



GRaBS Briefing delivering green infrastructure benefits to communities and places through planning

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This Briefing Paper is intended to give GRaBS UK partners a summary of current literature and an overview of the background policy context and issues relating to the planning of green infrastructure, in order to help *a)* in developing understanding of the benefits and value of green infrastructure, and *b)* in learning from current policy and practice.

1 Background

The previous Government set up the Urban Green Spaces Taskforce in January 2001 to advise Ministers on a range of issues impacting on parks and green spaces. The Taskforce carried out a 15-month work programme, and its final report, **Green Spaces Better Places**,¹ published in May 2002, made 52 recommendations. The report showed how green spaces need better planning in order to develop networks of urban green space, and to this end made recommendations 'for:

- *planners and planning mechanisms to take better account of the need for and benefits of urban parks and green spaces and the interests of the communities they serve;*

- *design reviews to enhance and revive urban parks by paying close attention to their basic design intention, and their relationship to their local neighbourhoods and communities;*
- *management plans and service and maintenance contracts to deliver objectives for urban parks and green spaces; and*
- *performance indicators and review procedures for local authorities and others to incorporate appropriate quality standards for urban parks and green spaces.'*

Green infrastructure is a term which refers to a wide range of natural and managed green and blue spaces in different rural and urban contexts and at various 'spatial' scales. These may include but are not exclusively limited to:

- large country parks and forests;
- recreational grounds and playing fields;
- hedgerows and public rights of way;
- public squares;
- street trees and planting;
- private front and back garden land;
- green roofs and walls; and
- blue infrastructure such as streams, waterways and their riparian margins.

2 Overview of benefits

The benefits of green infrastructure are wide-ranging and encompass social, economic, environmental and cultural values, and can meet many national priorities, including:

- urban renaissance and regeneration;
- housing growth and renewal;
- health and well-being;
- social inclusion, community development and citizenship;
- education and lifelong learning;
- environment and ecology;
- heritage and culture; and
- climate change adaptation through flood risk management and urban heat management.

This Briefing Paper focuses on three GRaBS-related outcomes: climate change adaptation; health and well-being; and regeneration and economic development.

2.1 Climate change adaptation

Design features such as green roofs can enhance biodiversity, absorb rainfall and aid flood risk management, improve the thermal performance of buildings, reduce the urban heat island effect, and improve the appearance of a development. For example, research undertaken at the University of Manchester under the **Adaptation Strategies for Climate Change in the Urban Environment (ASCCUE)** project² between 2003 and 2006 has shown that increasing urban green space by 10% can help to cool high-density areas of the city by around 3-4 °C, thereby reducing the urban heat island effect. And interim monitoring results from exemplar developments such as the sustainable drainage system at Lamb Drove, Cambourne have shown significant reductions in the discharge of water from the site into receiving waters following rainfall events.

However, after taking evidence from organisations such as Natural England,³ CABE (the Commission for Architecture and the Built Environment) and the TCPA in late 2009, the House of Commons Environmental Audit Committee published the report of its inquiry into **Adapting to Climate Change**⁴ in March 2010, and concluded that:

'The Government is not utilising green infrastructure to tackle the impacts of climate change. In updating its planning guidance on open spaces, sport and recreation, the Government must set out the strategic role green infrastructure should play in climate change adaptation. The Government should also promote green infrastructure as part of the National Adaptation Programme. Departments must deliver green infrastructure that supports adaptation and wider policy objectives by working more effectively across departmental boundaries. We recommend that the Government aligns the work of key departments on green infrastructure, and identifies a department to act as a green infrastructure champion.'

2.2 Health and well-being

The social benefits of the natural environment for maintaining and improving the health and well-being of individuals and communities are beginning to be recognised. Here, the design and quality and, indeed, maintenance of green spaces play an important role.

In February 2010, Sir Michael Marmot published the final report of his evidence-based review (**the Marmot Review**) of health inequalities in England post-2010. It set out an objective to 'Create and develop healthy and sustainable places and communities', and it recognised the role of green infrastructure in improving mental and physical health through access to and opportunity for outdoor exercise. The review evidence base supported previous findings that, although more than 95% of people believe it is important to have access to green spaces near home, many from disadvantaged backgrounds are unlikely to enjoy this opportunity of access.

Spatial planners and health professionals are currently working to develop **National Institute for Health and Clinical Excellence (NICE) guidance** aimed at improving health and reducing health inequalities through spatial planning. The guidance is expected in 2011. The TCPA is currently working with Hyde Housing and the Department of Health on a research project looking at the contribution of spatial planning to the statutory local authority/primary care trust Strategic Needs Assessment process.

