

**Paesaggio zerO 2008**  
**UK Case Study**

**Green Infrastructure:  
Planning at the Landscape  
Scale?**

**Sue Kidd**

**Department of Civic Design**



# Green Infrastructure: Planning at the Landscape Scale?

Why ?

What ?

How ?



UNIVERSITY OF  
LIVERPOOL

Department of Civic Design 1909 – 2009 : Celebrating 100 years of planning research and education

# Why? - Limitations of traditional UK approach

	An English Countryside Agency View	WHAT IS LANDSCAPE?	A Welsh LANDMAP View
<b>Social Science</b> <i>Landscape Conservation</i>	<b>Experience</b>	How people perceive the landscape influences how it is used or valued.	<b>Visual and Sensory</b>
	<b>Land Use</b>	The present day pattern of land use, such as settlement, farming, energy production and forestry.	<b>Culture History/ Archaeology</b>
	<b>History</b>	Landscapes have also been shaped by past patterns of human activity.	
<b>Science</b> <i>Nature Conservation</i>	<b>Wildlife</b>	The types and abundance of plants and animals, determined by the physical backcloth of the 'natural' environment and by economic and social factors	<b>Biodiversity</b>
	<b>Natural Form</b>	Geology, landform, river and drainage systems and soils shape the land and its 'usefulness' for agriculture and other human functions.	<b>Earth Science</b>
			<b>Function</b>
			<b>Form</b>

