

# Local Development Framework Briefing Paper Green Infrastructure



## Devon County Council's advice to Local Planning Authorities

*This is one of a series of briefing papers prepared by Devon County Council to assist the preparation of Local Development Documents. To view this, and other briefing papers, see <http://www.devon.gov.uk/ldf-briefing-papers>. For more information or comment contact 01392 382094 or email [environment@devon.gov.uk](mailto:environment@devon.gov.uk)*

***Local Planning Authorities are requested to take the following matters into account in preparing their Local Development Frameworks and other documents:***

***1. The Core Strategy should:***

- a) Set out the Vision and Strategy for Green Infrastructure (GI)***
- b) Make provision for networks of GI to accommodate the requirements of the Regional Spatial Strategy, particularly Policy GI1, and the upcoming Devon GI Strategy***
- c) Provide the policy framework for households to access open space through the appropriate application of access standards and principles for existing and new development (such as Natural England's accessible natural greenspace standards and the National Playing Field's Six acre standard)***
- d) Set out policy guidance for the sustainable planning and management of GI assets.***
- e) Identify resources through major funding regimes and improve the case for GI to be funded as a primary public investment, with a delivery programme to support GI policies.***
- f) Require developers to provide GI assets and/or to make contributions for the provision of green infrastructure.***
- g) Illustrate the principles of GI on the Strategy Diagram***

***2. Other Local Development Documents should:***

- a) Identify a network of existing GI assets and make proposals for new GI opportunities to establish an integrated network of assets to meet the requirements of the GI Strategy.***
- b) Identify GI policies and proposals on the Proposals Map***

***Partnership working***

***Devon County Council wishes to work in partnership with District Councils, in further developing the above policy areas with colleagues and other organisations and would wish to be involved in any discussion relating to them. (See Section 5)***

## 1. Background

The concept of **Green Infrastructure** originated in United States in the mid 1990's by highlighting the importance of the natural environment in decisions about land use planning. In particular, the emphasis on the **life support functions provided by the natural environment**, for example; flood defence, clean water and healthy soils, as well as the more anthropocentric functions such as recreation and providing shade in and around our towns and cities.

**The life support function of the natural environment is a precious asset** that is essential to sustain current and future populations. **Land is a finite resource** subject to many competing demands and uses that often have little or no interest in maintaining or safeguarding life support functions. **Key considerations in maintaining or safeguarding these functions** need to be recognised ahead of planned development.

**“Green Infrastructure (GI)”** is the asset of natural, green and blue spaces that include: parks and gardens, allotments, woodlands, fields, hedges, lakes, waterways, ponds, playing fields, coastal habitats, footpaths and cycleways etc. *The main GI Assets in Devon by function are listed in Appendix 1.*

**The Green Infrastructure approach** analyses the environment in a way that highlights its function and subsequently seeks to put in place, through regulatory or planning policy, mechanisms that safeguard critical natural areas. Where functions are found to be lacking, plans may propose how these can be put in place through landscaped and/or engineered improvements.

**An inherent function of GI is multifunctional use of land.** Multifunctional in this context refers to the integration and interaction of different functions or activities on the same piece of land. This is key to the efficient and sustainable use of land in Devon where pressures on land are particularly acute. An example might be an urban edge river flood plain which provides a repository for flood waters, acts as a nature reserve, provides a recreational green space and could also be productively farmed (probably through grazing).

**This briefing paper** sets out the County Council's specific interest in coordinating green infrastructure policy, advice and initiatives. The guidance provided by this briefing paper is intended to assist in achieving a position where a proactive and holistic approach will be followed in thinking about and implementing green infrastructure. This briefing paper sets out;

Section 2 - Definition of Green Infrastructure

Section 3 – Vision, Aims and Key Objectives

Section 3 – Planning for Green Infrastructure

Section 4 – Key Issues to be addressed

Section 5 – Opportunities for Partnership Working

## 2. Definition of Green Infrastructure

**Green infrastructure (GI)** is a term that can mean different things to different people.

The North West Green Infrastructure Think Tank<sup>1</sup> explains that:

*For 21<sup>st</sup> century sustainable living, we need our green, blue and open space to function as green infrastructure, serving the needs of society, the economy and biodiversity, now and into the future. A planned approach means we will protect the vital life-support functions of green infrastructure while maximising its social, economic and environmental functions in relation to particular local needs.*

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<sup>1</sup> North West Green Infrastructure Guide (Version: 1.1) prepared by the North West Green Infrastructure Think Tank published in 2008. see <http://www.greeninfrastructurenw.co.uk/html/index.php?page=resources&NorthWestRegion=true> (The guide is particularly relevant to those involved in producing GI plans in Local Development Frameworks) .

Current government definitions of “Green Infrastructure” set out in planning documents are: Planning Policy Statement - Local Spatial Planning (PPS12)<sup>2</sup>, defines GI in terms of spatial planning and ensuring that sustainable communities are delivered as follows:

***‘Green Infrastructure’ is a network of multi-functional green space, both new and existing, both urban and rural, which supports the natural and ecological processes and is integral to the health and quality of life of sustainable communities.***

The draft SW Regional Spatial Strategy<sup>3</sup> defines Green Infrastructure as:

***“Strategic networks of accessible, multifunctional sites (including parks, woodland, informal open spaces, nature reserves and historic sites) as well as linkages (such as river corridors and floodplains, wildlife corridors and greenways). These contribute to people’s wellbeing and together they comprise a coherent managed resource responsive to evolving conditions.”***

**These definitions recognise** that green infrastructure, in terms of green and blue spaces, the protection of vital life-support functions and provide multiple social, economic and environmental benefits, in terms of health, quality of life and wellbeing.

Green infrastructure definitions are also discussed in various documentation including: Natural England’s Green Infrastructure Guidance<sup>4</sup>, CABI’s Grey to Green<sup>5</sup> document and the Landscape Institute’s Position Statement on Green Infrastructure<sup>6</sup>, all of which are summarised in **Appendix 5**.