2.3 Regeneration and economic development

Research into the economic value of urban green spaces, *Does Money Grow on Trees?*,⁵ published by CABE Space in 2005, found that quality green spaces:

- add value to the surrounding property, both commercial and residential, consequently increasing tax yield to maintain public services;
- contribute to attracting tourists;
- encourage employment and inward investment to an area; and
- help to create a favourable image of a place.

This is supported by the CABE Space publication *Start with the Park*,⁶ which illustrates examples of cases of a high-quality public realm providing a powerful means of transforming the image of a depressed area and so helping to reduce deprivation. However, CABE Space emphasised that integrated planning within a wider green space strategy is required to avoid unnecessary financial burdens on local authorities through ad hoc decision-making.

3 Planning context and updates

The 2004 Planning and Compulsory Purchase Act and subsequent planning legislation provide the current strategic planning and implementation context. Fig. 1 illustrates the hierarchy of the planning system in delivering green infrastructure.

3.1 Planning policy guidance

The most relevant national planning policy guidance is currently **Planning Policy Guidance (PPG) 17: Planning for Open Space, Sport and Recreation**, with accompanying guidance.⁷ The previous Government issued a consultation draft of **Planning Policy Statement: Planning for a Natural and Healthy Environment**,⁸ which sets out planning policies on the conservation and enhancement of the natural environment, green infrastructure, open space and land, and related facilities for sport, recreation and play. The TCPA has welcomed this new PPS's greater focus on the multiple benefits of green infrastructure,⁹ and believes that it would enhance the national policy framework for England, and support planners in making a significant contribution to the provision of green infrastructure in new and existing communities.

Planning Policy Statement: Eco-towns. A Supplement to Planning Policy Statement 1¹⁰ sets out standards for green infrastructure in eco-town developments, including a requirement that 40% of an eco-town's total area be allocated to green space. The **Eco-towns Green Infrastructure Worksheet**,¹¹ produced by TCPA and Natural England, and supported by the Department for Communities and Local Government, provides further guidance for planners and promoters on green infrastructure development.

3.2 Using the planning system more effectively

The planning system is a tool and process that can be used to deliver the Government's sustainable development aims as well as regional and local aspirations and priorities. Green infrastructure can be delivered through policy and