# Why? - Limitations of traditional UK approach

## Nature Conservation

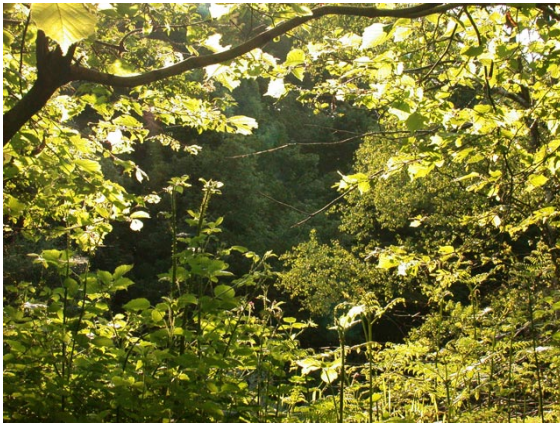
*Nature Conservancy Council*

Sites of Special Scientific Interest

National Nature Reserves

Local Nature Reserves

Sites of Local Biological Importance



## Landscape Conservation

*Countryside Commission*

National Parks

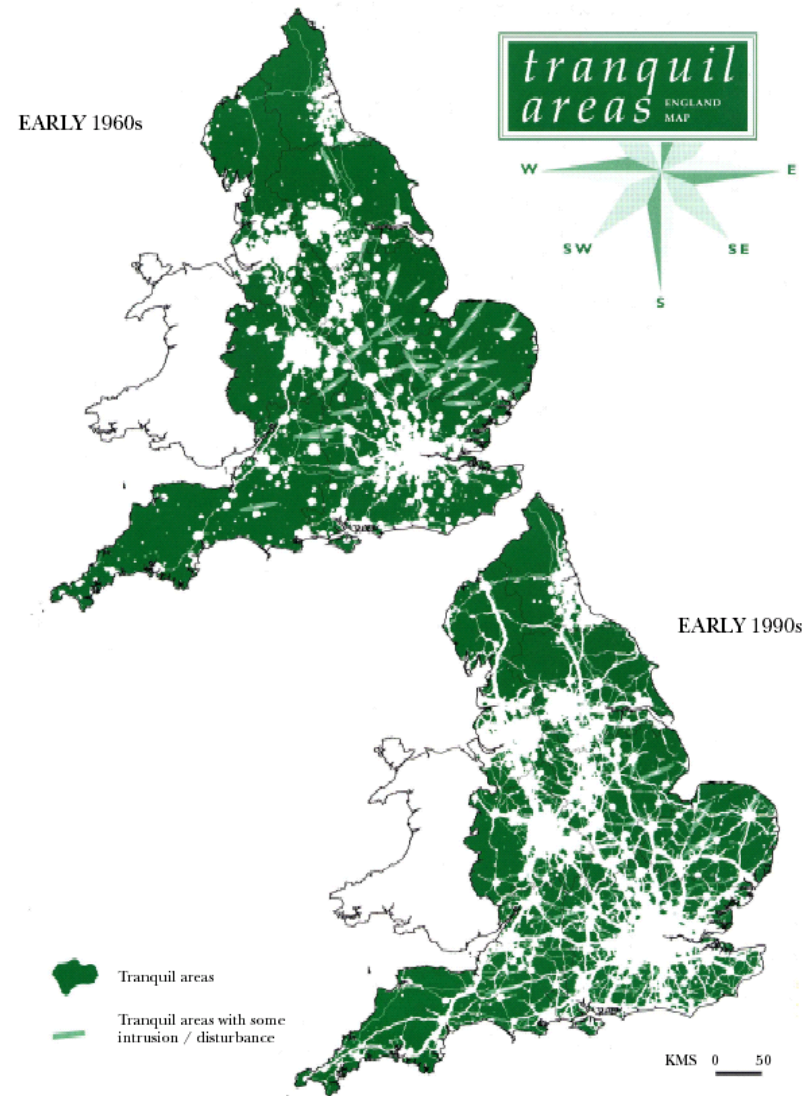
Areas of Outstanding Natural Beauty

Areas of Great Landscape Value



# Why? - Limitations of traditional UK app

*20<sup>th</sup> century  
landscape  
change*



# Why? - Limitations of traditional UK approach

## Nature Conservation

Countryside fragmentation

Reducing habitat quality

Loss of species

Questioning basis of site designation

*Convention on Biodiversity*

*Ecosystems Approach*

*Ecosystem Services*

*Implications of climate change*

***Natural Areas***

## Landscape Conservation

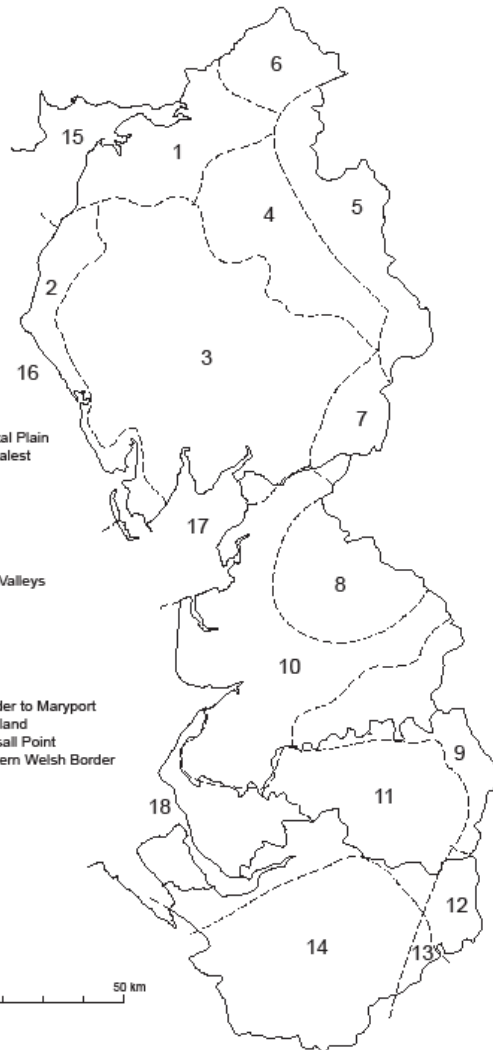
Loss of character and quality in 'ordinary landscapes'  
Why should some landscapes be valued more than others?

