



CREATING & IMPROVING
OUR GREEN NETWORK

THE SOUTH YORKSHIRE GREEN
INFRASTRUCTURE STRATEGY



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South Yorkshire Forest Partnership

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Foreword

South Yorkshire has the makings of a vitally important green network of productive natural assets, inspiring places and diverse environments.

We have some of the most beautiful and productive landscapes in England, and as one of the greenest areas in Europe we have much to celebrate. The sub-region is blessed with a wealth of valuable natural resources: prolific woodlands, diverse green spaces, a network of productive rivers, inland waterways and wetlands, stunning moorlands, rich agricultural land and coal, stone and aggregates. Taken together this green capital has the potential to become one of our strongest selling points and a distinct competitive advantage over other locations.

South Yorkshire's green infrastructure is not yet achieving its potential; we must join together if we are to make it work for us all.

Over time, our landscapes have been fragmented and degraded, starting in earnest with the medieval clearances of trees for shipbuilding and fuel, followed by Vermuyden's river engineering and drainage of washlands and wet woodlands to create farmland, and more recently the extraction, heavy industry and other entrepreneurial pursuits which caused rapid expansion of our towns and cities, followed by decline and deprivation in many areas. This rich heritage has left its imprint on our society, but it is clear that some places in South Yorkshire are now let down by a legacy of specific, critical environmental problems, including unattractive, blighted and dilapidated areas, where the quality of life is far less than our communities deserve. These inequalities are evident across all four of the local authorities in South Yorkshire.¹ Such problems are a threat to South Yorkshire because they act as a deterrent to future growth and investment, they undermine social cohesion and they diminish natural life support systems.

The whole of green infrastructure could be far greater than the sum of its parts.

This strategy advocates a vision for the future of South Yorkshire's network of green assets, including proposals for a new, radical programme to support local action, to stimulate investment and to strengthen the image of our area. It aims to build on existing achievements and ongoing activities and to fuel new on the ground actions to promote the regeneration of our communities.

It is not an option to return to some false notion of an idyllic past with pristine nature and isolated settlements. Instead we need a progressive new vision – a bold and long-term view – leading us forward by creating a green network that is productive, prized and profitable. There is much to do to realise this vision – work that needs to be both properly resourced and carefully coordinated. This long-term view involves achieving a working symbiosis between our communities, and between built and natural environments, through modern and inclusive approaches to governance, and with the full engagement of all parts of society.

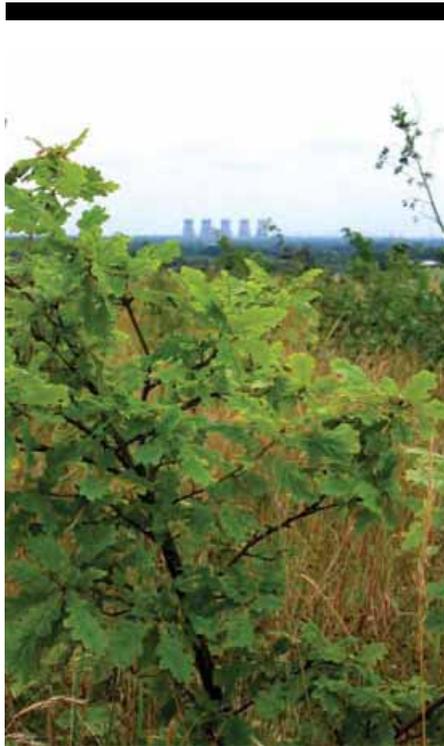
This strategy advocates a collaborative approach that will make better use of our complimentary resources, strengthen the relationship between our urban centres and rural areas, and stimulate growth that is smart, green and resilient to future changes. South Yorkshire is lucky to have such a unique juxtaposition of natural assets. I believe that if we work together, we can deliver a truly great green infrastructure network.

Tom Wild
Director, South Yorkshire Forest Partnership



Executive Summary

This document presents a new vision for South Yorkshire's green infrastructure, and provides a framework for a programme to support local action, stimulate growth and create liveable, attractive and prosperous places over the next twenty years, and beyond.



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This document is Phase 1 of the South Yorkshire Green Infrastructure (SYGI) Strategy. This phase of works has established the steering group, consulted with potential delivery partners and stakeholders, undertook scoping and development and created this advocacy document.

The SYGI Strategy, Phase 1, of this work puts forward a series of ambitious, high-level goals, supported by proposals for the kinds of actions that can deliver these goals. It includes a masterplan, highlighting priority areas for improvements in specific locations. The strategy goes on to describe the kinds of potential actions that can be taken forward in partnership, to address the main strategic challenges faced by South Yorkshire.

This document also sets out how Phase 2 will develop a five-year programme for delivery, which will be refreshed on a rolling basis. The proposed approach is to focus on improvements that will deliver benefits across the local authority boroughs and into the City Region and neighbouring landscapes in England.

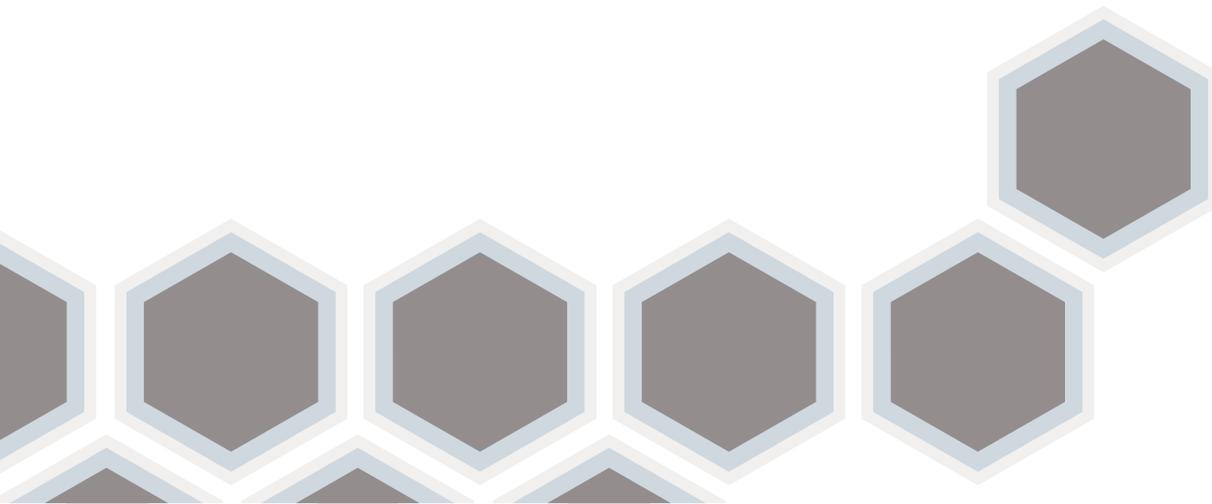
This document presents a new vision for South Yorkshire's green infrastructure, and provides a framework for a programme to support local action, stimulate growth and create liveable, attractive and prosperous places over the next twenty years, and beyond.

The strategy Phases 1 and 2 offer support and advocacy for the multifunctional benefits of an integrated green infrastructure network, and suggest how these actions could be resourced and embedded into

routine spatial planning processes. It asserts that working at a sub-regional scale is necessary to provide the adequate resources and support to neighbourhoods and boroughs. Seventeen recommendations are made relating to the governance, delivery, funding and communication of the measures put forward in this strategy.

This strategy represents an important step towards coordinated action across South Yorkshire, strengthening the case for investment, and creating real savings by avoiding duplication. This document also offers other practical and immediate outcomes, including important background on green infrastructure and a framework for embedding this information into local policy documents of organisations involved in strategy and delivery, from our planning authorities to environmental groups to businesses in the sub-region.

Transform South Yorkshire, who commissioned and part funded the SYGI Strategy, asked a board representing the four local authorities of South Yorkshire to approve the strategy recommendations and give South Yorkshire Forest Partnership (SYFP) custodianship of the ongoing strategy. This agreement cements a shared partnership approach to implementing the delivery programme, to enhance and create the GI network, to take the vision of this document forward.



1. Purpose of This Document

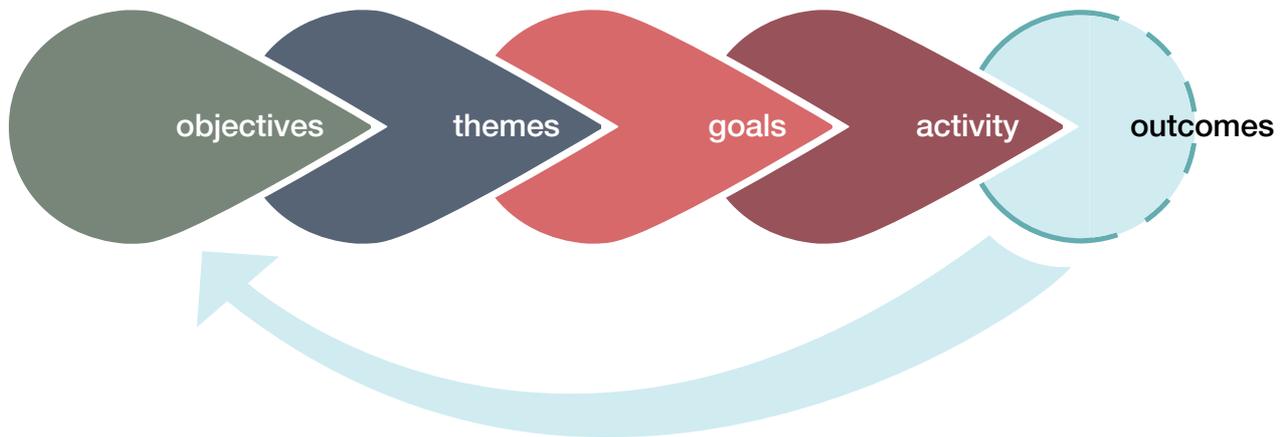


Figure 1: Structure of This Document

1.1

The strategy document puts forward a vision for South Yorkshire’s green infrastructure network, underpinned by specific objectives giving four clear themes, leading to the exploration of goals, and allowing us to develop potential actions in different locations, bringing greater understanding of the priorities for GI in South Yorkshire.

1.2

This advocacy document is Phase 1, and sets out an overall strategy for protecting, maintaining and improving the quality of green infrastructure (GI) across South Yorkshire. Phase 2 (to be delivered in 2011 to 2016) will set out the detailed plan for delivering GI provision within priority areas, building on the outline in Appendix B.

Who is this Strategy For?

1.3

Planning authorities, agencies and organisations who work across boundaries in South Yorkshire and beyond.



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The Growth Point agenda was the reason for this strategy and so this document provides the case for making sustained investment in South Yorkshire’s green network integral to development. This strategy does this by identifying opportunities, influencing the people who can make things happen, promoting links between existing activities and avoiding duplication, and by helping to secure resources for new collaborative projects.



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2. The Strategy Vision

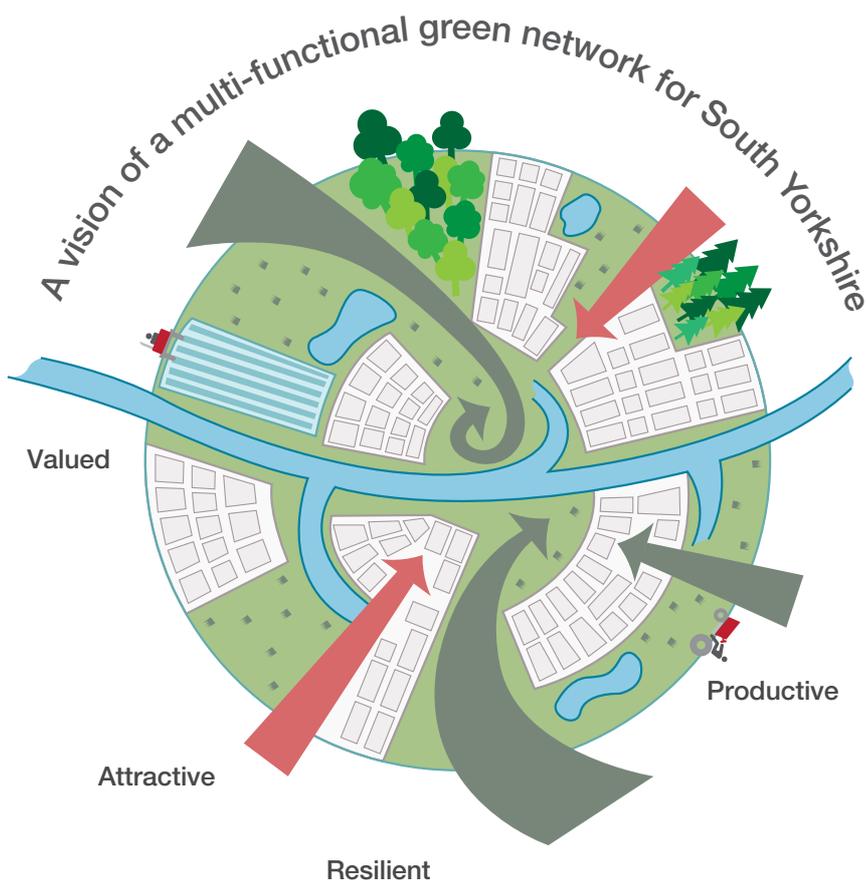


Figure 2: Strategy Vision

Particular emphasis is placed on green infrastructure which radiates in to towns and cities. This vision envisages cities and towns with green infrastructure links in the form of green lungs/wedges such as transport corridors (for example tree lined avenues and arterial routes) across South Yorkshire and beyond. This could involve improving transport routes and green infrastructure investments to key gateways. Green infrastructure nodes could be developed, linking different assets. Public realm improvements could be sought to improve linkages to outer ring roads

“

The choice is stark: either we provide new developments with parks, nature reserves and informal green spaces that can work together to create places that are attractive and support healthy communities or we have carbon-neutral battery farms for people.²”

Sir Martin Doughty,
Natural England Chair 2007-2009

2.1

This strategy envisages a vital, productive and attractive green infrastructure network, which has the capacity and strength to link South Yorkshire's communities, supporting sustainable change within a resilient and biodiverse ecological network while helping to deliver social cohesion.

2.2

This vision for our shared green infrastructure (GI) shall be achieved through setting in motion a programme of coordinated action, wise investment and appropriate management. The programme for delivery in Phase 2 of this work will involve linking up existing assets, and restoring and enhancing the environment in targeted locations. What is achievable will depend on local conditions. In keeping with the social heritage of South Yorkshire, innovative and entrepreneurial solutions will be encouraged at every scale of working.

2.3

Appendix H gives definitions of *green infrastructure* from central government, planning organisations and environmental bodies. Each in its own way presents GI as a network of facilities and services which deliver more than one function, and have the role of supporting life in the sub-region through benefits and services. It is widely accepted that green infrastructure is not an element, as a singular asset or resource, but the way in which a network of elements are managed so as to complement and enhance one another.

Goals of the Strategy

2.4

Development of the strategy included a scoping study and a programme of engagement and consultation with key stakeholders in the sub-region, to identify objectives for future action, based on the concept of a multi-functional green network for South Yorkshire. These are outlined in section 5. Goals for the strategy have been created out of this research:



Economy

Provide for an enhanced quality of place for both new and existing communities and for new economic investment. Stimulate and sustain economic growth through innovation.



Community

Create and extend opportunities for access and recreation, joining up communities, maintaining and providing employment opportunities, and supporting social cohesion. Use the green network to support mental and physical health.



Climate Change

Adapt to the anticipated effects of climate change, and mitigate that projected by UKCP09.³



Biodiversity

Enhance, conserve, appreciate and respect the unique functions of biodiversity, which enable all life and success in South Yorkshire.

The Network

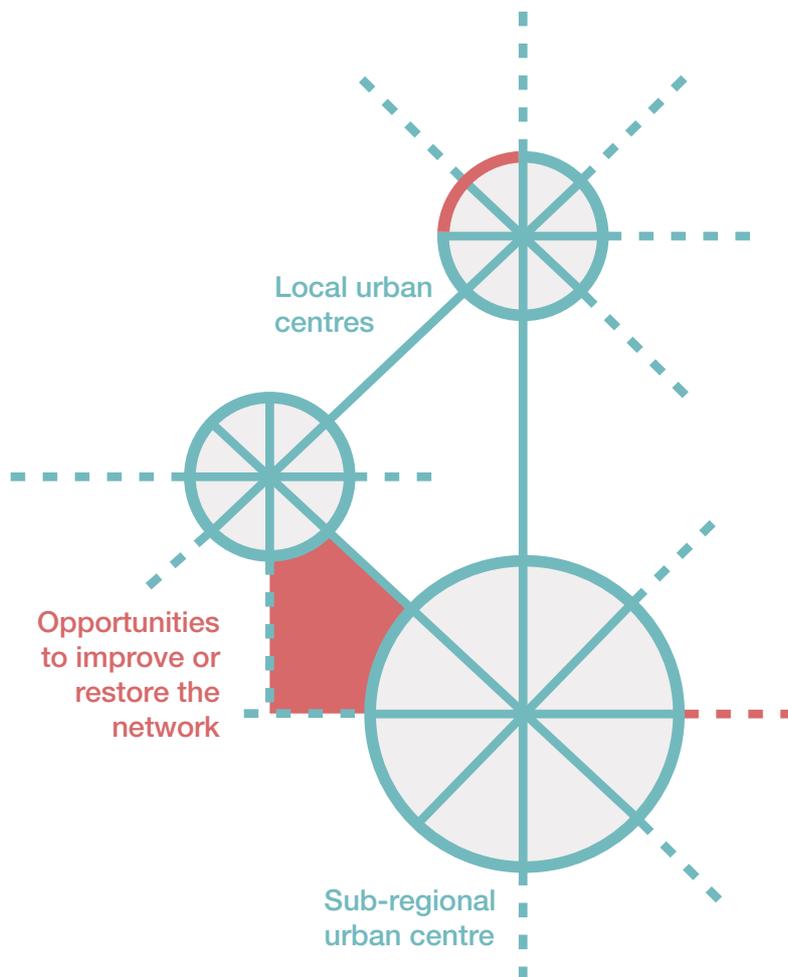


Figure 3: The multifunctioning network

2.5

This strategy promotes the delivery of a green infrastructure network that will comprise of all the natural elements needed to support South Yorkshire’s communities and their sustainable growth; to be planned and implemented in a strategic manner, at a cross-boundary scale. This vision for green infrastructure can be pictured conceptually as a multifunctioning network of attractive, biodiverse and well-maintained natural assets.