A Diagram illustrating the central role of GI in maintaining the world’s life support system is set out in **Appendix 2**. Some research undertaken by the National Trust (*‘Green Spaces – Measuring the Benefits’*)<sup>7</sup> to assess the multiple value of land is summarised in **Appendix 3**. Current National, Region and Local GI policies and standards are summarised in **Appendix 4**

### **3. Draft Vision, Aims and Objectives**

The Vision for GI is:

***For Devon’s green and blue spaces to be a robust and sustainable GI asset that provides for the vital life support needs of society, maximising its social, economic and environmental functions in relation to particular local needs, in terms of matters such as health, quality of life and wellbeing.***

#### **Aims**

- 1. Protect, manage and enhance the County’s environment** for its inherent biodiversity and geodiversity value, ecosystem services (i.e. water regulation, food provision, CO<sub>2</sub> storage, pollination) and opportunities to enhance quality of life (i.e. outdoor education, leisure and recreation, benefits to health and wellbeing).
- 2. Conserve the County’s distinct sense of place** in the form of its landscape heritage, historic environment and unique settings, and the opportunities that these provide to enhance quality of life.
- 3. Secure the provision of high quality, multiple use green infrastructure to meet the needs of current and future populations and visitors** and aspire to connect existing and new GI attributes both on a local and sub regional level.

<sup>2</sup> *Planning Policy Statement 12 – Creating strong safe communities through Local Spatial Planning (PPS12) – published by Communities and Local Government 4 June 2008*

<sup>3</sup> *Draft Regional Spatial Strategy for the South West 2006 to 2026 published by the South West Regional Assembly on 6 June 2006*

<sup>4</sup> *Green Infrastructure Guidance published by Natural England 2009*

<http://naturalengland.etraderstores.com/NaturalEnglandShop/Product.aspx?ProductID=cda68051-1381-452f-8e5b-8d7297783bbd>

<sup>5</sup> *Grey to Green, how we shift funding and skills to green infrastructure - published by CABI in 2009*

See: <http://www.cabi.org.uk/files/grey-to-green.pdf>

<sup>6</sup> *Green Infrastructure: connected and multifunctional landscapes- published by the Landscape Institute June 2009 see:*

<http://www.landscapeinstitute.org/PDF/Contribute/GreenInfrastructurepositionstatement13May09.pdf>

<sup>7</sup> *Green Spaces – Measuring the Benefits’ (based on research carried out by the University of Essex at six National Trust sites in the East of England) published by the National Trust*

**GI objectives in Devon are as follows:**

- 1) Maximise the number of responses that the natural and urban (e.g. increased shading in urban areas) environment can make in response to climate change.
- 2) Biodiversity enhancement will be a key consideration when developing the green infrastructure network with reference to the County Biodiversity Action Plan and nature map resource
- 3) Access for all will be at the heart of green infrastructure improvements with due consideration made to tourism, public transport connections, rights of way enhancement and the County's aspirations for Cycle County status
- 4) The social and economic benefits associated with the environment must be recognised and secured through improved management schemes and practices
- 5) The appropriate multiple functions and uses of land to incorporate maximum environmental, social and economic related benefits will be promoted
- 6) Green infrastructure should contribute to and protect the historic and landscape character of the county, particularly where these can also provide improved countryside access opportunities and restore or recreate wildlife habitats

**The outcomes need to be measured in terms of maintain and enhancing life support functions**, in terms of quality of place, quality of life, and quality of environment for example in associated with health and wellbeing, air and water quality, water supply, flood prevention, locally produced food. .

**Opportunities for Joint Working** will need to be developed to assist in this process and ensure that there is a consistent County-wide approach to GI policy and provision (see section 6).

#### **4. Planning for Green Infrastructure**

Just as we plan for and invest in our capital infrastructure, in terms of upgrading and expansion of the transport network through Transportation Plans, there also needs to be plans to upgrade and invest in our environment or green infrastructure through the preparation of Green Infrastructure Plan.

The Strategy for Green Infrastructure should be supported by evidence of what physical, social and green infrastructure is needed to enable the amount of development proposed for the area, taking account of its type and distribution. This evidence should cover who will provide the infrastructure and when it will be provided. The core strategy should draw on and in parallel influence any strategies and investment plans of the local authority and other organisations.

**The function of Green Infrastructure planning** is to provide the spatial planning and policy framework to deliver green infrastructure.

**A systematic and integrated approach to planning, design and maintenance of GI Strategy and policies** needs to address deficiencies and champion:

- a) High Quality of Place in terms of its image and perception and marketing of its green infrastructure credentials;
- b) High Quality of the Environment by safeguarding, protecting and enhancing:
  - Landscape character and local distinctiveness,
  - Historic environment including archaeology,
  - Biodiversity and earth science diversity protection and conservation,
  - Water resources, drainage and flooding,
  - Air quality and pollution, and

- Agricultural land, soil quality and minerals;
- c) High Quality of Life in terms of such matters as public health, including obesity and wellbeing that has resulted in inactive lifestyles;
- d) Standards and principles for access to open space;
- e) Ensure that sustainability issues are considered throughout the planning process e.g. in construction, location, access, management and use;
- f) Integrate green infrastructure provision and management into development proposals in a holistic, planned and coordinated way with upfront funding; and
- g) Economic benefits in terms of tourism, jobs, regeneration etc.

It is clear that GI is not an issue on its own to be identified or separated from sustainability and needs to restore natural functions of the environment and provide a framework for the future. A number of elements of forward planning policy already seek amongst other things to safeguard, protect, and enhance the green environment at strategic level, plan wide level and local level. Investment in green infrastructure can often be more cost effective than conventional infrastructure.

Advice about the assessment and provision of GI in LDD is set out in **Appendix 5**

## **5. Key issues to address**

The key issues to be addressed in terms of life sustaining resources and green infrastructure assets such as the planets needs for water, atmosphere, food, and safeguarding flora, fauna and other assets require a significant specialist expertise to understand and address the issues in the most sustainable way. Some of the main issues are summarised as follows:

- a) **Population growth/loss of natural areas:** Increases in development will put more pressure on existing GI resources which are essential for the quality of life. The scale and pace of development requires major changes to the traditional ways of providing GI.
- b) **Sustainable resource management / safeguarding of water supplies / climate change implications:** The management and use of land at both the macro and micro level can have particular impacts on water resources, production, pollution, and climate. Inappropriate resource management policies, such a monoculture, hedgerow removal can have a detrimental impact on the GI resource opportunities.
- c) **Sustainable communities/heath/welfare/education:** GI is necessary in achieving improvements in the quality of life in sustainable communities such as Cranbrook in East Devon. GI must be planned strategically and delivered in an integrated way across the whole sub-region and at all spatial planning levels.
- d) **Fragmentation of natural spaces / biodiversity / ability of nature to respond to change:** GI is essential in protecting biodiversity and the natural landscape and connecting the rural countryside with urban green spaces. A connected strategy will create wildlife corridors which will reverse habitat fragmentation and increase biodiversity. The provision of GI could also benefit the local landscape character.
- e) **Sustainable transport:** Increasing the use of sustainable transport will reduce road congestion, air pollution and reduce CO2 levels and therefore climate change. The use of sustainable transport such as cycling will also be beneficial for people's health and well-being. It will be useful to combine the policies in the green infrastructure strategy, the Local Transport Plan and the Rights of Way Improvement Plan.
- f) **Social cohesion:** Well managed green infrastructure is also thought to contribute to stronger social cohesion by providing open areas for community events. The management of green infrastructure can be passed onto the local community therefore empowering them to protect their local surroundings. This improvement of areas may encourage local businesses and people to invest in an area.

- g) **Landscape and historic environment:** The GI Strategy will promote the protection and enhancement of the landscape and historic environment.
- h) **Economy, recreation and tourism:** The environmental assets of Devon play an important role in terms of the economy of the County, this together with green tourism initiatives such as the National Cycle route, Tarka Trail, County Parks etc are important GI assets which contribute to the economy of Devon.
- i) **Minerals and waste:** The planning, management, recycling and mitigation of the harmful effects of waste is essential to maintaining life-support systems. The restoration of both mineral and waste sites that ensure connections with the existing GI network provides the potential for important GI asset development and enhancement.

**Partnership working:** Working with a holistic approach it will be essential to work with other local authorities and governmental groups to create well connected green infrastructure.

## **6. Opportunities for partnership working**

### **Suggested preparation of Green Infrastructure Strategy**

In the absence of any expression of a Green Infrastructure Strategy in the RSS (at this stage), it is suggested that a Devon-wide GI Strategy will be prepared, either in whole or as part of the Sub-Regional Study work currently being progressed. This will help to provide the strategic framework so that more detailed GI policies and proposals can be included within local authorities LDF core strategies and other LDF development plan documents.

### **Coordination of GI Strategy**

In arranging to coordinate the preparation of the Strategy, the setting up of a Green Infrastructure Partnership and Steering Group will be useful to coordinate the work of the strategy. The LAA2 group will initially represent the GI partnership with a more specific group developing in order to oversee project implementation and funding as well as raising awareness of green infrastructure issues once the strategy is completed.

A Green Infrastructure Development Officer has been put in place to manage this process.

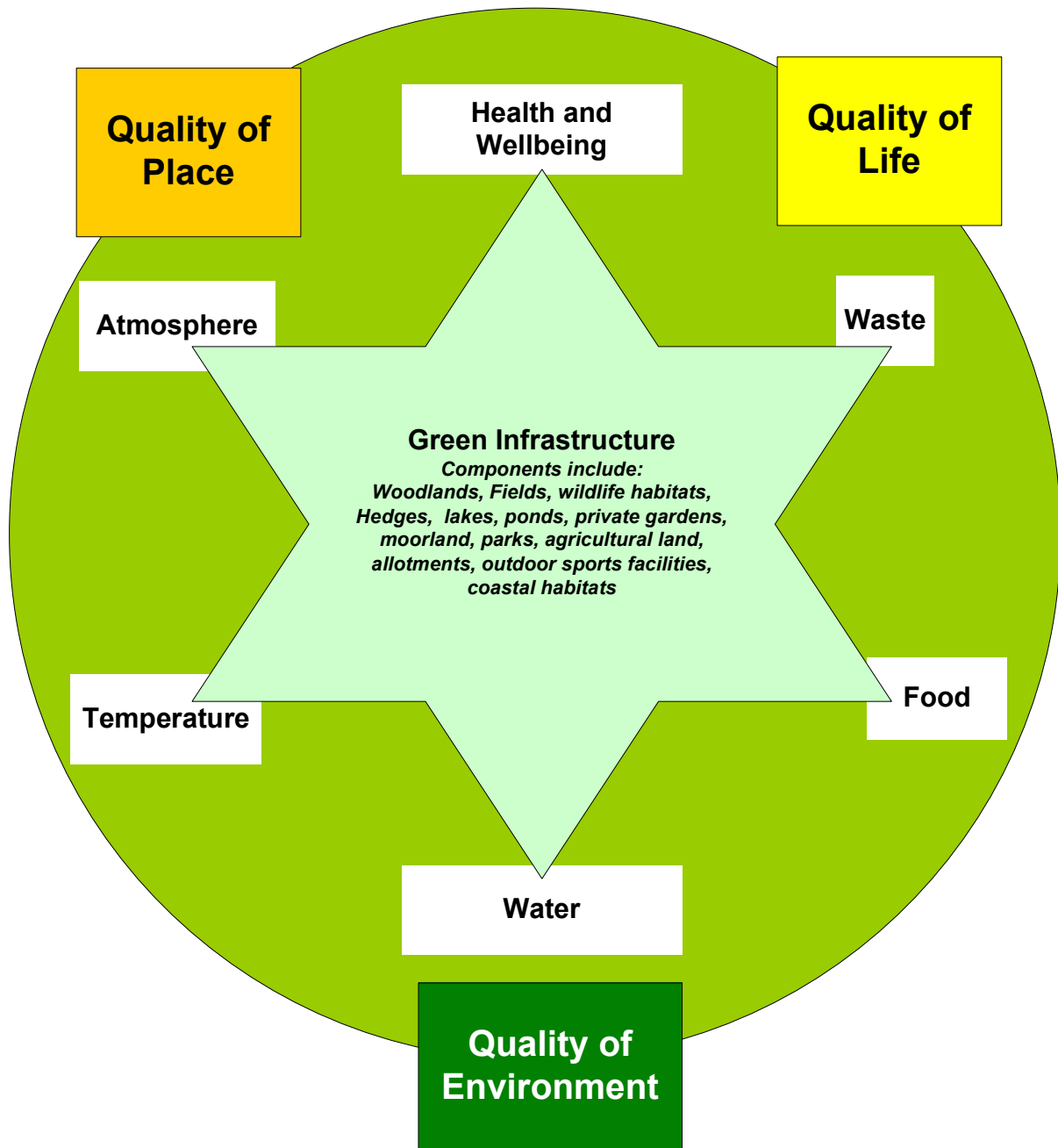
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**Table illustrates the functional uses associated with Green Infrastructure.**