*Landscape Character Assessment*

*EU Landscape Directive*



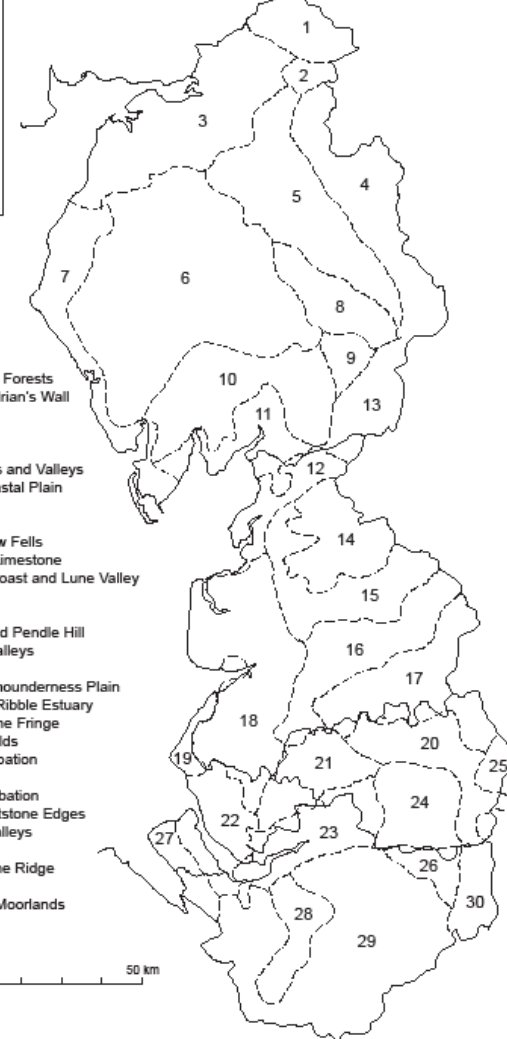
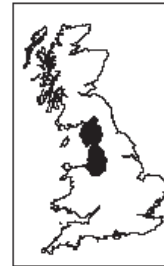
## Natural Areas



- 1 Solway Basin
  - 2 West Cumbrian Coastal Plain
  - 3 Cumbrian Fells and Dalest
  - 4 Eden Valley
  - 5 Northern Pennines
  - 6 Border Uplands
  - 7 Yorkshire Dales
  - 8 Forest of Bowland
  - 9 Southern Pennines
  - 10 Lancashire Plain and Valleys
  - 11 Urban Mersey Basin
  - 12 Southwest Peak
  - 13 Staffordshire Uplands
  - 14 Mosses and Meres
- Maritime Natural Areas
- 15 Western Scottish Border to Maryport
  - 16 Maryport to Walney Island
  - 17 Walney Island to Rossall Point
  - 18 Rossall Point to Northern Welsh Border

0 50 km

## Countryside Character Areas



- 1 Border Moors and Forests
- 2 Tyne Gap and Hadrian's Wall
- 3 Solway Coast
- 4 North Pennines
- 5 Eden Valley
- 6 Cumbria High Fells and Valleys
- 7 West Cumbria Coastal Plain
- 8 Orton Fells
- 9 Howgill Fells
- 10 South Cumbria Low Fells
- 11 Morecambe Bay Limestone
- 12 Morecambe Bay Coast and Lune Valley
- 13 Yorkshire Dales
- 14 Forest of Bowland
- 15 Bowland Fringe and Pendle Hill
- 16 East Lancashire Valleys
- 17 South Pennines
- 18 Lancashire and Amounderness Plain
- 19 Sefton Coast and Ribble Estuary
- 20 Manchester Pennine Fringe
- 21 Lancashire Coalfields
- 22 Merseyside Conurbation
- 23 Mersey Valley
- 24 Manchester Conurbation
- 25 High Peak and Gritstone Edges
- 26 Bollin and Dean Valleys
- 27 Wirral
- 28 Cheshire Sandstone Ridge
- 29 Cheshire Plain
- 30 South West Peak Moorlands

0 50 km

# Natural England



UNIVERSITY OF  
LIVERPOOL

Department of Civic Design 1909

2009 Celebrating 100 years of planning research and education

# What ... is green infrastructure?

‘Green infrastructure is the region’s life support system – the network of natural environmental components and green and blue spaces that lies within and between ... cities, town and villages and which provides multiple social, economic and environmental benefits.’