2.6

Achieving this vision requires many activities, from the sub-regional to the local scale. There are missing links and areas where major environmental improvements are needed. For example, flood risk could be reduced across the Don rivers catchment by targeted investment in additional storage in the upper catchment; degraded areas affected by contamination and pollution from former industry can be regenerated, to create new and enhanced green spaces; access routes can be created or linked up where they are currently fragmented, to add to the network.

2.7

In this vision for the green infrastructure network, GI radiates in to urban centres to fuel activity. New and improved green wedges and links would be created, delivering transport routes and options for non-motorised travel between residential, recreation and employment centres. These elements would provide vital opportunities for access to nature within cities and in the countryside, promoting healthier lifestyles and improving our communities’ quality of life.



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2.8

Targeted work across the administrative boundaries will benefit communities facing significant change and new development. Effective, inclusive planning systems, where all parties work to the same goals for GI, will result in greater efficiency in decision-making and deliver greater stability for private sector investors, allowing them to take on greater challenges with confidence. This approach can help to ensure that new developments – such as those projected in Local Development Frameworks – will embed multi-functional natural elements in every aspect of design, creating wonderful places to live and work, which is no less than our communities deserve.

2.9

Across South Yorkshire, improvements will be delivered where they are most needed, with the full engagement of local people and stakeholder groups. Engagement with communities and local businesses will help realise the vision of a joined-up green network on the ground.

2.10

The priority will be to make South Yorkshire's green infrastructure work for us all, with investments helping to deliver modern, attractive development, liveable places and more sustainable communities. The relationship between actions taken and the resulting regeneration will be clearly evident by increased prosperity, reduced deprivation, greater unity and improved local environments across the sub-region.



It has been evident for more than seventy years that providing a quality environment is an essential prerequisite for creating a sustainable community. Social justice and economic development cannot be delivered in isolation from effective management of the natural and built environment.⁴

Professor Peter Roberts, Housing and Communities Agency

Case Study 1 Making the Green Network Work for Communities

Rotherham is subject to significant flood risk from the River Don. Centenary Riverside is part of an ongoing £14 million flood alleviation scheme along the river to respond to primary flood risk in the lower catchment. This is a partnership scheme led by Rotherham Metropolitan Borough Council together with the Environment Agency, Yorkshire Forward and the Wildlife Trust for Sheffield & Rotherham, and managed and maintained by the Wildlife Trust for Sheffield and Rotherham. It is supported by funding from South Yorkshire Objective 1, Yorkshire Forward, the Environment Agency and Rotherham MBC, ERDF, Biffaward, The SITA Trust, WREN, Natural England's Biodiversity Action Fund, WRAP and the INTERREG IVB Northwest Europe Programme through the VALUE Project.

The Centenary Riverside Project sought to alleviate the primary source of risk through GI. The land used was a former industrial site with relatively low land value. A floodplain has now been created with significant biodiversity opportunities.

Centenary Riverside is an example of a development with multi-functional impacts. The site is managed and maintained by the local Wildlife Trust and will include input from volunteers and the local community. The investment has created a green recreation area where such assets were previously lacking, this contributes to prospects for economic growth and social cohesion in this part of Rotherham. The nature reserve also has potential benefits for urban cooling. The prospect of a more protected town centre from the risk of floods will encourage businesses to stay in the area and potentially attract new ones, with a positive impact on the local economy and communities further down the Don catchment in other areas of England.



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Multifunctional Network

2.11

By consensus, green infrastructure is multi-functional, operates as a network and delivers ecological services. Such a big concept requires big ideas and strategic thinking. Green infrastructure strategy is more than just a re-branding of green space strategy. Green infrastructure strategy steps into the domain of thinking about how a green space fits as a jigsaw piece in a number of jigsaws, from local habitat networks to national climate change.⁵



© Barnsley MBC

Case Study 2 The Benefits of Good Urban Green Space

Dearne Valley Country Park in Barnsley covers 75 hectares including areas of ancient woodland, new planting, and open space. It is an important example of a multi-functioning space, where the functions support and complement one another, while providing a multitude of services to the community surrounding, and beyond.

Recreation^{6,7}	Formal and informal resource including football pitch, equipped play, fishing and canoeing.
Biodiversity	Local nature reserve, ancient woodland and local wildlife site, protected and priority species.
Renewable Energy/ Biomass	Managing the existing woodland and planting new for wood fuel.
Climate change	Carbon sequestration and urban cooling function.
Sustainable transport	Cycle route linking to Trans Pennine Trail, bridleway and public rights of way links residential areas with Barnsley town centre.
Flood risk management	River Dearne which flows through the site is in Environment Agency Flood Zone 3b.
Water quality	Management improvements to River Dearne leading to improved water quality and improved biodiversity of the river. Two large lakes use water for angling and nature conservation.
Landscape	Maintained landscape character including open vistas and mature trees, and industrial heritage such as pit head winding gear, and the remains of canal and railway.
Relationship to growth	Dearne Valley Country Park is centrally located surrounded by existing and future residential and business growth.
Air quality	Woodland helps absorb transport emissions.

Funding

2.12

The SYGI Strategy was commissioned to support the Growth Strategies of the four South Yorkshire authorities, as a condition of Growth Point Funding. In 2009, Transform South Yorkshire commissioned South Yorkshire Forest Partnership (SYFP) to produce a green infrastructure strategy covering the sub-region, to be developed in partnership with the local authorities for Barnsley, Doncaster, Rotherham and Sheffield, and with Sheffield City Region. To augment this work, SYFP secured funding from the Interreg IVB North West Europe programme through the VALUE project, and the South Yorkshire ERDF Technical Assistance programme. Together this funding has been used to take forward the project in two phases. This commission is a requirement of the Growth Point programme funding from DCLG (Department for Communities and Local Government).

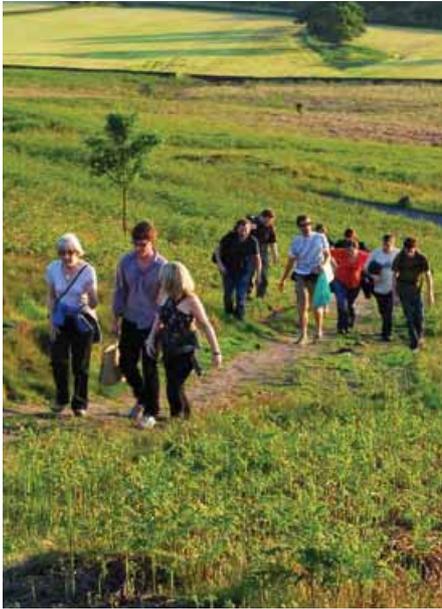
Stakeholders

2.13

Working with stakeholders has been critical to the strategy development. Stakeholders are defined as individuals and organisations with a direct involvement in delivering or utilising Green Infrastructure in South Yorkshire. This strategy has used a Communications and Engagement plan (available on request) throughout development. The text opposite describes the strategy development, and the integrated process of engagement.



Strategy Programme



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Phase 1.1

January 2010 – May 2010

In early 2010, SYFP commissioned environmental consultants TEP to prepare a scoping study summarising the existing situation in South Yorkshire (available on request). This report established where gaps in policy and provision could be potential barriers to future work. It also began to identify where the strong support of environmental schemes, coupled with development opportunities, could be the ignition for future growth. The scoping study was completed in May 2010 and approved by the strategy steering group. This was the stepping stone to Phases 1.2 and 1.3. To begin the process of working openly and interactively, the strategy was launched by holding a stakeholder workshop in January 2010. The event included presentations by CABE, Dearne Valley Eco Vision, Natural England and the Forestry Commission.

2.14

Phase 1.2

June 2010 – December 2010

The emphasis of this work has been to deliver coherent thinking and to produce robust recommendations, as well as preparing the ground for adoption and implementation of the strategy. Throughout Phase 1.2, the views of a broad range of stakeholders were sought, to bring about buy-in from as many different groups as possible.

This work has included local authorities, specific interest groups, membership organisations and charities, government bodies dealing with health, nature and the built environment, and private enterprises including developers and consultants. The intention of opening up the strategy in this way has been to establish and maintain relationships with the people delivering green infrastructure on the ground, now, throughout South Yorkshire.

2.15

Phase 1.3

January 2011 – March 2011

The strategy was consulted upon and re-drafted during the final stages of development. A methodology for a business plan for Phase 2 (Appendix B) was developed and arrangements we made to steer progress, beyond March 2011, as custodians of this important work.

2.16

Phase 2

April 2011 – March 2016

The programme will be developed in partnership with key stakeholders. This will include proposals for funding and for securing future resources for practical projects, as well as detailed arrangements for management, risk assessment and administration of coordinated actions.



3. Geographic Scope

Figure 4: National Context



Figure 5: Regional Context



3.1

This strategy covers the sub-region of South Yorkshire, incorporating the four local authority districts of Sheffield, Rotherham, Doncaster and Barnsley and part of the Peak District National Park. There has been no sub-regional corporate body since the South Yorkshire county council was disbanded in the 1980s, yet the police, archaeology service, transport executive, fire service, and BBC are among many diverse organisations which use this established area to play out their strategic roles. Planning policy has traditionally been done on a regional and local scale, despite the number of groups working sub-regionally and cross-boundary, in the area, for many years. The scoping study, produced by TEP,⁸ found that the most significant sub-regional policy for green infrastructure is still the 2003 South Yorkshire Forest Plan.⁹

Figure 6: Strategy Area



“Why Do We Need a Green Infrastructure Strategy for South Yorkshire?”

3.2

The ways in which growth is planned and delivered are undergoing a period of rapid and challenging change. This advocacy document is being launched during a period of severe funding shortages, continued degradation of habitats and a shift towards an older, less active population. However, many opportunities also exist alongside these threats, including the variety of natural assets in the sub-region, the dedication of local people and professionals to achieving positive change, and innovative approaches.

3.3

Green infrastructure planning must connect urban to rural resources by threading GI through the built environment, and connecting the urban area to the wider rural area.¹⁰ The surrounding countryside is in fact pivotal to urban living. It provides a multitude of functions which enable thriving towns and cities: e.g. water storage, large scale food and biomass production, recreation, flood risk management etc.



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3.4

Without a strategic plan for green infrastructure which looks at the mix of rural and urban, functions and assets, needs and funds, on a sub-regional scale, our towns and cities will become islands, set apart and struggling to cope with future demands and pressures in the midst of a disconnected countryside.

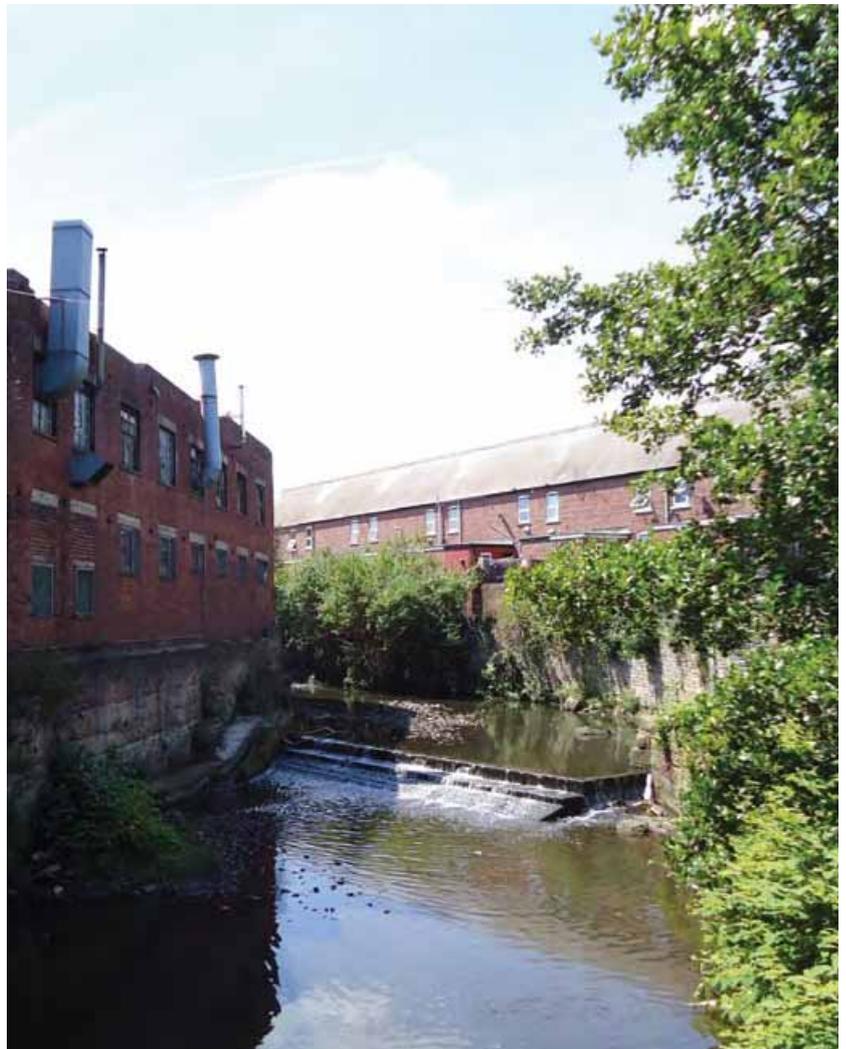
3.5

Indeed, in many areas of South Yorkshire, our countryside is under increasing specific pressure to support towns and cities by providing space for homes and enlargement of urban areas. These challenges must be met in a way that understands, preserves and enhances the function and character of the landscape; and integrates the new urban locations with the green network, to create vibrant, safe and strong communities fit for future generations.

“

The most deprived populations [in South Yorkshire] are the least likely to be living near to woodlands.¹¹”

*Environment Agency
& University of Staffordshire*



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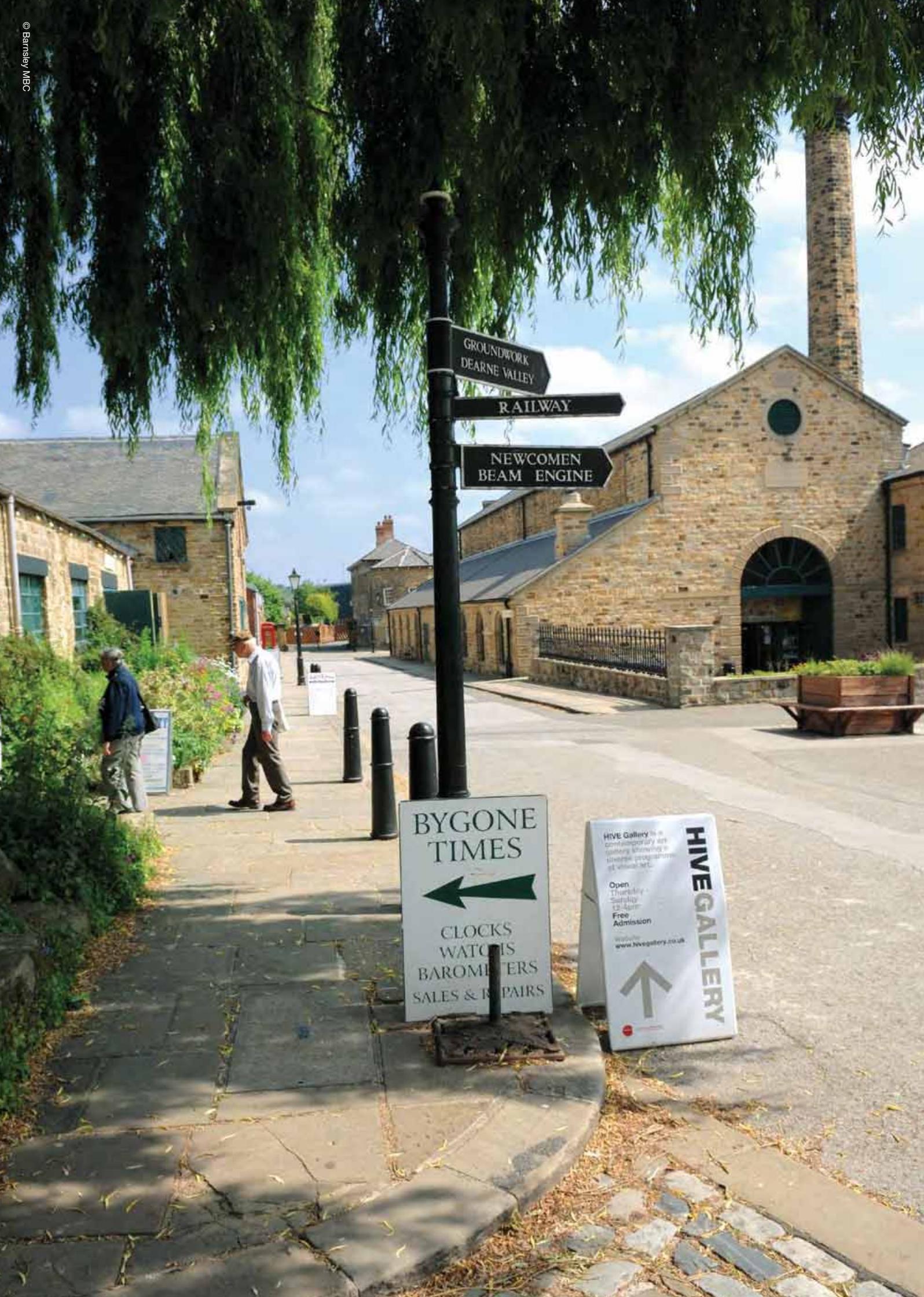
Neighbouring Sub-Regional GI Strategy

Leeds City Region has developed a Green Infrastructure Strategy to help bring a wide range of economic, environmental and social benefits to the area. The strategy is not a statutory planning document; it identifies where value may be added to existing and future green infrastructure investment and interventions at the city region scale. A Delivery Plan is now in development to support strong cross-boundary political leadership, sustained investment and effective partnership working between the private and public sector, and is expected to be delivered in 2011.¹²

North Sub-Region Green Infrastructure Study is part of the technical studies for the North East Derbyshire Core Strategy. Consultation on the first draft of the study was undertaken in late 2010.¹³



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4. Valuing Green Infrastructure

South Yorkshire is blessed with a wealth of varied natural assets, of differing states and levels of quality, all with both current and potential future value. In essence this means that South Yorkshire could have almost limitless forms of green infrastructure. Our collective duty is to decide what activities and plans should be the focus of current resources so that we can protect what might be precious in the long-term, and calculate how to afford this now.