<b>Functional Uses</b>	<b>Existing resources that contribute to GI assets</b>	<b>Format (E.g. GIS)</b>	<b>Source</b>	
<b>Agricultural land</b>	Arable			
	Horticultural			
	Stock grazing			
	Energy crops			
	Orchards			
	Set-a-side and fallow			
<b>Woodland</b>	Amenity Woodland			
	Conservation Woodland			
	Productive Woodland			
	Biomass Woodland			
<b>Informal/formal recreation</b>	Allotments		Relevant LA through LDF / green space work	
	Amenity green space (including town and village greens)		Relevant LA through LDF / green space work	
	Beaches			
	Children's play space			
	Community gardens and urban farms			
	Cemeteries, disused churchyards and other burial grounds			
	Country Parks			
	Nature reserves (with public access)			
	Open Access land (including registered common land)	GIS layer	DCC	
	Playing fields			
	Public provision of children and young people (e.g. play areas)			
	Urban parks and public gardens			
	Water bodies (rivers, reservoirs with access)			
	<b>Gardens</b>	Domestic gardens, Restricted access green space e.g. retail parks		
		Residential Institute Grounds		
Hospital Ground				
Places of worship grounds				
School and college grounds				
<b>Controlled access green space</b>		Airports		
	Military Training Grounds			
<b>Access links</b>	Public Rights of Way			
	Permissive Rights of Way			
	Greenways (off road)			
	Quiet Lands (on road)			
	Defined cycle routes			
	Defined walking routes			
	Other public rights of way			
	Canals			
<b>Linear green corridors</b>	Hedges			
	Ditches			
	Railways			
	Road verges			
	Watercourses			
	Inter-tidal Zone			
	Beaches, cliffs and dunes			

<b>Wildlife / geological sites</b>	Statutory designations: SPAs, SACs, Ramsar, SSSIs, NNRs, LNRs	GIS Layers	MAGIC
	CWS	GIS Layers	DBRC
	DWT reserves	GIS Layers	DBRC
	RSPB reserves	GIS Layers	RSPB
	National Trust reserves		National Trust
	Forestry Commission reserves		FC
	Devon Birds Society reserves		Devon Birds
	Agricultural land in agri-environment schemes	GIS Layers	Natural England / MAGIC
	Water bodies & floodplain		South West Lakes Trust Environment Agency
Ancient Woodland			NE website / DBRC
BAP habitats			NE website (or discuss with Craig Dixon at DCC)
Devon Nature Map	Aerial photos (1947 and 2000)		
Geological Sites, BAP habitats			
<b>Historic sites</b>	Sites recorded on the County Historic Environmental Record		
	Historic parks and gardens		
<b>Landscape / historic character</b>	Landscape Character Areas		
	Historic Landscape Character Areas		
<b>Broad landscape designations</b>	National Parks		
	AONBs		
	World Heritage Sites		
	Biosphere Reserve		
<b>Minerals</b>	Active and disused mineral workings and quarries		
<b>Land identified for development</b>	Other vacant land		
	Contaminated land and Other derelict land		

**Green Infrastructure - Life Support system**



*Diagram Illustrates the components of Green Infrastructure as central to the life support system*

## Research by the National Trust to assess the multiple value of land

To understand the concept of multifunctional sites, the National Trust has undertaken some research 'Green Spaces – Measuring the Benefits'<sup>8</sup> to assess the multiple value of land.

The National Trust report recognises that land is one of the country's most scarce resources. The report suggests that the value of land still tends to be assessed around single functions with separate spaces for food production, development, recreation and wildlife, and that the current approach to the management of land does not necessarily help us to meet the competing needs for healthy living, managing carbon and water and providing a sense of place.

A recent study assessing the multiple value of land using 8 key environmental and health services key services of land to assess the social, economic and environmental benefits that come from good land management, comparing the technical assessment of land functions with the public perceptions of land functions. These are illustrated in **Figure 2**