North West Green Infrastructure Guide 2008



UNIVERSITY OF  
LIVERPOOL

Department of Civic Design 1909 - 2009: Celebrating 100 years of planning research and education



# What ... is green infrastructure? Multi-functional

## Ecological Utility

- Biodiversity
- Connectivity within a network
- Air, water and soil quality
- Flood management
- Climate change adaptability

## Social /Economic Utility

- Landscape character / sense of place
- Historic resource
- Setting for culture
- Sport and active recreation
- Mental and physical health
- Education and life-long learning
- Social inclusion
- Availability for social enterprises
- Setting for tourism
- Food, fishery and energy production
- Land and property value

# What ... is green infrastructure?

## *The 'CLERE' model*

an agent for **C**ommunity development

a **L**andscape to be conserved

an **E**cosystem providing urban services

a **R**ecreational resource for health and well-being

A contributor to the local **E**conomy

Barber, 2005



# What ... is green infrastructure?

## *The Building Blocks*

### *Hubs*

Key origins and destinations for people/ wildlife /ecological processes

### *Links*

Green ways/ blue ways connecting the system together

### *Sites*

Smaller areas of ecological and social value

*Plus a supportive 'matrix' or general environmental context*

# How...to plan for green infrastructure?

## 1. Data /policy audit

*Identification of key strategic outcomes*

## 2. Current resource mapping and functionality assessment

*What is the green infrastructure of an area*

*What the green infrastructure is doing and might be doing*

## 3. Needs assessment

*Where is the green infrastructure functioning well and needs to be maintained*

*Where the green infrastructure needs to change*

## 4. Intervention Plan

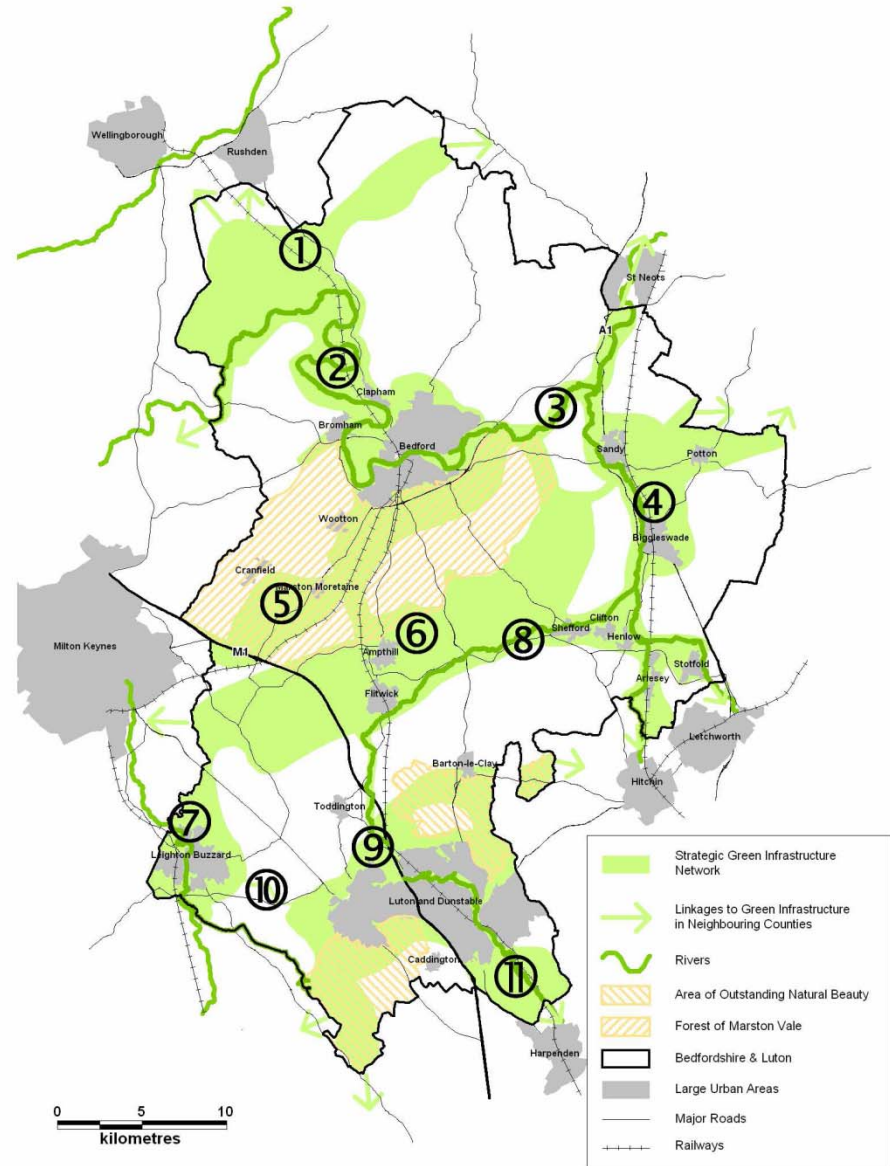
*What will be done to secure change*

**Site 1 Urban Fringe  
Farmland**

**Site 2 Urban Park**

Existin	Potentia	Green Infrastructure Benefit/ Function	Existin	Potenti
	√	Quality of place	√	√
√		Create setting for economic growth	√	√
√		Job creation and social enterprise	√	
√		Sport	√	√
		Physical health	√	√
		Mental health and wellbeing	√	√
	√	Land and property value uplift	√	√
	√	Flood management		
	√	Climate change mitigation/ adaptation		√
	√	Biodiversity in situ	√	√
	√	Environmental connectivity		√
√	√	Air and water quality		
<b>Create new green infrastructure.....</b>		<b>Green Infrastructure Strategy</b>		<b>Conserve and enhance existing</b>