4.1

The green infrastructure approach to planning the environment has so much to offer, from improving health and wellbeing, to managing the effects of climate change. These potential benefits of GI are well researched and articulated by Natural England's work on *Green Infrastructure Corridors* in Yorkshire and the Humber.¹⁴ This study identifies regional and local assets and establishes fifteen potential functions, outlined in Appendix E and explained in detail in the scoping study.

4.2

Figure 7 demonstrates that trends in uses or demand for functions (driving forces) exert a range of pressures and impacts on our assets – from positive improvements in access through to negative impacts like overexploitation and exhaustion of supply, loss of biodiversity and environmental quality. Attempts to improve the state of green infrastructure require us to respond to a wide range of these demands, pressures and impacts, by setting in place desired outcomes, such as reduction in flood risk, improved access to green space, greater fuel crop yields etc.

4.3

The ways and means of achieving these outcomes will vary in cost. The challenge is to adequately quantify the benefits of a *managed environment* through green infrastructure planning, so that natural processes can be used for public good.



© Andy Barker courtesy of Sheffield City Council



© South Yorkshire Forest Partnership

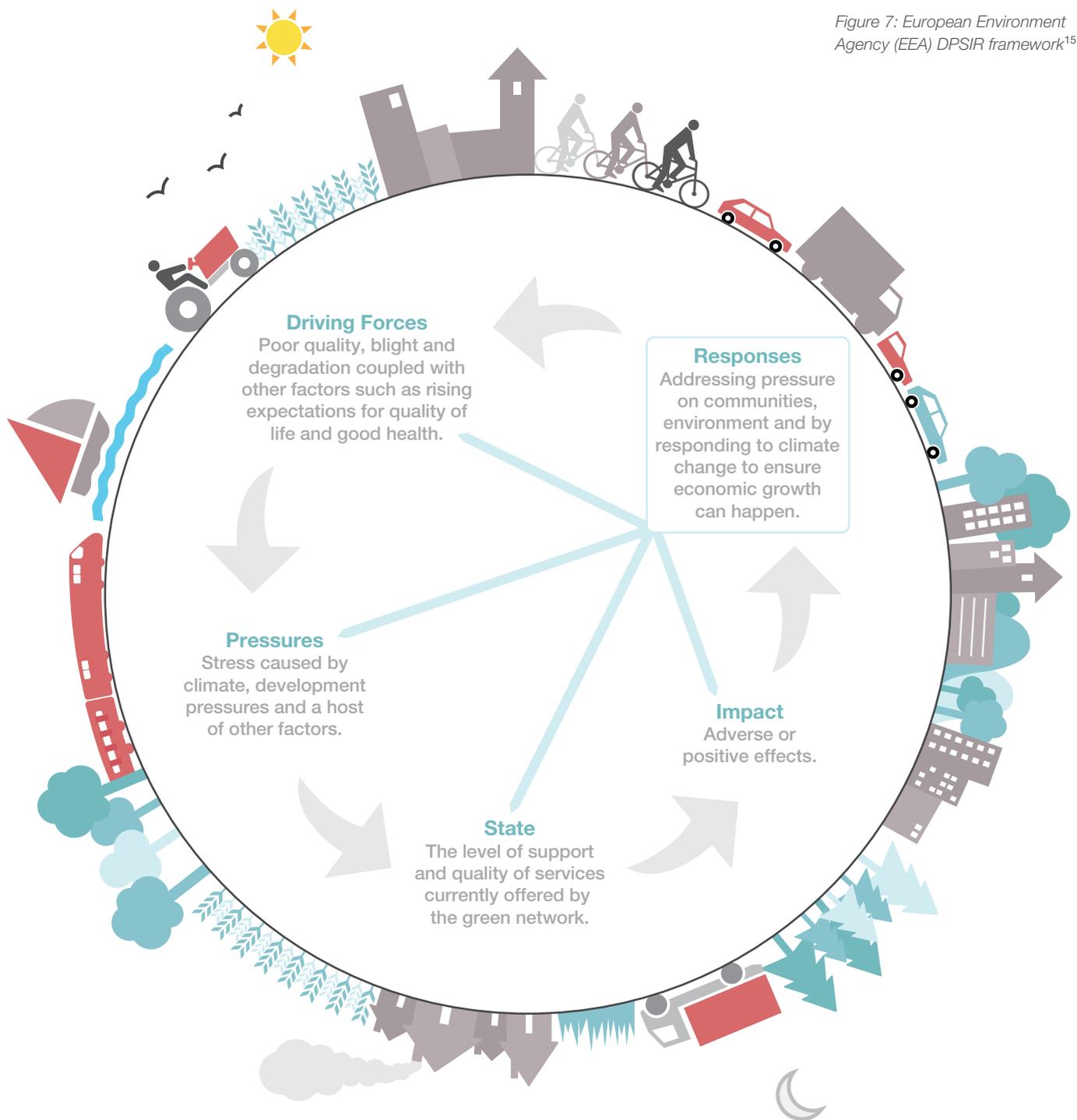


Figure 7: European Environment Agency (EEA) DPSIR framework¹⁵

4.4

Figure 7 is based on Driving forces / Pressures / States / Impacts / Responses (DPSIR) causal framework for describing the interactions between society and the environment, developed by European Environment Agency; an extension of the Pressure / State / Response model developed by Organisation for Economic Co-operation and Development.

Managing the Network

4.5

Green infrastructure management demands a thorough understanding of the linkages and interdependencies between different natural systems, in order to inform good decision-making as to the most efficient and effective long-term approach to using and conserving valuable resources (see Figure 2). Perhaps most important are the ideas of promoting multiple uses and functions of the same assets (e.g. areas of land) – and understanding how values drive decisions.

4.6

Figure 7 helps identify the preconditions and pressures that affect the state of green infrastructure in the sub-region. Amongst other factors these include the geology of the area, its climate, previous land uses and other anthropological impacts, as well as existing infrastructure and social conditions (explored in Appendix F).

4.7

The result is a network of ecosystems of contrasting content, quality and value to people, which vary over the landscape of South Yorkshire. The green infrastructure elements might include parks, agricultural land, forests and woodlands, rivers, inland waterways, lakes and wetlands, local nature reserves, private gardens and allotments, geological features, access routes, and heath and moorlands.

Case Study 3 Sub-Regional Scale GI Benefits from Investment

Since 2003, the Moors for the Future Partnership has piloted work to reverse 150 years of atmospheric pollution and fires that left large areas of the uplands of the Peak District and South Pennines bare of vegetation. The partnership aims to retain the huge existing carbon reserves already held in the peat moorlands – peat is the single biggest store of carbon in the UK, storing the equivalent of 20 years of all UK CO₂ emissions; 20 million tonnes of carbon are stored in the Peak District alone.¹⁶ Damaged and eroding peat releases carbon and other greenhouse gases such as methane into the environment.

Re-vegetating moorland also improves water quality and colour and reduces diffuse pollution and sediment, helping the sub-region comply with the Water Framework Directive. Improved water quality is also good for biodiversity and less energy is needed to treat water for domestic use.

The Pennine uplands are also an important wildlife habitat and the Partnership has recently received a £5m grant from the EU Life+ Programme to undertake the largest conservation project in the UK to improve biodiversity within the South Pennine SAC – an EU Priority Habitat.

The work has been focused on restoring degraded moorland by stabilising and re-vegetating bare peat to help absorb moisture (and carbon), while more recently working to re-introduce bog-building sphagnum mosses. These practical techniques restore the natural functioning of the uplands. This work has sub-regional and regional benefits. The Partnership is undertaking monitoring and modelling work to investigate the hydrology of the uplands and the impact that restoration work may have in mitigating flash flooding events further downstream where mid-catchment settlements are likely to be vulnerable to flooding while constrained by existing development.

There is a need for a more holistic and spatial approach to understanding moorland processes and management, and a need to develop approaches that combine understanding of interlinked social and natural processes.¹⁷ The work of the Moors for the Future partnership will further develop understanding of the multi-functional benefits of moorlands.



Quantifying Value

4.8

“To value” means not only to cherish or respect, but to understand and quantify. This second meaning is important to securing a central role for GI within development and change in South Yorkshire. The natural environment is so essential to human life that many aspects cannot be valued in monetary terms, and its true value overall is “priceless”. Monetary terms are however the basis for cost/benefit analysis and therefore the mechanism by which development is invested in. Indeed, if the landscape is not valued it is given a value of zero.¹⁸

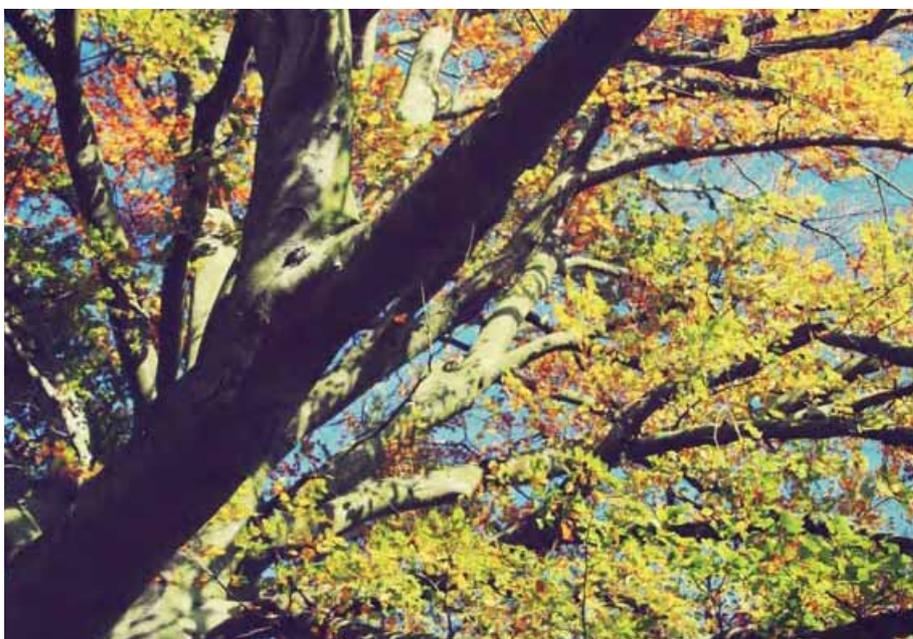
4.9

To avoid this stalemate and enable cost/benefit analysis of GI, so the managed environment can be recognised within the present system of values, detailed guidance is growing in volume and credibility, to support the case for GI investment.

This strategy recommends the use and development of datasets which look at whole life costs and benefits of GI.



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Inland Waterways, Canals and Tow Paths

The legacy of canals and tow paths are integral components of GI and transport infrastructure in South Yorkshire. The South Yorkshire Navigation connects the major urban areas of Sheffield, Rotherham and Doncaster, and the Stainforth & Keadby Canal runs through Thorne and Hatfield (initiative area L). These major waterways and towing paths pass through areas of high deprivation inbuilt urban locations. Access to canals and tow paths offers health, leisure and recreational opportunities to these communities and thread these with rural areas beyond.

To ensure long-term use of towpaths investment and maintenance are needed, but the benefits could be great. These corridors have a useful role to play in widening travel choices, providing opportunities for cycling, walking, alternative public transport and green routes.¹⁹ 100 tonnes of carbon dioxide (CO₂) are saved per 1 kilometre of towing path upgraded.²⁰



© Rotherham MBC

Evidence for the Benefits of Green Infrastructure from Policy Driven Assessments

4.10

Policies and strategies relevant to the development of South Yorkshire's green infrastructure will provide evidence to support the adoption of green infrastructure as an integral element of development through the planning system, at the local and cross-boundary scale:

- All types of green space strategies, open space and recreation land assessment (PPG17)²¹ that shows where access to green space is limited or quality is diminished
- Strategic Flood Risk Assessments which show where land is vulnerable to flooding, and evidence from site by site flood risk assessment (PPS25)²²
- The regional adaptation study which cites risks of climate change to wildlife and communities (Adapt YH)²³
- Future evidence to create policy for mitigation: technological innovation, secure low carbon energy and green modes of transport (Infrastructure Strategy for the UK)²⁴
- Core Strategy site allocation using evidence of the physical, social and GI needed to enable development (PPS12)²⁵
- Spatial planning to put brownfield sites forward before greenfield, for housing (PPS1) or identify where development would bring most benefit and cause least harm, where the option to use brownfield is no longer viable²⁶
- Local Development Framework mapping of designated sites, for biodiversity and geological conservation value to communities (PPS9)²⁷

Examples of Current Cost Benefit Guidance for GI

- Natural Economy Northwest accounting system for GI investments²⁸
- CSI research into the value of attractive setting for business investment^{29,30}
- CABE guidance on urban park assets³¹
- LiFE cost benefit analysis of GI flood risk management³²
- Forestry Commission benefits of GI report to DEFRA and DCLG³³
- Green Values surface water management calculator (US)³⁴
- UN Environmental Programme work on the TEEB project (EU)³⁵

Case Study 4 A Shared Toolkit To Value GI

In 2008 a consortium of Natural Economy Northwest, the Northern Way, Natural England, CABE, Design for London and Tees Valley Unlimited commissioned a "valuation framework" for assessing potential economic returns from investment in green infrastructure.³⁶ The Green Infrastructure Valuation Toolkit is now made available online, as a prototype and free "open source" resource (www.bit.ly/givaluationtoolkit). Open Source is a term derived from software engineering, where the designer of an application would make the source code freely available to others to modify, use and develop, into the future. Its use here indicates that the designers welcome comment, criticism and new information with which to develop this tool. The consortium has established a Green Infrastructure Valuation Network (GIVaN) to encourage and coordinate development. The tool is essentially a set of formulae within a spreadsheet that can assess the benefits of green assets and express this in monetary terms. Visitors to the webpage are invited to download the toolkit and experiment, and pass the link on to their network of colleagues and partners working in GI.



Case Study 5 Improving Landscape Quality

Green infrastructure can strengthen local economies and improve the quality of life for deprived communities and neglected environments. Moston Vale was transformed during the Industrial Revolution, and uncontrolled tipping led to the flooding of Moston Brook, a tributary of the River Irk.³⁷ By the 1960s, Moston Vale had become a landfill site, and later a neglected area of green space surrounded by a community with socio-economic problems, and offered little to benefit the surrounding area.

An economic strategy for the North West region had designated the area a Strategic Regional Site, so any change would have to have wide reaching benefits.³⁸ The Moston Vale project set out to transform of 21 hectares of brownfield land into community woodland with managed access to the whole site, a significant contribution to regional and local Biodiversity Action Plan targets, the involvement of business, and engagement with communities. Red Rose Forest, with the Irk Valley Green Tips project, began by making small scale improvement works, working with the Moston Vale Residents Association and the wider community, which triggered further work and greater goals.