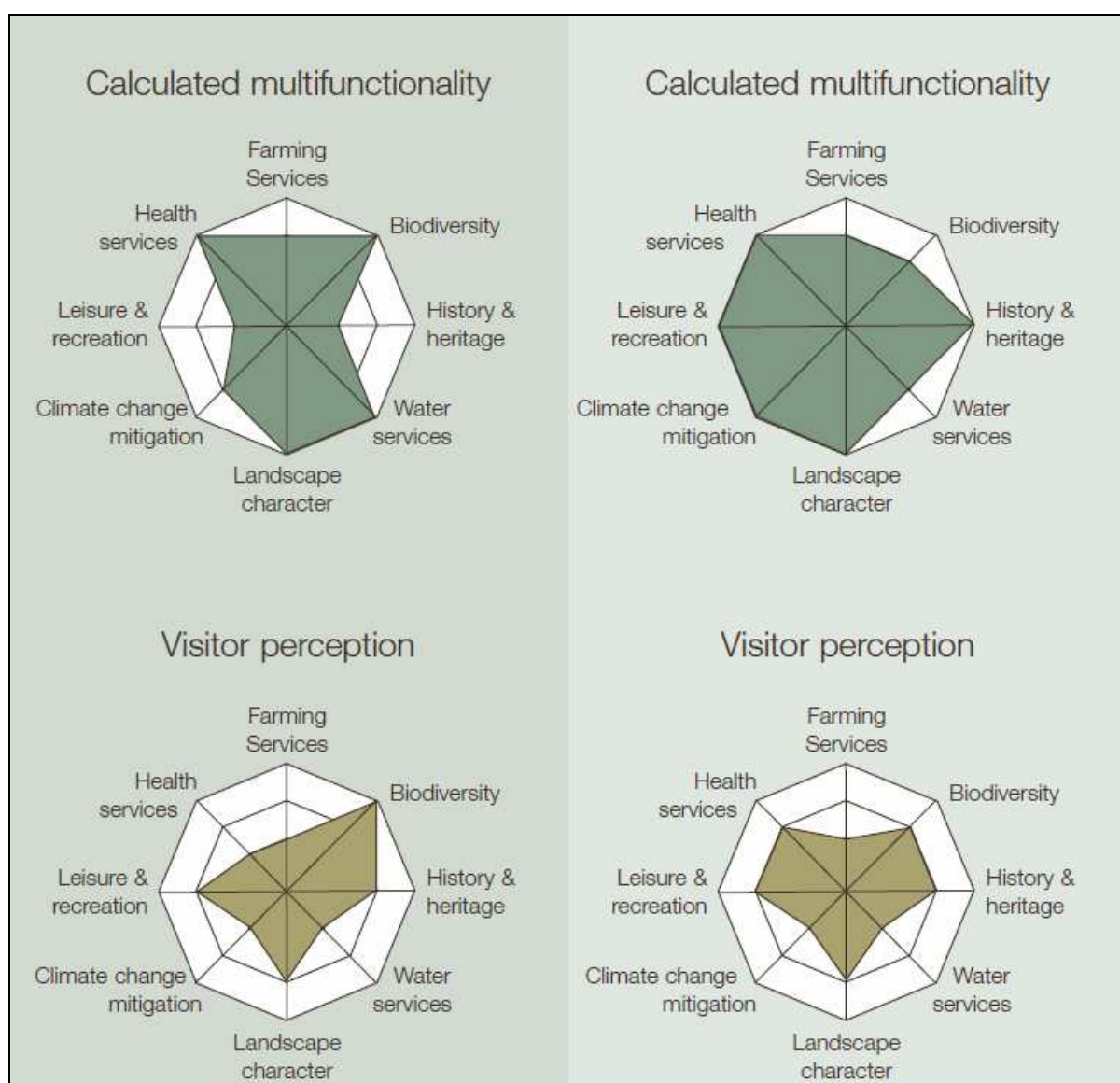


Figure 2: Multifunctionality of different services of land at the same time at Wicken Fen and Hatfield Forest

<sup>8</sup> 'Green Spaces – Measuring the Benefits' (based on research carried out by the University of Essex at six National Trust sites in the East of England) published by the National Trust

## National, Regional and Local Green Infrastructure policy and standards

### a) National Policy

National planning policy guidance is set out in

1. Planning Policy Statement (PPS12) - Local Spatial Planning<sup>9</sup>, apart from defining the 'green infrastructure' (in para 2.4) also requires in relation to infrastructure that:

*“The core strategy should be supported by **evidence of what physical, social and green infrastructure is needed to enable the amount of development proposed for the area, taking account of its type and distribution. This evidence should cover who will provide the infrastructure and when it will be provided.** The core strategy should draw on and in parallel influence any strategies and investment plans of the local authority and other organisations. (para 4.8)”*

2. The companion guide to Planning Policy Guidance (PPG17) (Planning for open space, sport and recreation)<sup>10</sup> - in paragraph 3.6 indicates that with regard to open space,

*“Paragraph 6 of PPG17<sup>11</sup> is therefore unambiguous: ‘**The Government believes that open space standards are best set locally**’. Where authorities seek benchmarks with which to compare their locally-derived standards they should seek the assistance of national agencies, such as the Commission for Architecture and the Built Environment (CABE), the Countryside Agency, English Heritage, English Nature and Sport England. These agencies are all able to provide advice and access to research findings which councils may find useful.”*

The Companion Guide also sets out Natural England's Accessible Natural Greenspace Standard (ANGSt) (in para 10.16). This advocates that every home should be:

- within 300 m of an accessible natural greenspace of at least 2 ha, plus:
- At least one accessible 20 ha site within 2 km
- At least one accessible 100 ha site within 5 km
- At least one accessible 500 ha site within 10 km

Para 10.17 indicates these standards can be difficult and sometimes impossible to achieve. English Nature has therefore refined ANGSt to put greater emphasis on identifying local needs and improving accessibility and site quality. The new version will be published with a tool-kit for local authorities during 2002 to provide guidance on mapping and site assessment; determining what is natural; assessing accessibility; analysing provision; and identifying measures to improve the quality of existing natural spaces for both people and wildlife.

Accessible Natural Greenspace standards have been developed and promoted by a number of organisations including Natural England (A Space for Nature, 1996), Town and Country Planning Association (Biodiversity by Design: A Guide for Sustainable Communities, 2004) and the Woodland Trust (Space for People, 2004).

### 3. Landscape/ landscape character

Assessments of the character and quality of the overall landscape have been undertaken [Countryside Agency on a national basis, 1997 and Devon County Council 2002]. The relationship of the character assessment to the designated areas is indicated in DCC's 2002 work. In addition, descriptions have been published by the Countryside Agency for most of the AONBs, [excluding to date only North Devon], and in 2000 DCC undertook a landscape assessment of the County's AGLVs. All these documents provide something of a baseline for

<sup>9</sup> Planning Policy Statement 12 – Creating strong safe communities through Local Spatial Planning (PPS12) – published by Communities and Local Government 4 June 2008)

<sup>10</sup> Assessing needs and opportunities: a companion guide to PPG17 published by Communities and Local Government May 2002

<sup>11</sup> Planning Policy Guidance 17: Planning for open space, sport and recreation – published by Communities and Local Government July 2002

the condition of the landscape of the designated areas, and allow broader landscape trends to be identified over periods of time.

#### 4. Biodiversity

Local Planning Authorities have a statutory duty to protect and positively enhance biodiversity and geodiversity under Section 40 of the Natural Environment and Rural Communities Act 2006. National policy guidance on this topic is provided through Planning Policy Guidance (PPS9) – Biodiversity and Geological Conservation.

The Devon Biodiversity Action Plan (BAP), which is co-ordinated by the County Council on behalf of the Devon Biodiversity Partnership, provides a collective agenda for the conservation and enhancement of Devon's wildlife and natural features. The County Council's own contribution and commitment to this process is set out through its own Biodiversity Role and Action Programme. The term biodiversity embraces all species, communities, habitats and ecosystems, whereas the term geology (or 'geodiversity') is shorthand for all features of geological and geomorphological interest including rocks, fossils, landform and the natural processes which create them. These two topics have traditionally been referred to under the umbrella term of 'nature conservation'.

