4
GreenPrint for Growth	4/4	3/4	3/4	4/4	3/4	3/4
Haydock Estate	1/4	1/4	1/4	1/4	1/4	1/4

Suggestions for GI interventions

Key

Low impact

Very significant impact



# Regional level: Liverpool city region



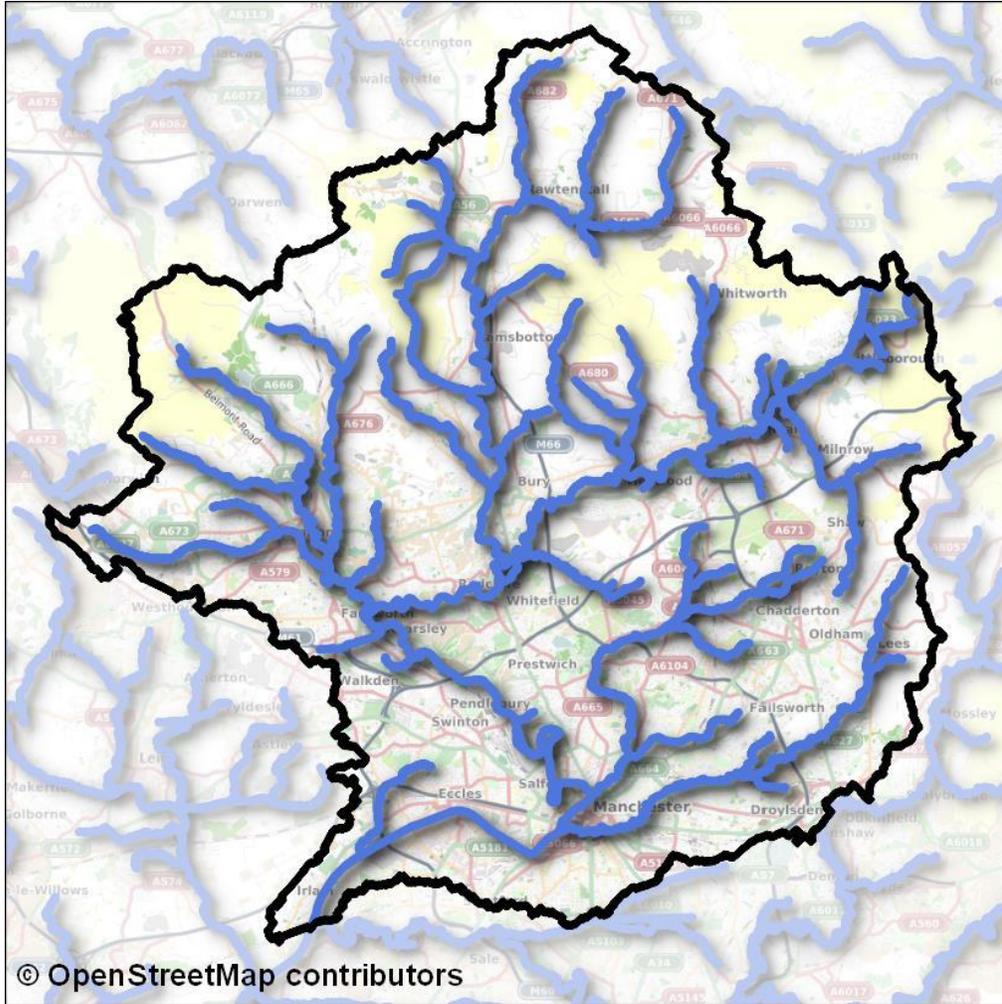
# River Irwell Catchment Pilot

## General goals:

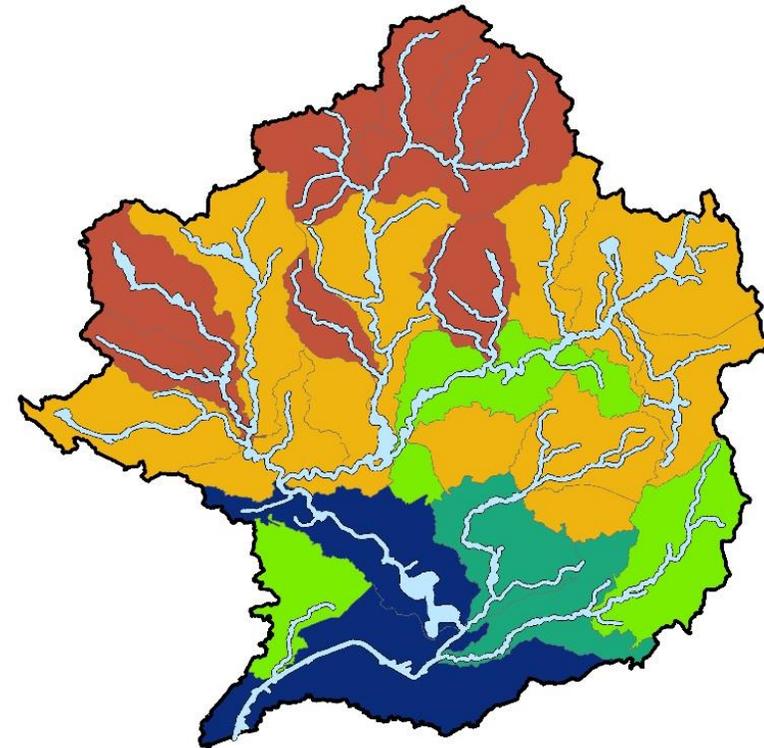
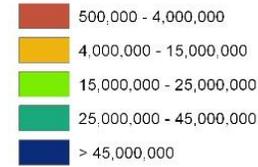
- Reducing diffuse pollution from rural and urban sources
- Restoring the condition of riparian and aquatic habitats.
- Construction of GIS model or tool, which demonstrates
  - what GI interventions to apply in particular locations
  - where to implement GI solutions to get the maximum benefit.
- The main steps involve:
  - Identifying water problem issues - list of common sources of contamination
  - Development of GIS model, consisting of “layers” of different landscape features - each providing a potential pathway for pollutants or water;
  - GI Opportunity assessment – “heat map” inventively cases study areas for more detailed assessment
  - Involving stakeholders in weighting areas for implementation of GI solutions
  - Spatial prioritization of GI solutions



# River Irwell Catchment Pilot



Total value of ecosystem services, £



0 1.25 2.5 5 7.5 10 Miles



# River Irwell Catchment Pilot



Multi-functionality is a key concept for GI

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## ENGRAVE



Thank you for the attention!

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