The impacts of the development are demonstrated through positive economic growth. For example, there is strong evidence that the Manchester and Salford Housing Market Renewal Pathfinder and Newlands regeneration of the site resulted in a more rapid rise in house prices in the area than in other parts of Manchester (to June 2008).³⁹



© Newlands & The Forestry Commission

Table 2: Analysis of Strengths, Weaknesses, Opportunities and Threats - capacity to deliver green infrastructure

STRENGTHS

- It is clear from consultation and engagement that the capacity and will to work in partnership is already alive and kicking in the sub-region.
- Several organisations have a track record in securing funding and grants from a variety of sources, including the EU and the private sector.

WEAKNESSES

- There is no dedicated funding stream for GI.
- Redundancies within partner organisations leading to loss of expertise and resources.
- Continued lack of faith in the role of GI to supply certain “environmental services” such as flood control, climate change measures and amenity.
- Lack of understanding of the value and role of GI by decision makers.

OPPORTUNITIES

- The close connection to communities means that the third sector (NGOs, charities and membership organisations) can be expected to grow, if given the right support.
- Third sector groups have greater potential to generate in-kind resources to invest in and maintain local GI projects. With sustained support, this can be better exploited to support their own actions. This must, however, be balanced against the ongoing struggle to obtain core costs and associated financial risks.
- Novel approaches to fund the maintenance of landscapes. This can include establishing new community trusts or social enterprises to manage commuted sums generated through planning approvals.
- Emerging policy on the Community Infrastructure Levy, with its option of funding for maintenance as well as capital expenditure (should SY planning authorities use it). A proportion of the funds will be ring fenced for local projects.
- Housing development providing multi-functioning, high quality green infrastructure.

THREATS

- Failure to continue investing in South Yorkshire’s infrastructure will significantly reduce the impact of earlier funding, such as Growth Point.
- Lack of consistency in how private sector funding is approached between the local authorities. Competition with one another and lowering standards across the sub-region.
- Impact of local authority budget cuts on both directly financing activity, and on providing “match funding” to external funding.
- Danger of potential partners competing instead of working together towards shared objectives.
- Sale of publicly-owned parks, reserves and woodland. (e.g. sale of freehold land and property assets by Yorkshire Forward (RDA), purchased for their strategic role in regeneration.)
- Increasingly poor air quality (although all four local authorities have declared a DEFRA Air Quality Management Area).
- Potential threats to nature conservation sites, especially protected species and habitats within Natura 2000 sites.
- Pollution in our water (e.g. Sherwood Sandstone aquifer).

4.11

The sub-region’s ability to plan and respond effectively to environmental stress is subject to its capacity to deliver improvements to green infrastructure.

4.12

The strategic planning process can be a trigger for actions at both the sub-regional and the local scales (see Table 3 below). Above the local scale the network becomes particularly important. The variety of user groups, the pressures on land use to maintain functioning habitats for wildlife and provide

space for communities to grow, and the need for connected cycle routes are all examples of pressures on green spaces. Starting work at sub-regional scale level will help to plan local and wider level cross-boundary projects.

- Certain land use functions require sub-regional working, for others this is less essential.
- Detailed GI planning is best undertaken at local authority level in partnership with communities.
- All partners should have a consistent approach across boundaries, sharing risks as well as returns.

Table 3: Appropriate scales for different green infrastructure planning concerns

<p>Neighbourhood Scale</p> <p>A network of local green spaces addresses many user needs, responding to localised effects of climate change, demographic change and social inclusion; helps to make first steps towards health, the biodiversity network and green transport.</p>	<p>Borough Scale</p> <p>Borough scale GI contributes to an area’s distinctiveness and biodiversity, allowing a wide range of user groups to share the same space. Borough wide targets for health, society and growth are opportunities to implement GI. Pressure for land use needs a strategic focus.</p>	<p>Sub-Regional Scale (South Yorkshire)</p> <p>Major transport and recreation trails, river catchment and major green spaces, as well as neighbourhood and district assets which cross boundaries and unite communities. This scale of GI provision can deliver multiple ecosystem services and public benefits, such as biodiversity, landscape enhancement, recreation, health and climate change adaptation.</p>
<p>Localised drainage Village greens Street trees Local routes Home zones Public gardens Pocket parks Building curtilage Green roofs & roof gardens Copses and woods Local nature reserves Cemeteries Private gardens Play parks Local sports facilities Allotments Green roof Housing development</p>	<p>City parks Urban waterways Woodland Street trees Cycle networks Gateways Large scale composting Historic gardens Key local wildlife sites Boulevards Wetlands and lakes Borough wide drainage Enclosed landscape Recycling schemes Extensive sports facilities Waste water treatment Regeneration of urban centres Strategic housing provision</p>	<p>Waterway network management Waterway network Inter-urban trails Floodplain capacity Woodlands >100 ha Green lungs Community forest Derelict infrastructure Restored infrastructure Country parks/estates Archaeological sites Open landscape Canal networks National nature reserves Regional development Public health policies Transport corridors Cross-boundary housing needs New towns Agricultural land</p>



© Steel Valley Project



© Sheffield City Council Allotment Office



© Rotherham MBC

Managing Flood Risk Across Boundaries

There is significant known flood risk in many areas of South Yorkshire, increased run-off from additional development within the Growth Areas and threat from climate change.

The river valleys of the Don and Dearne and their tributaries are the backbone of the GI network, linking the four boroughs with each other. As part of the GI network, strategic opportunities for managing riverine flood risk should be developed to help the sub-region adapt to the challenges of climate change.

Using GI to manage flood risk throughout river catchments requires space and investment.⁴⁰ The role of the Internal Drainage Boards is also vitally important in the management of the multitude of drainage channels and ditches in the Doncaster area.

The benefits of techniques which slow and manage flows need to be properly examined to ensure the best solution for all, over the lifetime of the investment. Additional benefits for communities (placemaking, biodiversity and resilience for example, Old Moor RSPB Wetland Centre in the Dearne Valley) should be integral. Partnerships where all parties buy-in to a shared vision of managing flood risk are essential to the process.



© Ed Shaw

Case Study 6 Multi-Objective, Single Vision at Varying Scales of Application

The Dearne Valley is a post-industrial, largely rural river corridor, which has suffered from various socio-economic problems and low relative land value. The Dearne Valley Green Heart Project is an example of how a vision, if properly conceived, can be shared across local authority boundaries, through different means and partnerships, to result in a net gain for local communities.

The Dearne Valley Green Heart organisation is a partnership of the RSPB, the Environment Agency, Natural England and the Local Authorities. It works to improve the green spaces of the Dearne Valley for local people and wildlife through raising awareness about flooding and climate change and improving access around the valley.³⁹



© Dearne Valley Green Heart Project

Key Messages

- Cross-boundary, sub-regional planning is needed to deliver improvements to green infrastructure. A significant challenge to sub-regional working at present is that the entirety of South Yorkshire's GI is not the sole responsibility of any single organisation. This is an opportunity to bring together a wide range of people from different backgrounds, who work and live here, to build in them the capacity to challenge, criticise and create targeted and local growth.
- Delivery of the South Yorkshire green infrastructure strategy shall complement work in other areas. This strategy shall work alongside documents working at a comparable scale, such as the Leeds City Region GI Strategy, as well as seeking to build links with plans covering the East Midlands components of the Sheffield City Region. It must also support and complement a broad range of local documents such as local authority green and open space strategies.
- Green infrastructure planning at the sub-region scale provides a useful framework and context for action at neighbourhood and borough scales. It does not obviate the need for local planning and action, but must seek to support and complement this work. Issues such as flood risk, risk to biodiversity, markets for agriculture and need for recreation etc. act across boundaries and require coordinated action.





5. The Strategy Masterplan

5.1

This strategy has been designed to advocate, support and coordinate targeted investment and development in priority locations. The masterplan draws together local initiatives across South Yorkshire under four strategy themes.

5.2

The potential power of the vision and goals presented in this strategy becomes clearer when translated into a set of tangible actions – i.e. objectives for implementation – linked with specific places.

These are the ideas which, when taken forward with the full support and engagement of local communities and partnerships, become the projects and initiatives that can make a real difference to people's lives.

5.3

The masterplan shown overleaf identifies twenty initiative areas (referenced by letter on the plan). Table 5 provides a summary of each of these, including information on the opportunities and constraints in each location. The twenty initiative areas are not twenty work programmes, but a means of grouping projects by geographical area (see Appendix F).

5.4

Proposed actions are tied to the strategy goals. If implemented these activities can contribute significantly to the overall network of green assets, as well as improving conditions locally. At this stage, the actions listed in each initiative area do not cover all of the objectives listed in the previous section, or all of the important sub-regional issues identified by stakeholders during strategy development (Appendix A). As the strategy moves towards implementation, opportunities to address these issues will be pursued as additional resources become available for new projects at specific locations.



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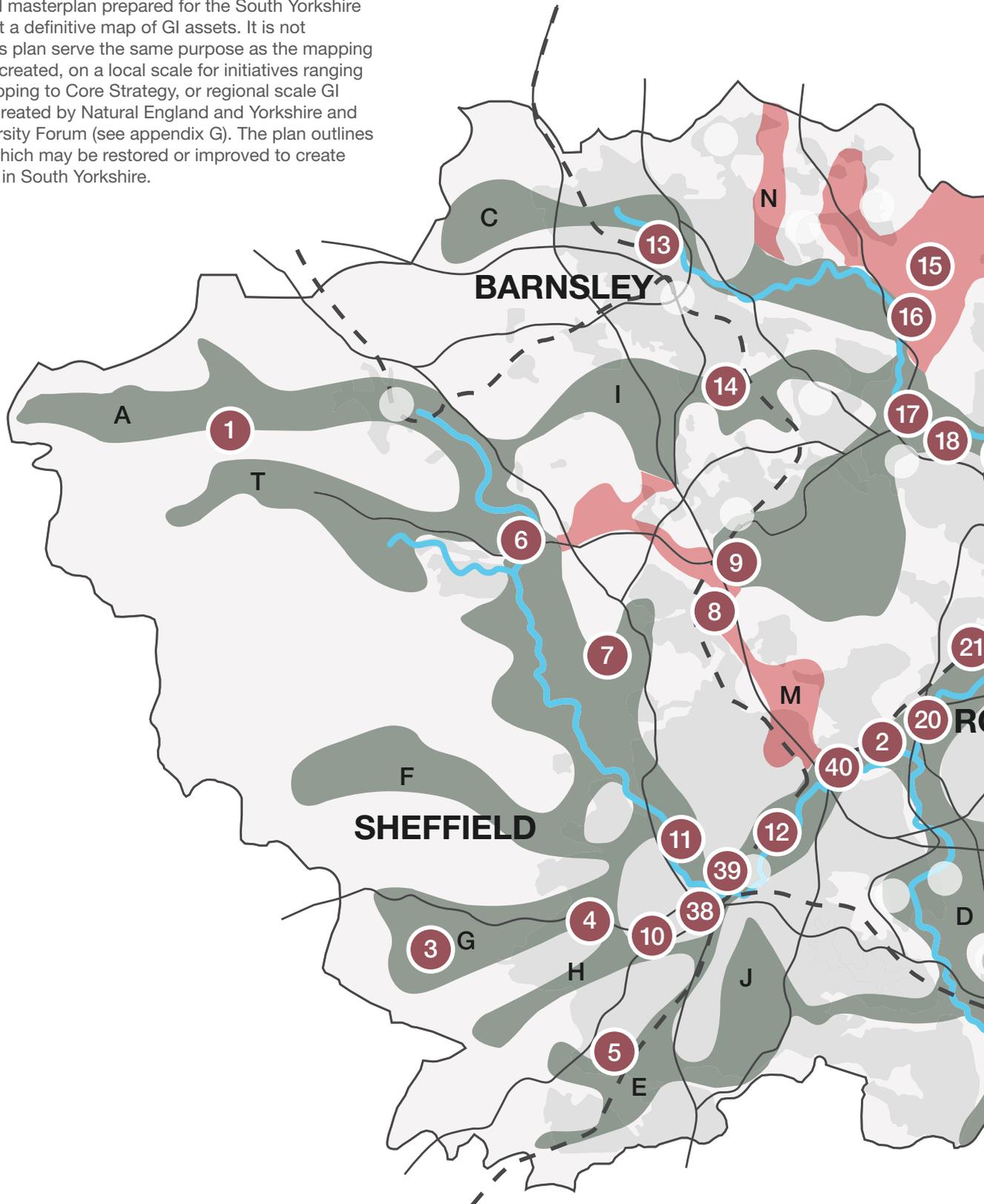


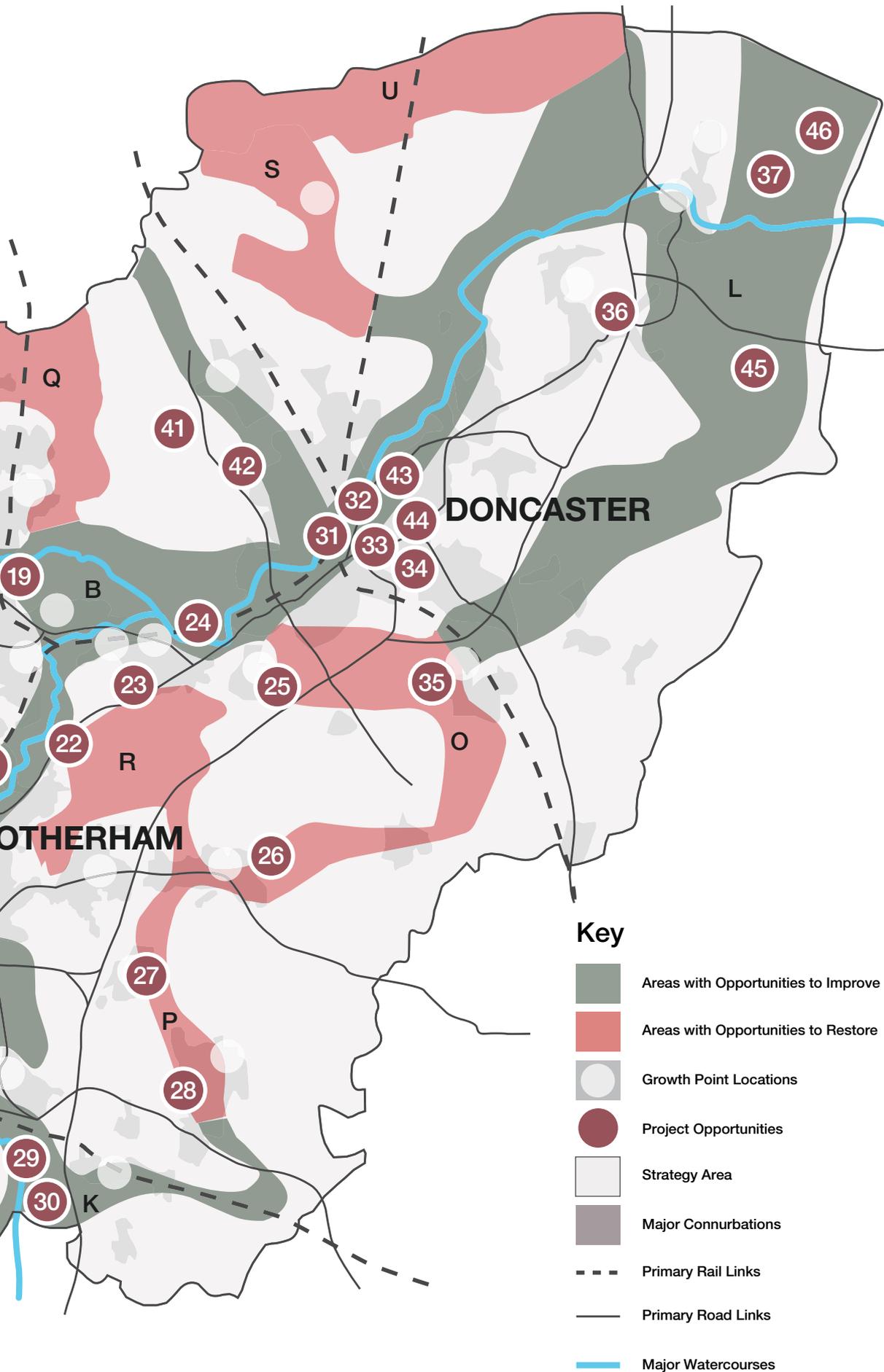
© South Yorkshire Forest Partnership

South Yorkshire Green Infrastructure Masterplan

5.5

The sub-regional masterplan prepared for the South Yorkshire GI strategy is not a definitive map of GI assets. It is not intended that this plan serve the same purpose as the mapping which has been created, on a local scale for initiatives ranging from habitat mapping to Core Strategy, or regional scale GI asset mapping created by Natural England and Yorkshire and Humber Biodiversity Forum (see appendix G). The plan outlines initiative areas which may be restored or improved to create a green network in South Yorkshire.





List of project opportunities is given in Appendix C

Baseline Data

5.6

Natural England and Yorkshire and Humber Biodiversity Forum have each undertaken rigorous GI mapping exercises that identifies strategic GI, across administrative boundaries, at a regional scale.⁴² The masterplan builds on this exercise of mapping assets and functions, and translates it to a sub-regional scale. The existing work has been augmented with further local datasets and knowledge to highlight other areas where gaps exist between demands and needs at the sub-regional level (see Appendices C, D and G).

5.7

Information from current policy and strategy is listed in Appendix D. This information was considered and supplemented by interaction with stakeholders.