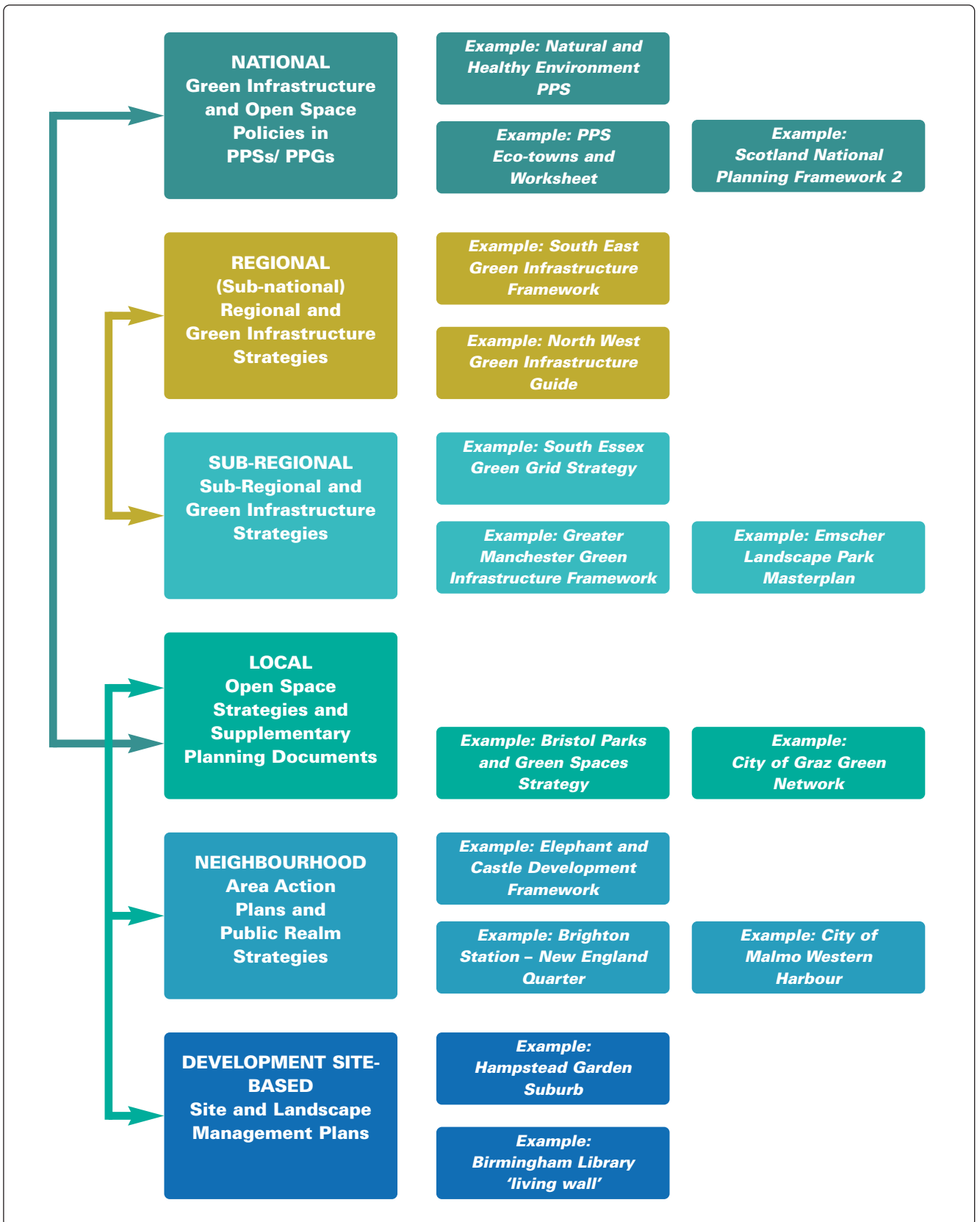


Figure 1
Spatial hierarchy of green infrastructure planning with examples

Development Plans, and through conditions and obligations as part of planning permissions, but most importantly it can be monitored and reviewed against clearly defined and evidence-based indicators. First, the English plan-led system provides the opportunity to embed green infrastructure policies in Development Plan Documents at various levels, such as Local Development Framework (and formerly

Regional Strategy) documents. This is illustrated in Fig. 1. The guidance publications **Open Space Strategies: Best Practice Guidance**,¹² produced by CABE Space and the Greater London Authority, and **Climate Change Adaptation by Design**,¹³ produced by the TCPA, are excellent sources of information for planning authorities.

Secondly, planning permissions granted to development proposals provide the opportunity to deliver and implement Development Plan policies. Where appropriate and justified, the private sector may be required to contribute to the costs of provision and maintenance through **Section 106 planning obligations** or the **Community Infrastructure Levy**. Detailed policies should be set out in the Development Plan to provide clarity and certainty.

Planning conditions can also be used. **The Planning Inspectorate provides a list of model conditions that would be helpful for local planning authorities. The conditions are not exhaustive and do not cover every situation where a condition may be imposed. Their applicability will need to be considered in each case against the tests in Circular 11/95, and the wording may need to be amended to address the individual circumstances of the case. A full list is available from the Planning Inspectorate's website (at <http://www.planning-inspectorate.gov.uk/>). Extracts from two relevant model conditions are listed below:**

- **'Sustainable drainage:** *No building hereby permitted shall be occupied until surface water drainage works have been implemented in accordance with details that have been submitted to and approved in writing by the local planning authority. Before these details are submitted an assessment shall be carried out of the potential for disposing of surface water by means of a sustainable drainage system in accordance with the principles set out in Annex F of PPS25 (or any subsequent version), and the results of the assessment provided to the local planning authority. Where a sustainable drainage scheme is to be provided, the submitted details shall:*
 - i. *provide information...'*
- **'Landscape management plan:** *A landscape management plan, including long term design objectives, management responsibilities and maintenance schedules for all landscape areas, other than small, privately owned, domestic gardens, shall be submitted to and approved in writing by the local planning authority before occupation of the development or any phase of the development, whichever is the sooner, for its permitted use. The landscape management plan shall be carried out as approved. No development shall take place until a schedule of landscape maintenance for a minimum period of [] years has been submitted to and approved in writing by the local planning authority. The schedule shall include details of the arrangements for its implementation. Development shall be carried out in accordance with the approved schedule.'* (Planning Inspectorate Consultation on Revisions to Model Conditions, December 2009, and Circular 11/95)

Finally, a clear framework of monitoring and review must be established. This should form a part of the implementation of regional and local Development Plans, as well as Annual Monitoring Reports. Aspirational but deliverable and measurable targets and indicators, such as for the quantity of green roofs built per annum per authority, should be set at the appropriate spatial level, taking into account local opportunities and constraints. Taking an example from European best practice, planning authorities could be encouraged to adopt the **Green Space Factor** used by the City of Malmo,¹⁴ to ensure that a minimum amount of green space per development is achieved.

3.3 Policy updates and development

On 9 June 2010, the Government announced plans to remove the designation of garden land as previously-developed land. This will provide the opportunity and powers for local planning authorities to integrate private garden land into their green infrastructure network to tackle challenges such as those posed by climate change. In 2009 the previous Government restricted development of front gardens with impermeable surfaces to improve the resilience of the built environment to flooding. **GRaBS Briefing Paper 1: *Understanding the Environmental and Social Impact of Garden Development***¹⁵ gives details on the issue of back garden development.