# Bedford and Luton Strategic Green Infrastructure Plan



This map is reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office  
 © Crown Copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or criminal proceedings. (Licence 100017355) (2007)  
 AONS © Crown Copyright.

**BEDFORDSHIRE & LUTON STRATEGIC GREEN INFRASTRUCTURE PLAN**  
 February 2007

Figure F3

The Bedfordshire & Luton Strategic Green Infrastructure Network

# Cambridgeshire Towards an Integrated Green Infrastructure Strategy

R5 Protect acidic heath habitats, encourage restoration and enhance linkages with sites to the west on the Greensand Ridge and to the east to the Breckland

R6 – R7 are concerned with the creation of new corridors of biodiversity to tackle the fragmented pattern

R6 Promote green bridges over major physical barriers to protect and develop biodiversity connectivity

R7 Create new strategic biodiversity and access corridors linking main settlements and green hubs

R8 – R9 focus on providing major greenspaces to serve existing and new populations arising from growth in the sub-region

R8 Create range of new strategic accessible greenspaces around the fringe of Cambridge, Northstowe and the Market Towns in association with planned major developments

R9 Develop existing and create new orbital and strategic recreational routes to the countryside and around the fringes of Cambridge and the Market Towns in association with existing and planned major developments

R10 – R13 concentrate on the enhancement of the recreational access network

R10 Promote enhanced and new waterway links within the Fens to provide improved access by water

R11 Promote biodiversity and landscape enhancements in rural areas particularly along the route of existing Strategic Rights of Way

R12 Promote and improve the network, status and quality of strategic/published routes

R13 Promote the provision of river bridging points in key parts of the Rights of Way network

R14 underlines the importance of providing Landmark Projects as a catalyst for the delivery and public awareness of the Strategy through a variety of exciting projects

R14 Support the creation and development of Landmark Projects to focus the delivery of the Green Infrastructure Strategy and encourage linkage with recreational and historic/cultural sites and projects



Image courtesy of FC

## Spatial Structure of the Green Infrastructure Strategy

### 5.7

The spatial development of the Green Infrastructure Strategy is best understood as comprising three aspects: corridors, sites and areas.