5.8

Sites that do not constitute green infrastructure assets in themselves but might have significant potential were also mapped. This included derelict land, mineral sites, and disused railways, as well as some policy-defined areas such as housing market renewal areas, local regeneration zones and proposed new greenspaces. LDF Proposals Maps and Site Allocations were used to underpin the masterplan. A summary of all mapping used is given in Appendix G.

Engagement & Consultation

5.9

Initial stages of strategy development involved the creation of a Communication and Engagement Plan to identify stakeholders and target their engagement within the strategy (available on request). The initial stage of consultation launched the strategy and devised the four themes, and goals shown in section 6.

5.10

Many organisations were consulted to canvass their opinions and set these priorities for action, including: Local authority representatives in strategic planning, development management, parks and countryside, etc. private landowners and developers,

environmental organisations working in South Yorkshire, the general public and specific interest groups, including membership-led organisations, and government organisations dealing with health and recreation, and the natural and built environment.

5.11

In late 2010, SYFP held a workshop to explore the views of stakeholders and set objectives for action. (A full report on the outcomes of this workshop is available on request.) The resulting data were fed into the masterplan (schematic map) that identifies a series of initiative areas which present opportunities to develop practical projects (see pages 28/29).

Strategic Mapping

5.12

The masterplan uses baseline information, and data derived from consultation, to present a range of potentially important collaborative projects, within initiative areas in both urban and rural locations. This section of the strategy therefore gives a spatial dimension to the four themes and supporting objectives, and helps drive forward green infrastructure by presenting opportunities to develop practical projects.

5.13

Consultation identified areas where the green infrastructure functions were deficient in relation to economic or social need, or where degraded environments have the capacity to be restored to deliver significant benefits. The masterplan therefore highlights areas where opportunities exist.

5.14

The strategy recognises that a potential problem with green infrastructure planning is to attempt to manage too many different functions in a single green location. Although this approach might suggest an efficient use of land, some assets have certain characteristics of overriding importance which might be compromised by multi-functional use. For example, assets of nature or landscape conservation value may be damaged by insensitive access. The strategy attempts to avoid this problem by mapping on specific, local objectives in each area. Biodiversity and the natural environment must underpin all green infrastructure planning to ensure long-term effects, benefits and financial consequences.

5.15

It is acknowledged that not all strategic GI opportunities will coincide with the broad locations of growth, for instance the River Dearne is identified by Natural England as a strategic GI function and asset but not all of it lies with the built up areas of Barnsley. Instead the Green Infrastructure Strategy provides a strategic appraisal of existing green assets in the South Yorkshire sub-region and an analysis of the potential broad locations for growth and identification of opportunities for green infrastructure within the sub-region.

5.16

Action specified by the strategy and programme for delivery, will take place within the initiative areas. The network serves the sub-region, and action within the initiative areas will bring broader benefits and support housing growth, even if growth areas lie outside the network.



© South Yorkshire Forest Partnership



© Sheffield City Council Environmental Planning

The Borough Scale

5.17

Delivery at the local and sub-regional scales will undertake cross-boundary, locally led activity.

5.18

Barnsley Council has written a GI strategy for the Borough (yet to be adopted) and is involved in the recently published Leeds City Region Green Infrastructure Strategy. Detailed green infrastructure plans should be created at a planning authority level in all planning authorities in South Yorkshire. This strategy recognises, however, that all planning authorities in South Yorkshire are at different stages in the LDF process; each with its own objectives for the future. These objectives do not necessarily sit at odds with neighbouring planning authorities (see Appendix D) although the situation for green infrastructure planning varies considerably across the sub-region. The strategy takes this into account.

5.19

The SYGI strategy seeks to compliment current and future plans by other partners, including Leeds and Sheffield City Regions, by supporting delivery of city region economic agenda and providing a simple but ambitious vision for the future growth of the whole of South Yorkshire.



© South Yorkshire Forest Partnership



© Andy Barker courtesy of Sheffield City Council

Case Study 7 Borough Scale Best Practice

Sheffield City Council is active in policy development and promotion of green roofs. Their Sharrow School building is an excellent example of a small project on a single public building that was designed to have maximum environmental and community benefits while aesthetically integrating with the surrounding landscape of Mount Pleasant Park and is inexpensive to run and maintain. A key factor in the design by the Council's team of architects was the school's green roof which helps to alleviate extreme rainfall, humidity, noise, pollution and to provide insulation.⁴³

The roof was designed to be multi-functioning. The design needed to be low input, requiring no artificial irrigation or fertiliser, make use of locally sourced recycled materials, exploit the structural capacity of the roof to its full capacity to create a garden, and be resilient to the local climate. The scheme was also designed to make use of volunteers and local enterprises and provide educational opportunities for the school.⁴⁴ The green roof was declared a local nature reserve in 2009.



© The Green Roof Centre



6. Strategy Themes, Goals & Objectives

The vision of a vital, productive and attractive green network becomes more powerful, meaningful and influential when expressed as a series of clear goals for the future.



Economy

Provide for an enhanced quality of place for both new and existing communities and for new economic investment. Stimulate and sustain economic growth through innovation.



Community

Create and extend opportunities for access and recreation, joining up communities, maintaining and providing employment opportunities, and supporting social cohesion. Use the green network to support mental and physical health.



Climate Change

Adapt to the anticipated effects of climate change, and mitigate that projected by UKCP09.



Biodiversity

Enhance, conserve, appreciate and respect the unique functions of biodiversity, which enable all life and success in South Yorkshire.

6.1

These goals have been derived from consultation with local stakeholders and engagement with potential delivery partners, (the results of which are presented in Appendix A) providing details of datasets analysed, area assessments covering specific locations and identification of strategic objectives that apply across the sub-region. Table 4 also identifies objectives for the future, highlighting how the four strategy themes can be delivered through improvements to South Yorkshire's green infrastructure network.

6.2

GI is an investment tool. Some actions will contribute to more than one theme – for example, generating biomass has benefits for the economy through local energy markets, climate change through carbon neutral energy, and biodiversity through the creation of habitat and mitigation of climate change.

6.3

All four themes are of equal importance to the vision. All projects will pursue funding to make things happen. The “economy” goal is specifically focussed

on growth and investment, which can come full circle to fund GI, but it is not an *overriding goal* over the goals for biodiversity, climate and community.

6.4

Phase 2 of this strategy will address the question of how these objectives will be prioritised for action in the future, through the creation of a delivery programme (outlined in Appendix B).

Table 4: Objectives for the Green Infrastructure Strategy

This table is expanded in Appendix A

<p> Economy</p> <ul style="list-style-type: none"> • Stimulate sustainable economic growth, jobs and investment. Create opportunities for private sector enterprises, through investment, events and increased footfall. • Plan for the growth of South Yorkshire's green network and its improvement as a key consideration in development discussions and broader planning processes. • Create attractive, well designed and cared-for green spaces, where people can invest, work, live and visit. • Promote the right image of South Yorkshire as a great place with great natural assets – the forests, woodlands, parks, moorlands, national park, wetlands and waterways etc. – that together represent our unique selling point. • Support locally-grown food production, by safeguarding the capacity and integrity of farmland, allotments and private gardens as imported food becomes more expensive and energy-intensive. • Generate biomass, including wood fuel, as a renewable energy resource, from well managed local sources. • Support innovation by researchers and local businesses in the environmental technology, manufacturing and creative industry sectors, e.g. by promoting the use of green energy, wood products and green roofs. • Save money by reducing discolouration and diffuse pollution of rainwater on moorlands by reducing water purification costs. 	<p> Community</p> <ul style="list-style-type: none"> • Engage communities to use, improve and manage their local green spaces and wider environment. • Make it possible for people to use their local green networks for recreation, healthy activity and travel. • Build up from the existing high-quality spaces by investing in areas where provision is poor and where there is little open or green space near where people live and work. • Apply best practices in engaging local people in improving their own environment, building on the best examples from around South Yorkshire and beyond. • Provide new places where all people, young and old, can take exercise, practise sports and learn about the natural environment. • Create new and improved cycling and walking routes for recreation and getting to/from work and school. • Bring people together and celebrate our natural assets – at local festivals and events, and by involving people in direct activities to manage their own environments.
<p> Climate Change</p> <ul style="list-style-type: none"> • Build improved resilience to future change, adapting to and mitigating against climate change. • Reduce our reliance on fossil fuels by generating renewable energy from biomass, hydro-power and wind-power. • Harness the capacity of our woods and peatlands to store carbon. Destroying these assets releases harmful carbon dioxide; growing new woodlands captures carbon already in the atmosphere. • Ameliorate the urban heat island effect by creating and restoring green spaces as an integral part of the urban fabric. These assets can provide cost efficient and sustainable cooling in dense urban areas. • Manage our rivers and drainage systems in a holistic way to minimise flood risks and droughts – coupling localised responses with the need to manage water flows across whole catchments. • Introduce sustainable urban drainage systems (SUDS) and green roofs to slow run-off in developed areas. • Re-naturalise rivers to reintroduce washlands, and removing culverts which are liable to blockage. 	<p> Biodiversity</p> <ul style="list-style-type: none"> • Enhance natural habitats, conserve ecological diversity and manage valuable natural resources. • Advocate understanding of the need to manage biodiversity as being essential to society's wellbeing. • Protect and enhance the diversity of different animal and plant species and habitats. • Focus on species and habitats shown to be particularly vulnerable or important locally and globally. • Manage and monitor our wildlife habitats in the light of climate change, the damaging effects of pollution, inappropriate development and neglect. • Develop robust management plans which help to use resources in the most effective way. • Restore, link and buffer existing natural places. • Connect habitats, to build a more resilient network. • Consider the biodiversity potential of every part of that network.

8. Delivery Mechanisms

This part of the strategy makes key recommendations on options for delivery, funding, leadership, governance and action planning. Specific ideas are put forward as to how we might work together to achieve the vision for a green infrastructure network connecting communities across South Yorkshire.

8.1

The objectives, themes, goals and potential actions described in this strategy come with clear prerequisites:

- The need for a spatial delivery programme capable of supporting concerted work, with clear support.
- Strong and demonstrated support for GI as a concept running through planning, our communities, planning authorities, individuals, statutory and non-statutory bodies and organisations working in GI, and LEP.
- Buy-in from politicians, policy makers, developers and funding bodies.



© Sara Parratt-Halbert



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8.2

Finding the right balance between delivering these shared, sub-regional objectives and local opportunities will ensure that this delivery mechanism is fit for purpose. The information and case studies presented in this strategy show just how much has already been achieved on the ground in South Yorkshire. Experience gained from this work, together with thorough stakeholder engagement, has been used to inform the following proposals.

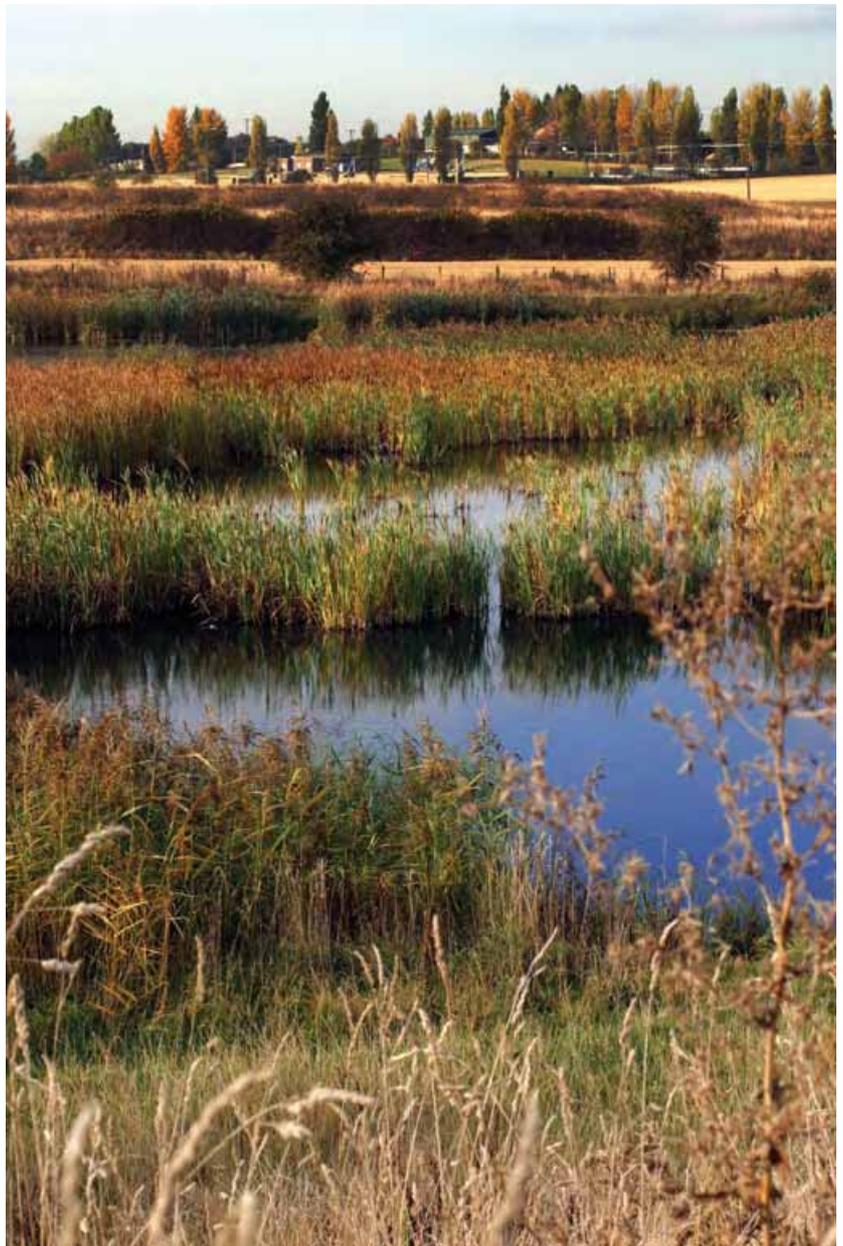
Strategic Lead and Governance

8.3

There is no lead organisation for South Yorkshire's green infrastructure. This strategy presents an opportunity to develop mechanisms to bring a wide range of people from different backgrounds into delivering targeted and local benefits for GI, under a single lead organisation. The potential for wide-reaching impacts and a broad range of benefits to communities means that this breadth of engagement and community of purpose is vital. There is a clear need for a coherent collaborative initiative with full support, capable of supporting delivery and requirements for governance at the appropriate level, with the capacity to provide strategic guidance.

8.4

In light of recent changes to funding there is now a need to place some long-held plans on hold, or to seek new ways to achieve similar outcomes by alternative means. Shifting plans is not necessarily about giving up on growth. This is an opportunity to truly engage local people in what they want for their lives; the key ingredient is strong ambition and a desire to see innovation, from leadership and delivery partners.⁴⁷



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8.5

A future green network needs to be seen to deliver benefits, at a range of different scales, and across many different sectors of society to demonstrate the ability of green infrastructure planning to address development objectives across South Yorkshire. This strategy has deliberately avoided setting standards and design guidelines as it is clear that, at present, detailed plans should address varying patterns of demand for assets and functions.

8.6

This is a complex and challenging proposal. There is a clear need for some form of joint working to take a joint approach to GI provision and to share experience, resources and efforts to meet South Yorkshire's GI needs and aspirations.

The steering group and TSY board recommends that:

- 1. a Delivery Programme steering group is formed;**
- 2. South Yorkshire Forest Partnership is given a clear responsibility for Phase 2, to take the strategy forward to develop the delivery programme (see Appendix B);**
- 3. key stakeholders provide written support for this proposed programme for future investment in South Yorkshire's green network.**

This strategy recommends that the proposed steering group invite an organisation currently working on a sub-regional scale to become a lead GI coordination body and enable joint, sub-regional, cross-boundary action for GI.

8.7

The lead GI coordination body will:

- Develop a formal business plan.
- Champion the importance, benefits and principles of green infrastructure to a wide audience including the public, private and voluntary sectors.
- Provide clear focus and direction for all the partner organisations involved in green infrastructure planning and provision.
- Undertake assessment of the need for GI provision.
- Identify priority projects and initiatives.
- Establish partnerships for the funding and delivery mechanisms.
- Disseminate information.
- Liaise with green infrastructure partnerships in neighbouring areas to coordinate cross-boundary delivery of projects.



Steering the Green Network

8.8

The issue of strategic lead and governance to take the strategy forward, should be considered by a steering group. The steering group tasked with developing the Green Infrastructure strategy should be widened to include political and private sector representation. This steering group should provide structures and resources to support grass roots level involvement, via membership organisations and partners already working with communities and community groups, such as Neighbourhood Forums, to achieve the goals of this strategy.



© Kerry Bennett

Case Study 9 Turning Loss Into Gain

Rotherham MBC reclaimed the landscape legacy of the vast mine workings, tip, colliery buildings and railway sidings at Manvers and surrounding collieries in South Yorkshire, over a period of 20 years. The scheme set an ambitious target: transform dereliction into a thriving economic and residential zone and replace the 8,000 jobs lost in the local area, while creating high quality landscape as a setting for continued investment.⁴⁸ Four industrial zones were masterplanned, and the sites marketed and sold by Rotherham Investment and Development Office (RiDO), the regeneration arm of Rotherham MBC.