#### 5. Historic environment

Government Guidance is currently set out in PPG15 Planning and the Historic Environment (1994) and PPG16 Archaeology and Planning (1990) provide guidance on achieving a balance between necessary development and protection of the historic environment. The government is currently undertaking a Heritage Protection Review that is likely to lead to a unified protection system for the historic environment. It is likely that a greater proportion of Devon will be covered by the proposed new national and local designations. The review will almost certainly require future amendments to any local policy frameworks that are currently being formulated.

### **b) Regional Policy**

#### Regional Spatial Strategy

**The Secretary of States (SoS) proposed modifications** (published 22 July 2008) **to the draft Regional Spatial Strategy 2006-2026** (published June 2006) recognises the need for Local Authorities and partners, when planning for the distribution of development to follow **Policy GI1** which requires them to:

- Build upon existing experience and initiatives to identify priorities and partnership for GI.
- Incorporate GI policies setting out broad locations for GI appropriate to the extent and distribution of development proposed, coordinate cross administrative boundaries as appropriate.
- Develop a GI Plan with a delivery programme to support GI Policies.

RSS Policy GI1 (as proposed by the SoS Proposed Modifications) states :

**Policy GI1 – Green Infrastructure** (as proposed by SoS Proposed Modifications)

**Development of networks of Green Infrastructure (GI) will be required to enhance the quality of life in the region and support the successful accommodation of change. GI networks will comprise of multifunctional, accessible, connected assets, planned around existing environmental characteristics.**

**Plans, strategies, proposals and schemes should aim to deliver wider special outcomes that incorporate environmental and social economic benefits by:**

- **Conserving and managing existing GI**
- **Creating new GI**
- **Enhancing its functionality, quality and connectivity**

**GI is required as an integral part of development and should include the identification, development and management of new areas of open space, not just more intensive use of existing areas of open space.**

**Local authorities and their partners will:**

- **Draw upon existing expertise and initiatives to take forward GI planning and identify priorities and partnerships for GI**
- **Incorporate GI policies setting out broad locations for GI appropriate to the extent and distribution of development proposed, co-ordinated across administrative boundaries as appropriate**
- **Integrate proposals to improve GI in the delivery of new developments, particularly through area based regeneration initiatives and major development proposals**
- **Ensure that a key aim of green infrastructure is the maintenance and improvement of biodiversity**
- **Protect the integrity of sites of international importance and provide new areas of appropriate greenspace where development would otherwise cause unacceptable recreational pressure on sites of international ecological importance**
- **Maximise the role of GI in mitigating and adapting to climate change**
- **Develop a GI Plan with a delivery programme to support GI policies.**

**The RSS framework for Implementation** indicates that Local Authorities, with other delivery partners such as Statutory Environmental Bodies (SEB's) (i.e. Environment Agency, English Heritage, and Natural England), development industry, Sport England etc should identify the criteria that needs to be taken into account with regard to the provision of GI when planning for development and that the delivery mechanism for implementation of the GI strategy are Local Development Documents.

**At the RSS Examination in Public (June 2007)** Devon County Council advocated the need for GI assets to be more explicitly identified, these could include for example:

a) At Exeter the Exe Valley through the City (extending from the Exe Estuary Ramsar Designation) and the Clyst Valley flood plain along the eastern edge of the City.

A GI Study to support the preparation of the Exeter City Council and East Devon District Council Local Development Frameworks and directly inform and be integrated within the preparation of the East of Exeter Joint Study Plan.

b) In the Plymouth area important elements of GI should be identified in the Sherford area including the National Trust Land at Saltram House, and a major "Community Park" proposed to the east of the new community.

c) At Newton Abbot the development of the Northern Option fits the concept of developing the Teign Valley as a tourism and green infrastructure corridor and wildlife gateway to Dartmoor National Park.

d) At Barnstaple and Bideford, which are located on environmentally important estuaries, the future development of the towns offers the opportunity to integrate linkages to the National Cycle Network and the Tarka trail.

### c) **Devon Structure Plan policies**

The provision of GI will need to have regard to the current Structure Plan Policies until such time they are superseded by the RSS. These include:

High Level Policy Aim 1 -	Conservation and Enhancement of the Devon Environment
High Level Policy Aim 3/ST3 -	Community Self Sufficiency
High Level Policy Aim 5 -	A Dynamic and Healthy Economy
High Level Policy Aim 6 -	A Sustainable Transport Network
High Level Policy Aim 7/ST4 -	Meeting the Need for Infrastructure
Policy ST1 -	Sustainable Development
Policy ST4 -	Infrastructure Provision
Policy ST23 -	New Community Concept
Policy ST24 -	New Community Implementation
Policy ST25 -	New Community Landscape Setting
Policy CO1 -	Landscape Character and Local Distinctiveness
Policy CO6-	Quality of New Development
Policy CO7-	Historic Settlements and Buildings
Policy CO7 -	Archaeology
Policy CO9-	Biodiversity and Earth Science Diversity
Policy CO10 -	Protection of Nature Conservation Sites and Species
Policy TO 5 -	Major Recreational Facilities
Policy TO 6 -	Long distance recreational footpaths and cycleways.

The thrust of the policies suggests that GI assets will need to protect for example, landscape character and local distinctiveness, the historic environment including archaeology, biodiversity and earth science Diversity, nature conservation sites and species. This work will be informed through Devon County Council involvement with the Historic Landscape Characterisation work and the broader Landscape Characterisation. (See the briefing papers on Biodiversity and Geological Conservation, Coastal Zone Policy, Landscape Protection and Enhancement, Water Resources and Flooding and Sports and Physical Activity).

d) **Standards and principles for access to open space**

**To ensure benefits of GI are available to the community - it will be necessary to provide a policy framework for households to access open space** through the appropriate application of access standards and principles (such as English Nature's accessible greenspace model and the National Playing Field's Six acre standard) and ensure that appropriate provision or enhancement is made for green space/assets in new development.

"Green Infrastructure Planning Guide" sets out a description of these standards and suggests that the English Nature Greenspace standard is regarded as having the best fit to GI Planning and advocates a modified standard is referred to as "Accessible Natural Greenspace Standard Plus (ANGST+)". The modified ANGST+ standard takes account of stakeholder involvement, local decision making and connectivity, the latter being a fundamental component of all infrastructure, and suggests that:

1. No person should live more than 300 m from their nearest area of natural greenspace of at least 2 hectares in size;
2. There is provision of at least 2 hectares of natural green space per 1,000 population;
3. That there should be at least one accessible 20 ha site within 2km from home
4. That there should be one accessible 100 ha site within 5km;
5. That there should be one accessible 500 ha site within 10km.
6. That adjacent greenspaces are interconnected; the priority and extent being determined by local decision making informed by stakeholder involvement.