More significantly, the imminent **removal of the regional tier of housing and planning**, notified in a letter from the Rt Hon. Eric Pickles MP, Secretary of State for Communities and Local Government, to council leaders highlighting the Government's commitment to abolish Regional Strategies, **will not remove the need to plan for green infrastructure at wider sub-regional levels.**

4 Relevance to GRaBS

Providing high-quality green open space with good accessibility is not a new concept to planners and built environment professionals. It stems back to the roots of town and country planning in the first planning Act, the Housing, Town Planning, etc. Act 1909, and concerns about health, housing and environment. Such early provision is demonstrated through a number of model villages in the Derbyshire Coalfields and Garden City style developments. Successful places have successful green spaces. For the next 50 years, good-quality green spaces will make places more sustainable by harnessing the range of benefits highlighted earlier.

The GRaBS project is precisely aimed to improve the planning and provision of green and blue spaces in urban areas as part of development activity. A key objective of GRaBS is to increase the knowledge and expertise of those responsible for spatial planning and development on how green and blue infrastructure (green roofs, green walls, green corridors, sustainable drainage systems etc.) can help new and existing settlements to adapt to projected climate scenarios, particularly exposure to higher temperatures and flooding.

5 Notes and further information

- 1 *Green Spaces, Better Places: Final Report of the Urban Green Spaces Taskforce*. Urban Green Spaces Taskforce, 2002.
<http://www.communities.gov.uk/documents/communities/pdf/131015.pdf>
- 2 See <http://www.sed.manchester.ac.uk/research/cure/research/asccue/>
- 3 *Green Infrastructure Guidance*. Natural England, 2009.
<http://naturalengland.etraderstores.com/NaturalEnglandShop/Product.aspx?ProductID=cda68051-1381-452f-8e5b-8d7297783bbd>
- 4 *Adapting to Climate Change*. House of Commons Environmental Audit Committee, 2010.
<http://www.publications.parliament.uk/pa/cm200910/cmselect/cmenvaud/113/113.pdf>
- 5 *Does Money Grow on Trees?* CABE Space, 2005.
<http://www.cabe.org.uk/files/does-money-grow-on-trees.pdf>
- 6 *Start with the Park. Creating Sustainable Urban Green Spaces in Areas of Housing Growth and Renewal*. CABE Space, 2005.
<http://www.cabe.org.uk/files/start-with-the-park.pdf>

- 7 Planning Policy Guidance 17 : *Planning for Open Space, Sport and Recreation*. Office of the Deputy Prime Minister, 2002; and *Assessing Needs and Opportunities: A Companion Guide to PPG17*. Office of the Deputy Prime Minister, 2001. See <http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/planningpolicystatements/planningpolicyguidance/ppg17/>
- 8 *Consultation Paper on a New Planning Policy Statement: Planning for a Natural and Healthy Environment*. Department for Communities and Local Government, Mar. 2010. <http://www.communities.gov.uk/documents/planningandbuilding/pdf/1498981.pdf>
- 9 *Planning for a Natural and Healthy Environment*. TCPA Briefing Paper 9. TCPA, Jun. 2010. http://www.tcpa.org.uk/data/files/resources/856/TB9_Healthy-and-Natural-Environment_G.pdf
- 10 *Planning Policy Statement: Eco-towns. A Supplement to Planning Policy Statement 1*. Department for Communities and Local Government, 2009. <http://www.communities.gov.uk/documents/planningandbuilding/pdf/pps-ecotowns.pdf>
- 11 *The Essential Role of Green Infrastructure*. Eco-towns Green Infrastructure Worksheet. TCPA, 2008. http://www.tcpa.org.uk/data/files/etws_green_infrastructure.pdf
- 12 *Open Space Strategies. Best Practice Guidance*. CABE Space and the Greater London Authority, 2009. <http://www.cabe.org.uk/files/open-space-strategies.pdf>
- 13 *Climate Change Adaptation by Design. A Guide for Sustainable Communities*. TCPA, 2007. http://www.tcpa.org.uk/data/files/bd_cca.pdf
- 14 See http://www.malmo.se/download/18.4a2cec6a10d0ba37c0b800012608/bo01_det_grona_bo01_eng.pdf
- 15 *Understanding the Environmental and Social Impact of Garden Development*. GRaBS Briefing Paper 1. GRaBS project. TCPA, Jan. 2010. http://www.tcpa.org.uk/data/files/resources/859/GRaBS_Briefing_Paper_1.pdf



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