Private sector investment in the scheme to date has been estimated at over £350 million and approximately 9,000 jobs have been created.⁴⁹ The area now holds a mix of land use: 400 acres of industrial and commercial facilities with 300 acres of recreation and amenity areas, adjacent to the wetland habitat at RSPB Old Moor and developments carried out by Yorkshire Forward and neighbouring local authorities.

In 2008, SYFP-led project *Creating a Setting for Investment* contributed around £1/2m to green infrastructure aspects of the regeneration programme, including a major park creation scheme. New infrastructure was developed to increase road and service capacity. Integral to this was the high quality landscape work along the road corridors. Brookfields Park was created on the site of the former colliery spoil tip, serving to link up communities as well as providing improved habitat and recreational opportunities. The public realm won a Civic Trust Landscape award in 2000.



© Rotherham MBC



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Table 6: Proposed leadership and governance roles of key stakeholders

Leaders/Roles	Tasks
Planning Authorities will lead on delivery and coordinate the input of local communities and politicians.	Generating meaningful buy-in at the right level.
	Partnership with local and national organisations. Championing green infrastructure for the benefit of South Yorkshire communities.
	Create vehicles for implementation of the strategy and deliver green infrastructure.
	Promote green infrastructure strategy through LDF.
	Review policies to encourage implementation. Incorporate goals for green infrastructure into strategic planning work.
	Produce guidelines for developing specific sites.
	Provide appropriate high-level governance and strategic guidance for future objectives.
Private sector organisations and their representative bodies, Businesses with interest in South Yorkshire or development of green infrastructure.	Align economic growth with the goals of the strategy. Deliver (directly and indirectly) GI.
	Provide key sources of match funding for environmental programmes in line with environmental markets, community building and “corporate responsibility.”
	As key components of the LEP the private sector take on increasing responsibility for GI.
Individuals and organisations working in green infrastructure in the sub-region. Will deliver the programme for delivery.	Partnerships between public bodies and specific interest groups or environmental organisations, with strong ties to local communities.
	Ensure that any actions proposed under the strategy are complimentary to/benefit wider strategies and work.
	Work with private landowners, asset managers and other enterprise by listening carefully to their needs and identifying where parallel aims might lie.
	Influence local policy development through best practice and cost benefit analysis.
	Ensure that work is not duplicated.
	Continue to bring communities into green infrastructure delivery projects.
	Understand the drivers and time scales in the private sector.
South Yorkshire Forest Partnership may develop the programme for delivery for SY, based on this strategy, in partnership with other organisations.	SYFP will continue to support the post of Green Infrastructure Strategy Manager until December 2011, and beyond, where funding enables this to continue.
	Seek agreement over the nature and scope of a steering group to become guardians of the strategy.
	Engage with individuals and organisations working in GI in the sub-region to agree portfolio of exciting but achievable and prioritised actions, and partnership accountabilities to deliver.
	Communicate how actions will target resources effectively to improve social cohesion and maximise economic value and savings (both direct and indirect).
	Develop cross-boundary partnerships and kick-start delivery, to lead by example.
	Build a strong working relationship between the steering group, the LEPs and our neighbours in the City Regions.

“What Does a Partnership Across South Yorkshire Offer?”

8.9

The development of this strategy already represents important progress towards coordinated and meaningful cooperation across South Yorkshire. However, the potential longer-term benefits are much more important. Over time, a shared programme for delivery has the great potential to strengthen individual project ideas; it will help to legitimise future local actions by demonstrating their place in a network of assets and initiatives.

8.10

This strategy argues that a strong and durable case for continued investment is needed, involving the right level of decision-makers and actors across South Yorkshire. The key messages to convey include:

- The chance to create savings by **avoiding duplication** and to achieve **greater value for money** in policy development and practical action.
- The importance of promoting **shared learning** across our communities and **embedding best practice** into new schemes, avoiding the danger of pursuing isolated and costly *white elephant* projects, and helping

partners to come to terms with their role within the rapidly changing policy landscape.

- The opportunity for efficient and professional **engagement with private enterprises** such as investors, landowners and consultants.
- The urgency of **meeting shared objectives shared across the different sectors**, such as mitigating flood risk and providing sustainable transport options.
- The possibility of implementing a flexible but efficient **programme for delivery**, supporting complementary action, and compatible with the city region and local authorities' boundaries.
- The more efficient use of resources, including sub-regional **economies of scale** and **improved chances** of access to funding.
- The **themes are interdependent** and all must be considered and integrated into initiatives and actions on the ground.

This will be the most important legacy of this strategy:

The highest priority for a programme for delivery will be to **support the local network** of partners that already exists in some parts of the sub-region, as well as helping to **generate new joint initiatives** in other key locations.

Case Study 10 Partnership with the Private Sector for Public Good

The Steel Valley Project has been in existence since 1988 and has successfully undertaken a very wide range of small scale, big impact landscape and green space enhancement projects within Stocksbridge. The project is a partnership between Tata Steel (formerly Corus, formerly British Steel) and Stocksbridge Town Council, Sheffield City Council and Bradfield Parish Council. Funding has come from South Yorkshire Community Forest and the Countryside Agency as well as various governmental and EU funding sources.⁵⁰ The benefit of working in partnership has been to ensure funding and activity is sustained.



“How Will We Work Together?”

Working with Local Enterprise Partnership

8.11

Work has commenced to establish a business-led Leeds City Region LEP Board which will be responsible for developing the LEP business plan.

The Sheffield City Region LEP board has now been set up. In time, if the green infrastructure strategy and programme for delivery extends to cover the whole of the City Region, then it would be appropriate to inform the LEP Board of the work and its integral relationship to the economic growth of the City Region.

8.12

In the Leeds City Region area, which includes Barnsley MBC the LCR secretariat has made some advances in delivering the LCR GI Delivery Plan, White Rose Forest has taken the GI work to heart and offers a variety of vehicles for the implementation of the Strategy.⁵¹ SYFP recommend that SCR LEP engage with us and stakeholders in the strategy to provide appropriate high-level governance and strategic guidance for the delivery of future objectives.

Engaging Communities

8.13

For each of the big ideas put forward that have the potential to contribute substantially to the entire green network, it is vital to be sensitive to the very real concerns that people will have about the future of their local environments. It is also essential to engage communities and tell the story of how planning this green network requires their support.

8.14

This strategy recommends that the network of green infrastructure partners tap in to existing mechanisms for engaging local communities in priority setting at the neighbourhood scale, and to only seek to initiate new discussions where necessary to augment these established groups. Legitimacy for these new networks will be sought to enable local accountability and governance over GI. Wherever possible, existing relationship between communities and partners will be used to make use of the trust and capacity built between them.



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Involving Planning Authorities

8.15

The planning system provides an important framework within which the different components of green infrastructure can be safeguarded and enhanced and provides mechanisms for new infrastructure to be created. Planning authorities could integrate green infrastructure with their commitment to ensuring access to services. In this way access to green and open space can be given a formal role to play in reducing evident inequalities across South Yorkshire⁵² improving opportunities for recreation and the benefits for mental and physical health.

8.16

The strategy recommends that Planning Authorities promote the Green Infrastructure Strategy through consultation with local communities. Initiatives and projects proposed should be tested to establish support. Planning Authorities should review policies to encourage the implementation of a Green Infrastructure Strategy. This should include an endorsement of this sub-regional strategy. It is recommended that the planning authorities in South Yorkshire set a clear and robust planning framework for the creation, management and maintenance of green infrastructure, including any new sites that are created. Planning Authorities should consider producing guidelines for developing specific sites.

Engaging the Private Sector

8.17

Profit-led organisations with interest in South Yorkshire or development of green infrastructure are responding to growing consumer demand for environmentally sound products and services, and demonstration of “corporate responsibility”, to enhance business competitiveness.

8.18

The strategy recommends that businesses provide key sources of match funding for environmental programmes and align economic growth with the goals of the strategy. As key components of the LEP and as direct and indirect deliverers of GI, the private sector will have increasing say in change.



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Supplementary Planning Documents (SPD)

Relevant parts of this strategy could be adopted as part of an SPD by each local authority, and linked to relevant green infrastructure policies in existing Local Development Frameworks (LDF). Using this strategy as such an advocacy document can help shape planners', and sustainability appraisal practitioners', approaches to

a whole range of LDF documents, including proposals maps and site-specific policy documents which have not yet been adopted, as well as existing SPDs where the local planning authority has already adopted the key relevant policies.



© Moors for the Future Partnership

Case Study 11 Learning the Landscape

The Don Gorge Strategic Partnership and the Don Gorge Community Group worked together to secure funding through Yorkshire's Rural Community Council to produce an education pack for the landscape and heritage of the Don Gorge. The pack covers all elements of the national curriculum for years 1-6 through a wide range of interactive activities which fully engage people in the landscape of the gorge. The pack has been made available online as a free download and from local libraries in the area, to reach as many people as possible.⁵³



© Don Gorge Community Group



9. Securing Funding and Other Resources

The absence of a dedicated funding stream for green infrastructure, coupled with growing needs for future investment is a threat to the green network. Without strategic thinking and sustained cooperation, there is a very real danger of potential partners competing instead of working together towards shared objectives.

9.1

Proposals for support should be targeted towards schemes providing resources which deliver sustainable jobs and growth, environmental quality enhancements and work to improve social cohesion and local governance. Support should be sought for innovation, informed by the best possible research and involving the wealth of expertise available within our universities and other educational establishments. This will help to ensure that new developments are more robust and resilient to future changes, and that they are informed by the cutting-edge knowledge and expertise.

9.2

The role of organisations with a track record in securing EU funding and support from national programmes, transnational schemes, charitable organisations and the private sector, will clearly become increasingly relevant.

9.3

Mechanisms for securing private funding may have to change in order to secure funding without stifling development, using a sound financial case and with shared benefits being clearly identified.

9.4

The close connection to communities means that the third sector of NGOs, charities and membership organisations have a critical role to play which can be expected to grow, given the right support. This needs to be balanced against the ongoing challenge of meeting core costs and associated financial risks. There is great potential for these groups to generate in-kind resources to invest in and maintain local green infrastructure projects, and with the sustained support, this can be better exploited to support their own actions. Perhaps more importantly, special interest groups and volunteering organisations connect people and

enable individuals to contribute directly – the importance of local people's hard efforts need to be recognised and demonstrated.

9.5

Furthermore, it is vital to secure resources for maintaining and managing what already exists, including those unique and valuable assets that both characterise South Yorkshire and support life in its communities. Novel approaches to fund the maintenance of landscapes will become increasingly important. This could include establishing new community trusts or social enterprises to manage commuted sums generated through planning approvals.



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Current Funding Opportunities

9.6

This section presents a brief overview of potential funding sources available in early 2011. The variety and number of different potential funding sources reflects the myriad potential benefits GI can bring to the community, economy and environment. Funding may be provided by organisations involved with the management of their own GI assets and some from Government funding schemes, including forms of subsidy, grant aid or planning obligation. There is a growing requirement for a sound evidence base to justify proposals and raise the chances of successfully competing for funds. Green Infrastructure Strategies will be particularly important in providing this evidence.

9.7

Other potential sources of funds that should be targeted for support for green infrastructure include:

- New Growth Point fund (limited)
- Developer contributions and the emerging Community Infrastructure Levy
- Private sector funding through property and financial endowments
- Environmental stewardship schemes
- Small scale funding grants for community projects
- Private sector sponsorship
- Established joint delivery projects
- Conservation trusts
- ERDF and other EU sources
- Sustainable Transport funding
- Funds for house building and business premises

South Yorkshire's Growth Points

All four of South Yorkshire's local authorities have benefited from Growth Point funding. The requirement to include adequate green space or natural elements in development may be considered an added "burden" during cost/benefit analysis of development projects. Initiatives such as Growth Point have sought to bridge the gap. TSY Growth Point Objectives are to provide the right housing in the right places, prioritise remediation and reclamation, phase housing growth in a way which supports and contributes to sustainable communities. Growth Point funding has been used in part to bring forward sites that the market couldn't make work, because of contamination, flood risk, or other abnormal costs. Its use varies across the sub-region. Growth Point funding ends March 2011.

Case Study 12 Working with Partners with Parallel Objectives

The landscape of the Dearne Valley contains rich farmland and wetland habitats, including wet grassland and woodland, reed bed and fenland. The rise and decline of industry in the area has left behind a legacy of deprivation in the towns and a "much-modified" washland floodplain.⁵⁴ The Futurescapes Project is a partnership of RSPB, Environment Agency and Natural England. In order to effectively achieve its aims the RSPB are working with farmers and landowners to bring more farmland into Natural England's Environmental Stewardship scheme to combine essential food production with conservation aims. The creation of a high-quality landscape along the Dearne will attract inward investment and improve quality of life for local people, and visitors from the surrounding conurbations of Sheffield, Rotherham, Doncaster and Barnsley, and have a tangible contribution to make to national Biodiversity Action Plan targets.⁵⁵



Local Authority Funding

9.8

Planning officers are key players in how the money from developer contributions will continue to play a role in funding GI in the next few years. There is potential to develop joint public service agreements between the South Yorkshire authorities (e.g. pooling Section 106 contributions into a single pot to spend on key GI projects).

9.9

None of the authorities in South Yorkshire have so far committed to introducing a Community Infrastructure Levy. Given the political will to do so, a significant amount of work would be required prior to adoption. Guidance on the impact of introducing CIL is available from DCLG.

The Potential for Using CIL to Fund GI

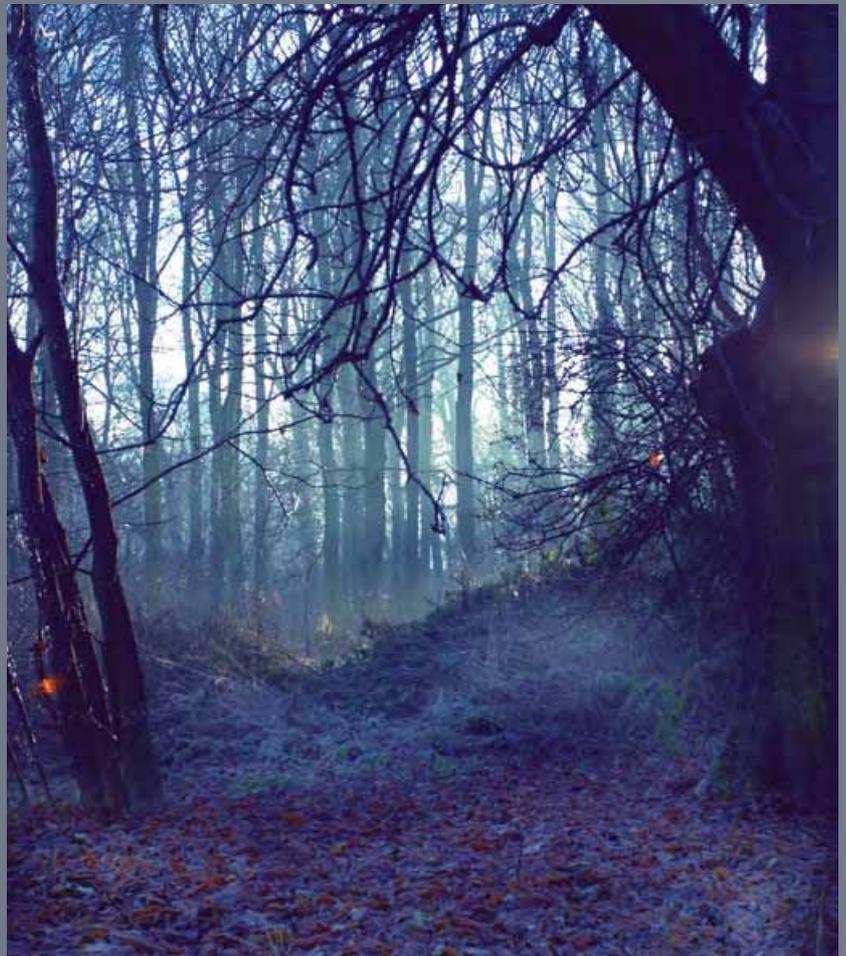
CIL covers not just transport and strategic infrastructure but about ensuring that the quality of life elements in a neighbourhood are provided, maintained or improved where growth occurs such as parks, pedestrian and cycle routes, flood defences etc. The definition of the CIL is quite wide and encompasses social and environmental infrastructure. Sustainable community strategies, local strategic partnerships, local economic partnership and local or multi-area agreements will be influential in setting objectives and securing delivery of GI across South Yorkshire.

Case Study 13 Dialogue with Developers

English Nature (now Natural England) responded to consultations on the Draft Development Brief for Staynor Hall housing development in Selby, in 2003. They recommended a high provision of accessible natural greenspace.⁵⁶ Outline planning permission was made for 1200 homes and employment areas, public open space, shops and community facilities on greenfield land outside Selby, in 2005.⁵⁷

The local authority met with developers and created a Section 106 agreement which required detailed Landscape Strategy and Nature Conservation Master Plans for the site. This led to investment in protection of Staynor Wood SINC, wildlife corridors and green spaces which balance recreation and biodiversity, to create a green residential development etc.⁵⁸

Subsequent applications for detailed planning have drawn up plans for cycle and pedestrian routes through the site to connect the various land uses and beyond to existing facilities in the town of Selby.⁵⁹ Despite the housing market slowing, phase one is now a community of homes, and affordable and standard purchase houses are coming on to the market in phase two of the development.