## A. Corridors – Green Grid Network

### 5.8

The first part in the development of the Strategy is the development of an appropriate Green Grid. This seeks to provide a network of routes combining both existing corridors that can be enhanced and a series of new green corridors. In the Cambridge Sub-region the main existing corridors are the rivers and watercourses. The Ouse Valley and Ouse Washes are the most prominent features but the other rivers which in turn filter into a network of ditches and drains and streams, are a key part of the existing network. It is proposed to enhance all the major existing corridors.

The new corridors have been identified to provide linkage of biodiversity clusters or features and also to give enhanced public access. Where possible, these routes have been selected to follow an existing published route or right of way. A range of environmental schemes would be promoted along these routes, resulting in a mosaic of habitats. Corridors will inevitably vary in width dependent on the characteristics of the locality and the opportunities that arise for working with landowners. However, it is envisaged that many of the corridors have the scope to be extensive, exceeding 1km in width. There are some 40 corridors proposed which together will develop a robust green grid and access network. A number of the new corridors pass over relatively open agricultural land connecting disparate habitats and settlements.

## B. Sites – Major Green Infrastructure Sites

### 5.9

Over 20 significant sites are included in the Strategy. A number of these comprise new facilities while others build on existing sites. The majority of the sites are located on corridors and the larger ones form key Green Hubs within the network or provide Landmark Projects. Some of the major sites are important Historic Cultural Centres and include Anglesey Abbey, Denny Abbey, Wimpole Hall and Park, and Wandlebury Country Park. Most of the other sites are related to proposed development sites within the sub-region indicating the provision of new facilities in close proximity to urban expansions and settlements and help provide for shortfalls in the existing network of Green Infrastructure.

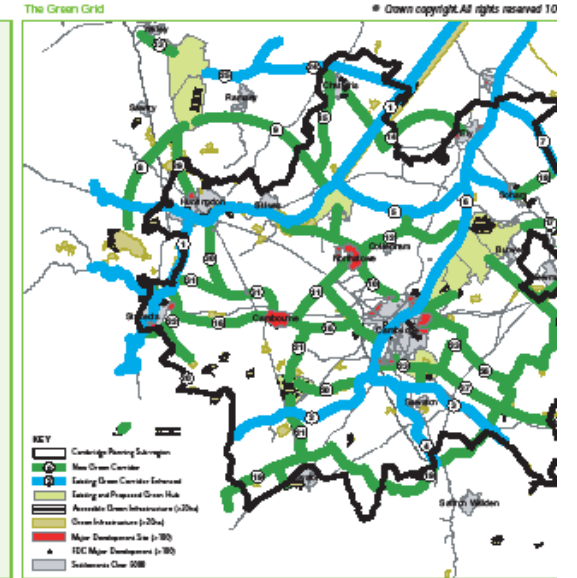
## C. Wider Area Initiatives

### 5.10

Some initiatives and projects will need to spread over a wider area. These relate mainly to agricultural landscapes where the mechanisms for delivery will focus on partnership liaison with landowners and tenants. The initiatives are designed to enhance the local landscape character and biodiversity interest. There are six area initiatives proposed.