The potential ANG sites must also comply with one or both of the following:

- have a natural or semi-natural land covering, e.g. a woodland or meadow
- be a park or other green space, with a significant part thereof managed for wildlife

ANG could therefore include: country parks; urban parks and gardens with areas managed for wildlife; nature reserves; Forestry Commission land; beaches; commons, village greens and millennium greens; and open access land.

The **Fields in Trust (FIT)** (previously known before 2007 as National Playing Field Association) Six Acre Standard aims to help land use planners ensure a sufficient level of open space to enable residents of all ages to participate in sports and games with an emphasis on access for children to play grounds and other play space.

The standard suggests that for each 1000 residents there should be 2.4 hectares (6 acres) comprising of:

- 1.6 hectares (4 acres) for outdoor sport and recreation space (including parks)
- 0.8 hectares (2 acres) for children's play, with about 0.25 ha of this equipped playgrounds

In its publication: 'The Six Acre Standard', the NPFA outlines a more detailed breakdown including a hierarchy of child play space. Unfortunately there is no online version of this document and it must be purchased from the NPFA<sup>12</sup>.

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<sup>12</sup> Extract from [http://en.wikipedia.org/wiki/National\\_Playing\\_Fields\\_Association](http://en.wikipedia.org/wiki/National_Playing_Fields_Association)

### **Advice for assessment of green infrastructure and guidance to providing GI in Local Development Documents**

These are set out in a number of documents, for example:

- i) **Natural England, Green Infrastructure Guidance**<sup>13</sup> provides a broad outline of the concept of green infrastructure and signposts related information such as Natural England's definition, policy statement and mechanisms for delivering GI. It describes the concept of, the value for planning and how to deliver green infrastructure. The guidance also maps out wider policy priorities and drivers for green infrastructure such as enhancing cultural heritage, community cohesion and economic growth. The document has been produced to support Natural England's role working with local authorities and green infrastructure partnerships. It is also useful for planners, developers and decision makers in the environmental, social and economic sectors needing to understand green infrastructure.
- ii) The **Commission for Architecture and the Built Environment (CABE) Grey to Green**<sup>14</sup> document discusses the switch from considering GI as often a burden on the public purse to recognising that GI provides a critical environmental service and the "environmental foundation that underpins the function, health and character of urban communities". It represents a new way of designing, planning and managing land. The document's focus is the social benefits that can be gained from GI from improving wellbeing and mental health to providing a working sustainable landscape that protects against flood, cools urban areas and saves energy. As part of this transfer to a greener way of planning, the document stresses the importance of appropriately trained staff within local authorities, and selling the benefits of green infrastructure as crucial to safeguarding local character and creating a healthier environment to work and live.
- iii) **The Landscape Institute's position statement on Green Infrastructure: connected and multifunctional landscapes**<sup>15</sup> presents the benefits of incorporating green infrastructure into the planning, design and management of landscapes and lists problems, their potential solutions and the lead authority responsible for recommended developments towards a comprehensive GI network. Through a selection of case studies it also discusses multifunctional potential, related benefits and development processes, such as policy background, community involvement, management and funding.
- iv) **Green Futures CLERE Model**<sup>16</sup> **of functionality assessment for multifunctional green space** identifies five broad function types of greenspace;
  1. **Community,**
  2. **Landscape,**
  3. **Ecosystem,**
  4. **Recreation, and**
  5. **Economy.**

These aspects can be expressed as five multifunctional strands:

- As an agent for Community development and education
- As Landscape to be conserved
- As an Ecosystem providing urban services

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<sup>13</sup> Green Infrastructure Guidance published by Natural England -

<http://naturalengland.etraderstores.com/NaturalEnglandShop/Product.aspx?ProductID=cda68051-1381-452f-8e5b-8d7297783bbd>

<sup>14</sup> *Grey to Green, how we shift funding and skills to green infrastructure* - published by CABE in 2009

See: <http://www.cabe.org.uk/files/grey-to-green.pdf>

<sup>15</sup> *Green Infrastructure: connected and multifunctional landscapes*- published by the Landscape Institute June 2009 see:

<http://www.landscapeinstitute.org/PDF/Contribute/GreenInfrastructurepositionstatement13May09.pdf>

<sup>16</sup> *The CLERE Model was developed by Alan Barber as part of Green Future. Green Future is the product of research at the University of Manchester thanks to a grant from the Simon Trust*

- As a Recreational resource for health and well-being
- As a contributor to the local Economy

A detail examination of the rationale behind each type and management issues associated with it are provided. This model is taken from the recently published book Green Future.

v) **“The North West Green Infrastructure Planning Guide”**<sup>17</sup> prepared by the North West Green Infrastructure Think Tank to support the Green Infrastructure Policy in the North West Regional Spatial Strategy (RSS) provides more detailed information on the concept of Green Infrastructure (GI). The document provides initial guidance on producing a Green Infrastructure Plan. The Guide is particularly relevant to those involved in producing Local Development Framework (LDF) documents by setting out the process, delivery mechanisms, phasing and securing funding for GI.

**Five steps in the green infrastructure planning process** are identified as:

**Step 1 Partnership and Priorities**

Establishing a clear understanding of the partnerships that are needed to plan and deliver green infrastructure

**Step 2 Data Audit and Current Resource Mapping**

Checking and collating data sources that are needed to analyse the existing green infrastructure and develop an intervention plan (and provides guidance about the availability of data sets)

**Step 3 Functionality Assessment**

Is required to locate gaps in physical or functional provision

**Step 4 Need Assessment**

Considers how the green infrastructure of an area currently meets the needs of particular communities it serves, how well it sustains the environment, how its performance will be affected by future changes, and how all these can be improved through intervention.