UK Government Budget Allocations

9.10

Direct central government investment in green infrastructure is often needed, since many returns lie in the realm of public good and interests and will only be realised over the long-term. This applies especially to degraded sites and ecosystems such as post-mining areas, brownfield sites, forests converted to agriculture, dredged wetlands and areas prone to erosion.

9.11

Funding for conservation and environment agencies/local authorities looks set to diminish over the coming years. Environmental bodies and agencies supporting affordable housing, jobs and training, climate change amelioration etc. will be looking for partners to help them to deliver targets.

9.12

Partners in the **private sector** can offer innovative schemes for achieving GI targets. For example, Yorkshire Water has invested heavily in composting sewage to make it an off-loadable product. Dried sludge from sewage works has been used for tree planting at a remediation site at Rabbit Ings at Royston.

9.13

The **Regional Growth Fund** will provide a basis for funding on a regional scale. The government anticipate that Local Enterprise Partnerships will play a role in coordinating across areas and communities, and in bidding for funding.⁶⁰

9.14

Forestry grants through **English Woodland Grant Scheme** (EWGS) are already a significant funding opportunity within South Yorkshire and are likely to increase in the next round of funding.

EU Funding

9.15

EU **external funding** sources will grow in importance in the next few years, as UK sources adapt to government spending cuts and meet the change to an emphasis on bottom-up planning. Relevant schemes include EU Life+, URBACT, Interreg and other ERDF streams.

Innovative Sources and Charitable Funding

9.16

The proposed **Green Investment Bank** would support economic growth through stimulating investment in the green economy. The bank would have an “explicit mandate to take on risks that the market currently cannot adequately finance, catalysing further private sector investment and facilitating the entry of new investors into GI.”⁶¹ Investments from the Bank will focus on large scale infrastructure projects and it remains to be seen whether green infrastructure projects will be of the scale or nature that the bank shall support.

9.17

Community Land Trusts could have a significant impact on how GI directly relating to social housing could be paid for and maintained. Pooling revenue for major projects via a *Trust* could attract private sector investment.

9.18

The Heritage Lottery Fund (HLF) uses money raised through the National Lottery to transform and sustain the UK’s heritage. *Landscape Partnerships* grant programme (delivered by a partnership of regional, national and local organisations with an interest in the area, community groups and members of the community) and *Parks for People* (grants for projects that regenerate public parks of national, regional or local heritage value) are the two main sources of support for large scale projects, which have impacts far beyond the local area, while still addressing the needs of the communities which surround them. These schemes have a variety of positive outcomes, from conservation of landscape character to increasing community participation in local heritage and the range of participants in landscape change. This may be achieved through improving skills and knowledge through learning, training, and access, and improving management and maintenance.⁶²



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9.19

Residents of leasehold property usually pay maintenance fees for the upkeep of communal spaces. Green spaces within housing developments are typically divided into privately owned (within the curtilage of each home) or adopted by the local authority (parks and verges etc.). **Development Trusts** on housing estates (such as that about to be trialled by Hanham Hall Code 6 development in Bristol) create a forum to which the neighbourhood contribute both time and money for the upkeep of communal spaces, such as allotments.

9.20

Large businesses often have obligations via taxation (such as landfill tax credits, see case study on Steel Valley Project) or self-imposed **corporate social responsibility** to undertake to fund local environmental schemes.

9.21

Leeds City Region is investigating the use of habitat banking in their GI strategic work. **Habitat banking** proposes to engage with developers to secure funding for mitigation for adverse impacts of development. Agreement between developers and planning authorities could be used to fund new habitat, created by environmental organisations, rather than the developers themselves. This approach, known elsewhere as *green credits*, is being investigated through the VALUE project on green infrastructure by SYFP and its partners in the Netherlands and Germany. These methods have been successfully tested in recent years and used as a method to quantify the value of green spaces and determine how these values can be replaced or compensated for within spatial planning. Credits could be pooled from a range of development schemes to achieve maximum impact for spend.⁶³



9.22

Agri-environment schemes can be used to enable landowners and managers to contribute to green infrastructure aims. Natural England's Environmental Stewardship scheme is being used by RSPB to secure their aims in the Dearne Valley (see case study).

Green Infrastructure Management

9.23

Effective long-term management of the GI network as an integrated resource will depend on investment, commitment and support from many partners. Traditional approaches to the long-term management of green infrastructure, such as the many local authority green spaces, are no longer sufficient on their own.



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Case Study 14 Developing Core Commercial Activities to Fund GI

Manor and Castle housing estate in Sheffield had 600 hectares of public open space on the estate but it was "failing". Green Space Audit was made which looked at management – what could this space do? Green Estate Ltd started life in 1998 as one of the 7 strategic programmes in the Manor and Castle Single Regeneration Budget programme, as a partnership between the Manor and Castle Development Trust, Sheffield Wildlife Trust, Sheffield City Council and various other organisations. The climate for funding meant that instead of becoming a local land management agency acting for the local Development Trust, Green Estate took the decision to develop core commercial activities.⁶⁴ In 2011 Green Estate manage and maintain seven parks and gardens in the area, support greenspace regeneration informed by the neighbourhood masterplan, undertake maintenance on behalf of local land owners, raise resources for new projects and assist in the delivery of the Activating Spaces Programme.⁶⁵



© Green Estate

9.24

Whilst some GI is in public ownership, for example the local authority parks, much is also in private hands or managed through organisations such as Trusts. The sustainability of the bulk of GI as useful infrastructure in the long-term depends on ensuring it remains managed and supported by secure funding. Some recent initiatives have sought to establish new management regimes for some green infrastructure assets including:

- private enterprise funded by management charges;
- management by charitable organisations established as community enterprises.



© Barnsley MBC

Case Study 15 Turning Brown into Green

Since its closure in 1992, Dinnington colliery had become a vast derelict and contaminated site; a decaying remnant of a prosperous past. Its elevated location next to the town, dominated the local landscape. Remediation by the regional development agency, Yorkshire Forward and SYFP using funds from the National Coalfields Programme, created a new landscape, with a variety of functions.⁶⁶

Part of the site is now Dinnington Community Woodland. It is owned by The Land Trust and managed by the Forestry Commission with the support of the local community. 3.5 kilometres of footpaths cover the 37 hectare site. The scale of the new landscape allows a variety of uses and characters, from the trim amenity grass used for games and events to the peaceful setting of a bird-hide, run by local birding group, SK58 Birders.⁶⁷ The Forestry Commission use the wood as a location for community events, such as the annual "Halloween Horrors" trail, creating a tourism attraction out of this local resource.⁶⁸ Another area of the former colliery is now a 34 hectare Business Park, run by Rotherham Investment & Development Office (RiDO), the regeneration arm of Rotherham Metropolitan Borough Council.⁶⁹ Businesses on the park provide jobs in the local area. The Land Trust protects the money invested in restoring the land, and covers environmental liability associated with the site's past history.⁷⁰

The town of Dinnington is close to Sheffield, Rotherham and Worksop. The Housing Market Renewal pathfinder scheme identified Dinnington as a location for large scale housing growth, and offered funding to meet the challenges of regeneration. Funding from this scheme has now ended, but the need for new homes, across South Yorkshire, remains. Without additional investment the weak housing market in the area can only be overcome through offering a setting for investment. The importance of the business park as a provider of local jobs and space for business to grow, and the woodland as a location for leisure, education, connection to nature and community events is clear. These functions will both attract investment and house buyers, and support future, sustained development by the local community.



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10. Next Steps

Following the publication of this strategy, we will seek to support actions by local partners to address sub-regional objectives. This will involve developing opportunities for delivery, and working with local partners to implement on-the-ground projects in priority areas.

10.1

Next steps will build on the strategy presented here and will work with both existing and new partners to pursue shared opportunities, access resources, and develop complementary policies across South Yorkshire, as follows:

- Develop partnerships between public bodies, local communities and third sector groups (such as the Wildlife Trusts, RSPB and Groundwork).
- Some partners will undertake action without the help of lead GI coordination body for the sub-region, but others will benefit from help to meet sub-regional objectives.
- Generate meaningful political buy-in, by discussing and agreeing different options at the local and sub-regional scales.
- Work with private landowners, developers, asset managers and other enterprises – identifying where shared opportunities exist – e.g. flood risk management and renewable energy projects.
- Communicate how the programme for delivery targets resources effectively to maximise economic benefits (both direct and indirect), improve social cohesion and enhance environmental quality.
- Cooperate on local policy development such as LDF, to ensure the continued prominence of green infrastructure in future discussions and priority-setting, and to improve policy based on hard evidence.

10.2

These activities depend on the goodwill, motivation and creativity of many different people and organisations. Success will, to a large part, be determined by the amount of time and input that individuals can manage. South Yorkshire Forest Partnership will therefore make every effort to value stakeholders and their experience and expertise.



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Table 7: Next Steps for SYGI

What to Do	How to Do It
Identify key partners for each key action in the priority initiative areas.	Build on existing relationships and use this document to help forge new links through the delivery process in Phase 2. Exploit opportunities for new projects where the capacity to deliver exists, and target areas where this can be improved.
Identify champions for green infrastructure in each local authority.	Work through official channels for approval and adoption of the strategy. Show how, why and when politicians and council officers have been involved in the strategy development. Use this document to engender buy-in and support.
Support community involvement and seek communities' support.	Help partners including the local authorities and other key stakeholders to support the involvement of local communities through funding, advice and partnership development. Advocate opportunities for people from all walks of life to get involved.

Summary of Recommendations

10.3

We all work together, across boundaries and in partnership, to protect, restore and enhance South Yorkshire's green network.

10.4

South Yorkshire's key stakeholders provide a written endorsement of the strategy.

10.5

A steering group should be formed out of this stakeholder group to take forward delivery.

10.6

The proposed steering group should invite an organisation currently working on a sub-regional scale to become a lead GI coordination body and enable joint, sub-regional, cross-boundary action for GI.

10.7

South Yorkshire Forest Partnership has been given a clear role by the SYGI steering group and the TSY board to implement a delivery programme for the South Yorkshire Green Infrastructure Strategy.

10.8

Pursue the vision of creating a vital, productive and attractive green network, joining up our communities, supporting

a resilient and biodiverse ecological network, helping to deliver social cohesion through sustainable growth, and taking on the challenge of climate change.

10.9

The programme for delivery should manifest clearly the expectations that are likely to be made of developers and the private sector in terms of scale, location, mechanisms and long-term obligation of delivery.

10.10

The Local Economic Partnerships (LEP) should in due course be approached to help provide appropriate high-level governance and strategic guidance for the delivery of future objectives.

10.11

As the key body for growth in the sub-region, Sheffield City Region LEP could be asked to establish a sub group or advisory panel, made up of those organisations responsible for taking forwards significant regeneration initiatives.

Custodianship

Due to Transform South Yorkshire's funding being withdrawn in March 2011, South Yorkshire Forest Partnership has been asked by the TSY board to act as custodians, and take the strategy forward.



10.12

The private sector should be approached to play a greater role in funding and delivering the green network, as part of their increased involvement in planning our sub-region.

10.13

The network of green infrastructure delivery partners should tap in to existing mechanisms for engaging local communities in priority setting at the neighbourhood scale, and to only seek to initiate new discussions where necessary to augment these established groups.

10.14

The whole life costs and benefits of development, including effects on health and the environment should be considered and quantified.

10.15

Funders and partners responsible for producing this strategy should now agree to make coordinated case for continued investment, involving the right level of decision-makers and actors across South Yorkshire, covering key messages in this strategy.

10.16

In taking forward these actions, every effort should be made to encourage, value and communicate the contributions made by all partners including private enterprises and their representatives, public bodies, local interest groups and charities, and existing networks across South Yorkshire.



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Conclusions

Good progress has already been made in stimulating regeneration in South Yorkshire by improving and restoring its natural assets, through engagement with local communities, businesses and stakeholder organisations. These changes have helped create an attractive setting for growth, improved quality of life for local citizens, and contributed directly to economic wellbeing by generating new business opportunities such as renewable energy initiatives.

11.1

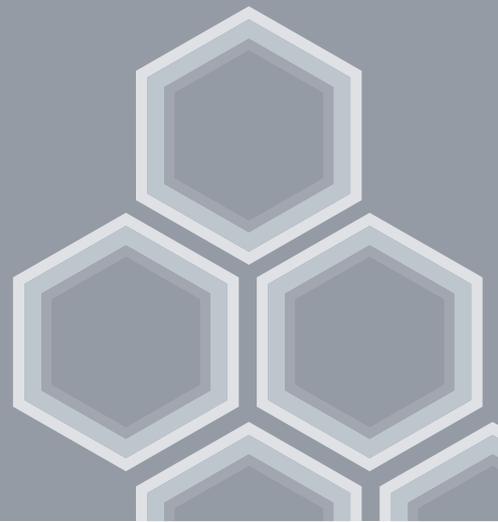
Despite positive change much of this work remains largely disconnected from the network and many of our communities still suffer from poor environmental conditions. Living with significant risks of flooding, poor access to quality open spaces or limited opportunities to experience wildlife is undermining quality of life in the sub-region, and having a negative effect on the confidence of investors who see stifled opportunities for sustained growth, in an area with unlimited potential.

11.2

As a result, in order to be successful in changing people's image of South Yorkshire and improving conditions for local residents, workers and visitors, a long-term plan for delivery is needed. The five year plan can only be the first step.

11.3

Plans need to deliver excellent value for money and must demonstrate how careful investment can bring about lasting benefits. For this reason, the strategy provides evidence showing how this work supports regeneration directly, and particularly how it contributes to creating sustainable jobs and growth.



With careful nurturing, wise decisions and sustained action, South Yorkshire’s green infrastructure network can create an attractive setting for investment, it can help us to adapt to and mitigate against the impacts of climate change, and it can make an invaluable contribution to the quality of life of our communities.

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Appendices

Appendix A: Sub-Regional Objectives Addressed by the Four Strategy Themes

This table presents a summary of the scoping and consultation undertaken to produce the strategy, and is summarised in Table 4. These are listed alphabetically, not in any order of importance. This information supports development of the delivery plan in Phase 2.

GI Themes →	 Economy	 Climate Change	 Community	 Biodiversity
GI Goals	Provide for an enhanced quality of place for both new and existing communities and for new economic investment. Stimulate and sustain economic growth through innovation.	Adapt to the anticipated effects of climate change, and mitigate that projected by UKCP09. ⁷¹	Create and extend opportunities for access and recreation, joining up communities, maintaining and providing employment opportunities, and supporting social cohesion. Use the green network to support mental and physical health.	Enhance, conserve, appreciate and respect the unique functions of biodiversity, which enable all life and success in South Yorkshire.

GI Objectives ↓	 Economy	 Climate Change	 Community	 Biodiversity
Access	Develop functional cycling routes between urban centres to increase the number of people cycling to work. Work with partners to develop cycling skills schemes. Develop an electric car economy in SY.	Ensure green infrastructure radiates into cities and towns in the form of green lungs/wedges, transport corridors, boulevards (tree lined avenues and arterial routes) across South Yorkshire and beyond.	Create cycle paths and enhanced access to green space. Improve transport routes and green infrastructure investments to key gateways. Develop green infrastructure nodes linking different assets. Seek public realm improvements to improve linkages to outer ring roads.	Connect communities to green space and develop “ownership” of SY’s assets.
Ageing population	Capitalise upon the potential of retired residents to plug gaps in resourcing with skilled volunteer time.	Ensure older residents are engaged in resilience and projects to mitigate. Collect anecdotal evidence of flooding events to inform current management.	Reduce levels of dementia and inactivity across SY through access to green space and the stimulation/peace this affords.	Encourage retired people to become involved in “Friends of” groups to protect and enhance green spaces and sensitive landscapes.
Agriculture	Support local food production. Safeguard farm land from unnecessary development which contributes to urban sprawl (retain capacity).	Support famers to be resilient by becoming less reliant on external resources (e.g. phosphate rock-based fertiliser).	Protect rural communities by creating/enhancing “buy local” market (retaining farming livelihoods).	Protect pollinating insects by using sustainable farming practices (e.g. lower pesticide use) to avoid impact on food production.
Attracting tourism	Create opportunities for private sector enterprises, through investment, events and increased footfall. Waterways network is a key tourist asset.	Promote “staycations” in the sub-region. Develop public transport links including cycle routes between settlements and landscapes.	Advocate the image of SY as a great place with great natural assets as our “unique selling point”. Create a regional centre for mountain biking.	Promote SY’s many quality managed habitats. Protect fragile landscapes by developing “gateways” on the fringes.