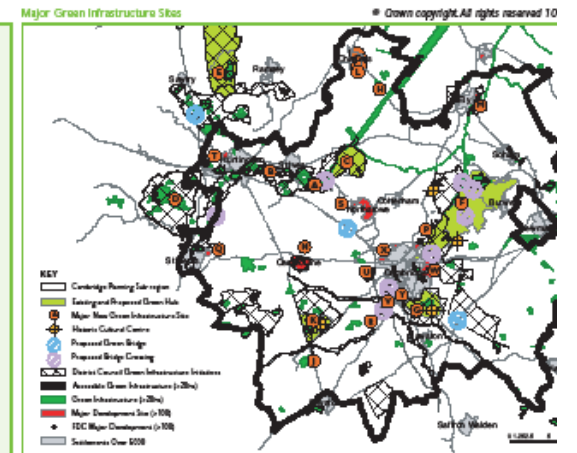
### Green Corridor Initiatives

- 1 Ouse Valley Strategic Green Space Corridor
- 2 River Rhee Enhancement Project
- 3 River Granta Enhancement Project
- 4 River Cam Enhancement Project
- 5 Old West River – Earth to River Cam
- 6 Cam Valley – Cambridge to Ely
- 7 River Lark Enhancement Project
- 8 Granta Water to Abbotts Ripon Corridor
- 9 Fen Edge Project
- 10 Guided Bus Route Green Corridor: Cycleway/Brideway & Sculpture Park
- 11 Northwest Cambridge Settlement Link
- 12 Northstowe, Cottenham to Old West River, Denny Abbey and Wicken Fen
- 13 South Peterborough Green Park to Great Fen Link
- 14 Chatteris to Ely Green Corridor
- 15 Chatteris to Soreham Biodiversity and Access Corridors
- 16 Cambridge to St Neots Green Corridor



### Major Green Infrastructure Sites & Initiatives

- A Fen Drayton
- B Houghton meadows (Part of Ouse valley Wet Woodland & Wet Meadow Project)
- C Needingworth Wet Fens Phase 1 & Phase 2
- D Granta Water Ancient and Semi Natural Woodland Link
- E Great Fen project
- F Wicken Fen Valon
- G Gog Magog Countryside Project
- H Ouse Washes, Estimations
- I Bassingbourne Chalk Grassland Improvements
- K Wimpole Hub Project
- L South Chatteris Country Park/Strategic Open Space
- M Ely Country Park
- N Regional Arboretum
- P Rowing lake & Enhanced Public Access & Recreation
- Q Land East of St Neots
- R Barrington Chalk Grassland Improvements
- S Northstowe Landscape Buffer & Country Park
- T North West of Huntingdon Strategic Open Space Project
- U Cotton Countryside Reserve
- V Southern Fringe, Moranto Site
- W Cambridge East
- X NIAB
- Y Southern Fringe/Addenbrooke's



# Green Infrastructure: Planning at the Landscape Scale?

Global

Ethos Setting

Strategic  
Frameworks

Local Delivery



Local



UNIVERSITY OF  
LIVERPOOL

Department of Civic Design 1909 - 2009: Celebrating 100 years of planning research and education



# Green Infrastructure: Planning at the Landscape Scale?

Policy/Strategy supporting green	Ethos setting	Strategic Framework	Local Delivery
<b>International</b>			
Kyoto Protocol	√		
Water Framework	√		
Habitats Directive	√		
Landscape Directive	√		
<b>National</b>			
UK Biodiversity Action Plan	√		

## Green Infrastructure Strategies?

# Green Infrastructure: Planning at the Landscape Scale?

Policy/Strategy supporting green infrastructure	Ethos setting	Strategic Framework	Local Delivery
<b>Regional</b>			
Regional Economic Strategy	√	√	√
Regional Spatial Strategy	√	√	
Regional Forestry	√	√	
Regional Rural Delivery Framework	√	√	

## Green Infrastructure Strategies?



# Green Infrastructure: Planning at the Landscape Scale?

Policy/Strategy supporting green infrastructure	Ethos setting	Strategic Framework	Local Delivery
<b>Sub regional / local</b>			
River Basin Management		√	√
Shoreline Management Plans		√	√
National Park Management		√	√
AONB Management Plans		√	√
Sub-regional Economic		√	√
Local Development		√	√
Parish Plans		√	√

## Green Infrastructure Strategies?



# Some conclusions from the UK experience

## Key lessons from the past

Science/social science divide is inappropriate

Site based approach is inadequate

Focus on conservation has its limitations

## Key features of current approach

- Integrated
- Strategic
- Multifunctional
- Future/change orientated

## Key challenge

To engage mainstream political, professional and public

# For further information on UK green infrastructure activities

<http://www.greeninfrastructurenw.co.uk>

<http://www.greeninfrastructure.eu/>