**Step 5 Intervention Plan**

Establishing an Intervention Plan, some interventions are within reach of the planning system, others require changes in the targeting of resources used for land management etc (Mapping of green infrastructure is not an end in itself)

vi) **Data Audit and Mapping**

An understanding of the GI resource can be assessed though the examination of national and local data sets and GIS Mapping. The data sets that will need to be examined (suggested in the North West Green Infrastructure Guide) are likely to include information about:

- Landuse (e.g. woodland, private garden, general amenity space)
- Land cover (e.g. improve grassland, broadleaf, saltmarsh)
- Environmental values
- Demographic patterns

Guidance on the available of data sets is set out in the North West Green Infrastructure Guide.

Much of the baseline data for green infrastructure can be found on the South West Observatory website at: <http://www.swenvo.org.uk/environment/index.asp#atmosphere>

vii) **Other GI Studies in Devon**

**Considerable work has already been undertaken in the identification of areas of opportunity and targets** (for example South West Regional Nature-Map and Rebuilding Biodiversity Initiative,

<sup>17</sup> North West Green Infrastructure Guide (Version: 1.1) prepared by the North West Green Infrastructure Think Tank published in 2008. see <http://www.greeninfrastructurenw.co.uk/html/index.php?page=resources&NorthWestRegion=true> (The guide is particularly relevant to those involved in producing GI plans in Local Development Frameworks) .

Biodiversity Action Plans, Catchment Flood Management Plans, and Forest Plans) and should be built drawn upon.

**The Habitats Regulations Assessment of the RSS** identifies a number of international nature conservation sites (i.e. Dartmoor SAC, East Devon Pebblehead Heath SAC and East Devon Heaths SPA, and Exe Estuary SPA and Ramsar site) which are particularly vulnerable to harm from recreational activities as a result of their proximity to urban areas or their attractiveness for recreation to local residents or tourists. The relevant authorities will need to work jointly and with Natural England to secure and implement appropriate and deliverable measures to avoid or mitigate adverse effects from recreation at these sites.

**Exeter Fringes Green Infrastructure Strategy** - commissioned jointly by East Devon District, Exeter City Council, Teignbridge District Council and English Nature in 2007. The Strategy will present a framework for the delivery of Green Infrastructure in the coming decades in the Exeter, East Devon and Teignbridge Growth Point. The initial finding of the Strategy expects to be published in the spring / summer 2008.

A separate **Spatial Plan and Action Plan** will be prepared for delivery by partner organisations, statutory agencies, developers and relevant local planning authorities in the future. The GI Strategy will also identify a **range of pilot projects** capable of being delivered a part of future program of work, linked whenever possible to area of identified growth and development.

**Plymouth City Green Space Strategy** - Plymouth's draft green space strategy 2008 to 2023 was launched for public consultation on 1 July. The green space strategy has been prepared following a detailed analysis of Plymouth's existing green spaces and play spaces which are published as a separate green space background report. Both of these documents can be downloaded from the website at:

<http://www.plymouth.gov.uk/homepage/leisureandtourism/parksgardensandopenspaces/parksandopenspaces/greenspacestrategy.htm>

**Other Districts** - Check what is being done

viii) **Devon Local Area Agreements (LAA)<sup>18</sup>**

Local Area Agreement 2008-2011 (LAA) a new settlement between central government, local government and its citizens in terms of improvement priorities and innovation.

LAA's that are currently relevant to green infrastructure issues include:

- **LAA2 - Improve the quantity, quality (clean, green and safe) and accessibility of public spaces and green infrastructure<sup>19</sup>** - recognises that Green Infrastructure is a key driver for many other priorities and outcomes of the LAA
- **LAA 8 Biodiversity<sup>20</sup>** – seeks to 'Targeted conservation and enhancement of Devon's biodiversity and geology in line with UK and local Biodiversity Action Plans and the South West Nature Map.'

<sup>18</sup> Draft Devon Local Area Agreement 2008 – 2001 May 2008, Devon Strategic Partnership (5 June 2008)

<sup>19</sup> LAA2 - Improve the quantity, quality (clean, green and safe) and accessibility of public spaces and green infrastructure See <http://www.devonsp.org.uk/sustainablecommunitystrategy/outcomes/draftlaapriorities/laa2.doc>

<sup>20</sup> LAA8 – Biodiversity see: <http://www.devonsp.org.uk/sustainablecommunitystrategy/outcomes/draftlaapriorities/laa8.doc>

### **References and other relevant documents**

#### **National**

GreenSpace 2007, *The Park Life Report, The first ever public satisfaction survey of Britain's parks and green spaces.*

The Countryside Agency 2006, *Landscape Character Network Workshop, Landscape Character and Green Infrastructure.*

<http://www.greeninfrastructurenw.co.uk/html/index.php>

Davies c, Macfarlaine R, McGloin, Roe M, "Green Infrastructure Planning Guide (Version 1.1)" published on behalf of Northumbria University, North East Community Forests, University of Newcastle upon Tyne, The Countryside Agency, English Nature, Forestry Commission, and Groundwork (See <http://www.greeninfrastructure.eu> )

Defra's *Safeguarding our soils, 2009*

#### **Regional**

South West Regional Assembly 2006, *Draft Regional Spatial Strategy for the South West 2006-2026.*

Biodiversity South West 2007, *South West Nature Map- A Planners Guide. Helping to Shape Spatial Planning for Biodiversity in LDFs.*

The Environment Agency's RSS South West Future Flood Risk, 2009.

[Catchment Flood Management Plans - South West Region](#)

[The Environment Agency's South West River Basin Management Plan, 2009](#)

South West Regional Woodland and Forestry Framework, 2006

South West Climate Change Action Plan 2008-2010

#### **Locals**

Shoreline management plans

AONB Partnership management plans

National Park management plans

Biodiversity Action Plan 2009-10

Minerals (2004) and Waste (2996) Local Plans

#### **Case studies**

Milton Keynes & South Midlands Environment & Quality of Life 2005, *Planning Sustainable Communities- A Green Infrastructure Guide for Milton Keynes & the South Midlands.*

*Tees Valley Green Infrastructure Strategy, 2008.*

<http://www.cambridgeshire.gov.uk/NR/rdonlyres/2D4412F4-000F-4105-8C09-19363F438BCB/0/ReportAppendixMap.pdf>

Cambridgeshire Horizons 2006, *Green Infrastructure Strategy.*

[Buckinghamshire Green Infrastructure Strategy 2009](#)