GI Objectives ↓	 Economy	 Climate Change	 Community	 Biodiversity
Brownfield Land	<p>Continue to bring derelict sites into use by the community.</p> <p>Remove toxins and pollutants from our landscapes.</p> <p>Continue to bring derelict sites into use by the community or developers or by public bodies.</p>	<p>Use brownfield to manage flood risk, break up the urban landscape and provide opportunities for wildlife.</p>	<p>Re-establish connection to the past through sensitive treatment of standing archaeology.</p> <p>Take advantage of potential education value through survey and monitoring work of habitats.</p>	<p>Brownfield sites can potentially fall into the new UKBAP priority habitat of Open Mosaic Habitats on Previously Developed Land.</p> <p>Use brownfield land to create oases within the urban fabric.</p>
Carbon	<p>Build a carbon neutral biofuel economy within SY.</p>	<p>Reduce our reliance on fossil fuels by generating renewable energy from biomass, hydro- and wind- power.</p> <p>Look at ways to use existing resources better e.g. use of canal and dock water for heating and cooling buildings.</p>	<p>Investigate the use of Community Heat and Power on a communal scale when building new developments.</p>	<p>Promote and enhance the capacity of our woods and peatlands to store carbon and protect these fragile habitats to ensure they continue to lock up carbon.</p>
Confidence	<p>Create attractive settings for investment.</p> <p>Create jobs in GI (fuel production etc.).</p>	<p>Create a low carbon economy. Engage the community/invest in resilience to flood risk.</p>	<p>Promote SY as a place with great natural assets and well designed spaces.</p> <p>Involve people in direct activities to manage their own environments.</p>	<p>Engage the community in managing resources and Ecosystems services.</p>
Create a Setting for Investment	<p>Create city parks and focal spaces which improve the image of the sub-region.</p> <p>Use GI (water bodies, street trees, microclimate) to attract increased footfall.</p> <p>Use canal and inland waterways network as a starting point to transform areas.</p>	<p>Build resilience into business through the premises they use.</p> <p>Create cheap to heat/power/sustain homes and businesses through investment in design/build quality.</p>	<p>Integrate and mix businesses, homes and green assets.</p> <p>Understand how to deliver “place making” in new and regenerating communities.</p> <p>Greenspace standards for existing and new development.</p>	<p>Green motorway and other transport corridors to clean air and absorb pollution while boosting visitor’s impressions of our towns and cities.</p> <p>Explore ways for design to benefit habitats and wildlife.</p> <p>Strategic commitment to managing green space.</p>
Flood Risk	<p>Encourage confidence in investment through an acceptable response to risk and preparing for extreme weather.</p>	<p>Plan how to manage an acceptable level of known risk into the future.</p>	<p>Build resilience to flood risk through understanding the potential role of woods and wash.</p> <p>Understand the role of GI in managing surface water to increase resilience.</p>	<p>Capitalise upon the potential benefits of lagoons, swales and flood plains for habitats which accept flooding.</p> <p>Plant and manage riverside trees and wet woodlands in appropriate places to slow flow.</p>

GI Objectives ↓	 Economy	 Climate Change	 Community	 Biodiversity
Forestry	<p>Activate our forest owners.</p> <p>Manage private and public woodlands.</p> <p>Support the wood fuel resource by planting and maintaining working woods.</p>	<p>Generate sub-regional biomass as a renewable energy resource for the sub-region.</p> <p>Manage sub-regional sources as a long-term investment.</p>	<p>Set up a cooperative which collects and distributes fuel.</p> <p>Encourage community involvement in woodland projects.</p>	<p>Maintain deciduous woodlands for huge benefit to temporal forest wildlife.</p> <p>Enhance existing patterns of woodland cover, and look to restore and create meadows and wet habitats, including wet woodland.</p>
Greenbelt	<p>Protect greenbelt land from development and where this is not possible ensure that any development is appropriate and meets the highest standards of sustainability, placemaking and permeability.</p>	<p>Re-assess the role of all greenbelt land on a sub-regional scale to ensure it serves communities by managing climate change.</p> <p>Bring green into towns and cities; and people out into the countryside.</p>	<p>Protect greenfield sites from unnecessary development which contributes to urban sprawl.</p> <p>Bring green into towns and cities; and people out into the countryside. For example fringe areas to the national park, and other sensitive landscapes, to provide managed “natural” landscapes for recreation.</p>	<p>Surround and penetrate the urban fabric with greenbelt to provide routes for wildlife.</p>
Greenspace	<p>Use GI as a cost effective way of cooling our cities, thus reducing cost burden on individual buildings, businesses and homes.</p> <p>Build up from the existing high-quality spaces by investing in areas where provision is poor to boost local areas.</p>	<p>Use the network of greenspaces to manage drainage.</p> <p>Ameliorate the urban heat island effect by creating and restoring green spaces as an integral part of the urban fabric.</p>	<p>Reduce health inequalities and advocate environmental justice in SY.</p> <p>Create a sub-regional forum to provide a vital link between park users, managers and policy makers.</p> <p>Draw people into parks by building community centres on site, and with local festivals and events.</p> <p>Connect people to the change in seasons.</p>	<p>Maximise the wildlife benefits of parks and gardens.</p>
Growth Areas	<p>Meet demand by creating places people can afford and will want to live in throughout their lives.</p> <p>Providing a focus and attraction for the increased population proposed within South Yorkshire growth areas.</p>	<p>Build new homes to sustainable development standards.</p> <p>Introduce sustainable urban drainage systems (SUDS) and green roofs to slow run-off.</p>	<p>Include a green space within walking distance which has opportunities for food growing, recreation and sport.</p> <p>Provide green space standards for existing and new development.</p>	<p>Integrate new development into existing sub-region wide habitats by consulting environmental groups during design. Provide areas of “wild” space within development.</p>

GI Objectives ↓	 Economy	 Climate Change	 Community	 Biodiversity
Habitat Creation and Conservation	Prevent fragmentation by development; maintain the network.	Increase connectivity between natural habitats to allow species to move as climate changes. Develop Biological Record Centre.	Involve communities, ask for volunteer time, recruit garden owners, engage with children. Support achievement of local, sub-regional and Yorkshire and Humber biodiversity targets as set out in local BAPs and the Yorkshire and Humber Biodiversity Delivery Plan.	Identify gaps in habitat resource (e.g. meadow habitats) and establish means to create. Manage and enhance existing habitats, buffer and link sites by creation of appropriate habitats such as meadows and wet grassland.
Health	Reduce sick days and illness across the sub-region through access to good food and recreation. Use GI to improve levels of mental health and depression to boost economy.	Reduce asthma and illness related to air borne pollution.	Access to green space and cycle links for opportunities for free exercise. Enable people to take control of their health.	Link people to wildlife starting with the garden, the park and out into the wonderful countryside of SY.
Jobs	Build skills through schemes that benefit environment. Safeguard forestry, agriculture and environmental jobs by securing and spending funding for GI.	Create opportunities for people to travel to and from workplaces without needing a car. Promote woodland crafts, recycled items and saleable items which support GI.	Encourage opportunities for local training and personal development within their communities.	Seek opportunities for job creation surrounding the management and enhancement of natural habitats.
Knowledge	Encourage environmental technology, manufacturing and creative industry sectors, (promoting the use of green energy, wood products etc.)	Encourage “green” practices within the home. Build resilience to flood risk and other climatic hazards. Monitor what is happening to our wildlife habitats in the light of climate change and develop robust management plans which help us to use the resources that we have in the most effective way.	Create a hub of information about places to go for recreation, cycle routes, where to get fuel or food and how to trade or sell surplus to neighbours. Apply the best examples of engaging communities from around South Yorkshire and beyond. Use exiting assets as outdoor classroom facilities; provide opportunities for meaningful volunteering.	Establish a biological record centre to account for ecology across the sub-region. This would provide a platform from which to protect GI assets with ecology value, from which investment could be targeted. Advocate understanding of biodiversity being essential to human wellbeing. Manage and monitor our wildlife assets to protect them against the damaging effects of pollution, inappropriate development and neglect.

GI Objectives ↓	 Economy	 Climate Change	 Community	 Biodiversity
Landscape Character and Heritage	Improving the look and feel of town centres through strategic “greening”. Build on the local character and rich industrial heritage with many listed structures and unique transport features to develop unique draw for SY.	Selling SY’s “green” attitude to planning by bringing open space into cities. Work to restore and create habitat which enhance landscape character.	Conserving and protecting remaining industrial heritage alongside development, to provide context to future generations.	Work to secure no net loss of biodiversity and a return to (proposed) pre-industrial levels of health for wildlife. Enhance existing patterns of woodland cover, and look to restore and create meadows and wet habitats e.g. wet woodland along the Dearne Valley.
Maintenance	Involve private sector. Develop business models for managing green space.	Build in resilience and plan for the future. Maintain assets to serve multiple purposes for multiple benefits.	Engage communities in maintaining their own places.	Ensure habitats do not become degraded; work to protect and enhance them.
Partnerships	Follow example set by international best practices for partnership working across the sub-region – e.g. Emscher Landscape Park in the Ruhr region of Germany.	Be strategic in response to climate change.	Sell GI to neighbourhood forums to get their validation for, and involvement in, projects.	Make GI a key consideration in development discussions and broader planning processes. Advocate and spread the word.
Permaculture	Encourage a sustainable community with some elements of subsistence independent from money.	Safeguard allotment land from development for benefits to permeable land (absorb surface water) and urban climate.	SY is a rural sub-region, raise awareness of local, seasonal food to reconnect urban dwellers with their countryside.	Safeguard allotment land from development for benefits to “garden” wildlife.
River Catchment Management	Create best practice in managing rivers within an urban setting. Acknowledge the important role of the internal drainage boards and work in partnership to manage water (towards the east of the sub-region).	Create additional shade in the landscape to combat “urban heat island” through tree and woodland planting. Favour pollution absorbing types of trees (e.g. Platanus × hispanica). Favour species which will withstand future inundation and heat.	Improve children’s respiratory health by improving air quality. Give “ownership” of urban trees through sponsorship programme.	Maintain the network of habitats for flying insects, bats and birds by creating corridors and avenues. Plant mature trees in continuous tree pits and use root directors etc. to maintain tree health.

GI Objectives ↓	 Economy	 Climate Change	 Community	 Biodiversity
Urban Tree Cover	Reap the benefits of improved setting for investment.	Create additional shade in the landscape to combat “urban heat island” through tree and woodland planting. ⁷² Favour pollution absorbing types of trees (e.g. Platanus × hispanica) Favour species which will withstand future inundation and heat.	Improve children’s respiratory health by improving air quality. Give “ownership” of urban trees through sponsorship programme.	Maintain the network of habitats for flying insects, bats and birds by creating corridors and avenues. Plant mature trees in continuous tree pits and use root directors etc. to maintain tree health.
Waste	Reduce the amount of waste produced by promoting green practices in business. Support development of new industry to manage recycling and reuse.	Maximise reuse and recycling wherever possible. Recover energy from residual waste to reduce dependency on fossil fuels; build a closed loop in the sub-region.	Create a sub-region wide drive for recycling and reuse. Create a “Sheffield Forum” for the sub-region to swap and reuse items.	Seek to reuse waste materials from industry to create soil conditioners and materials for habitat creation. Engage businesses and land users to enforce pollution control.
Water	The role of the Internal Drainage Boards is vitally important in the management of the multitude of drainage channels and ditches in the Doncaster area for agriculture.	Respond to the increasing risk of seasonal flooding of by providing storage and “slowing” flows in parts of the river valleys. Consider impact of reduced rainfall on species selection.	Make use of the network of inland waterways, tow paths and pools for recreation.	Respond to the link between water quality and biodiversity.

Appendix B: Delivery Plan

B1

This section of this consultation document contains a brief delivery plan for a programme for delivery in Phase 2.

- Establishment of criteria for projects and outcome measures to evaluate progress.
- Engagement and involvement.
- Business planning.

B2

This section refers to the masterplan in section 5, priority initiative areas in Table 5 the delivery mechanism described section 8 and discussion of funding and resources in section 9.

GI Criteria/Outcome Measures

B3

During Phase 2 strategic GI criteria for each of the projects pursued will be looked at. A GI Business Plan should

consider a range of outcome measures set out in section 7.

Engagement and Involvement

B4

The building of effective partnerships is essential for successful GI planning and delivery. Further consultation with stakeholders and mechanisms for working with partners will be outlined in a Communications and Engagement Plan, as was the case for Phase 1. The development of the Plan will be steered by the core partners and be completed as a matter of priority.

Green Infrastructure Business Plans

B5

A GI Business Plan will underlie Phase 2 and be the remit for the Green Infrastructure Partnership, under the steerage of lead GI coordination body

will have an important role to play in establishing the Green Infrastructure Partnership and provide a transparent framework and tool to aid project selection and delivery.

B6

A GI Business Plan should be clearly and concisely expressed, be realistic, and deliverable. Consistent annual monitoring of delivery of the plans will be necessary to measure effectiveness.

B7

Each Business Plan shall identify business need, the projects and initiatives to be delivered through each Green Infrastructure Strategy, specific actions and timescales for delivery (targets and milestones), costs and sources of funding, and the method and process for monitoring/measuring performance in respect of delivery.

Appendix C: Project Opportunities

As part of the programme of consultation South Yorkshire Forest Partnership held a workshop at Sheffield Town Hall on Wednesday 10th November 2010. Interactive activities, with plenary sessions, provided opportunities to discuss, assess and come to agreement on the future of GI in South Yorkshire.

The workshop explored what priorities were of primary importance, where this work would take place at the sub-region scale, and began to look at how this could be funded. A mapped list of project opportunities was developed.

Number on Masterplan	Project Opportunity
1	Barnsley Western Moors Management
2	Centenary Riverside, Templeborough
3	Sheffield Moors Flood Attenuation
4	Loxley, Rivelin and Porter Valleys
5	Ecclesall Woodland Centre
6	Upper Don Green Routes
7	Wharnccliffe and Grenoside Woods Hub
8	Hesley Wood Tip
9	Wentworth
10	Sheffield Botanical Gardens
11	Parkwood Springs
12	Sheffield Lower Don Flood Attenuation
13	Wilthorpe Marsh
14	Swaithe Catchment
15	Forest of Barnsley
16	Houghton Washland
17	Old Moor
18	Dearne Eco-vision and Green Heart
19	Brookfields Park
20	Rotherham Town Centre
21	Tata Steel Site
22	Thrybergh CP Access
23	Mexborough Gateway
24	Don Gorge

Number on Masterplan	Project Opportunity
25	Magnesian Limestone (Doncaster)
26	Maltby Colliery
27	Magnesian Limestone (Rotherhamr)
28	Dinnington Gateway
29	Rother Valley Country Park Extension
30	Chesterfield Canal
31	Doncaster Marshalling Yard
32	Doncaster Minster Gardens
33	Doncaster Town Centre
34	Potteric Carr Nature Reserve
35	Rossington Colliery
36	Fishlake
37	Humber Levels Re-wetting
38	Sheffield City Centre Breathing Spaces Programme
39	Wicker Riverside
40	M1 Corridor/Tinsley Link/Blackburn Meadows
41	Brodsworth Hall
42	Cusworth Park
43	Sandall Beat Wood
44	Doncaster Racecourse
45	Hatfield Moors (part of Humberhead Peatlands National Nature Reserve)
46	Thorne Moors part of Humberhead Peatlands National Nature Reserve)

Appendix D: Current Policy and Strategy

D1

This information supports development of the delivery plan in Phase 2.

D2

Approximately 12% of the National Park's area is also within Barnsley MBC and Sheffield CC. This land is subject to National Park Authority Planning Policies.

D3

This section provides an analysis of current policy support for GI in South Yorkshire. It considers the extent to which each policy reflects GI. This work addressed the questions:

- Is there a GI policy, objective or target within the policy document?
- To what extent does the document agree with the views expressed in this strategy that GI has a multifunctional role, delivering multiple benefits to communities?

D4

This strategy has used Natural England's fifteen functions of GI (given in Appendix E) to analyse the potential impact of each policy on GI. It is important to note that the policy documents included in the review are at different stages of development but the intention is to give a visual picture of the variety across the sub-region, and gaps in provision.

Future Policy Impacts in the Short Term from Planning Bodies

Barnsley MBC	The draft Barnsley GI Strategy is complete but not yet adopted. The Core Strategy Enquiry in Public (EIP) will take place in March 2011.
Doncaster MBC	The Core Strategy is scheduled for publication in March 2011.
Rotherham MBC	Public consultation for the Final Draft Core Strategy is scheduled for mid 2011.
Sheffield CC	Sheffield plan to include a biodiversity policy in forthcoming policy document.
Peak District NPA	The independent Examination into the Core Strategy will take place in mid April.

KEY:

The level of support for GI is categorised by colour.	
	Includes specific GI policy OR includes GI in vision/aims AND has strong GI ethos across one or more policies/objectives/principles.
	Has specific reference to GI within another policy OR has a strong GI ethos but with no explicit mention in specific policies/objectives/principles.
	Includes a loose reference to GI OR has a general GI ethos without any specific mention.
	Blank: includes no mention of GI or GI approach.

POLICY and STRATEGY	Green Infrastructure	Accessible Public Open/Green Space	Biodiversity	Contribution To Mitigating Flood Risk	Accessibility	Recreation	Cultural	Landscape	Education	Quality Environment	Climate Change	Health	Tourism	Products from the Land	Land and Property Values	Economic Growth
SUB-REGIONAL/CROSS-BOUNDARY																
Growth Point Programme of Development (2008)	Green	Red			Red					Red	Red	Orange			Orange	Orange
Sustainable Housing Market Strategy: Strategic Framework (2007)	Red									Red					Red	
Sheffield City Region Development Programme (2006)	Orange						Red			Orange			Orange			Green
South Yorkshire Forest Plan (2002)	Green	Green	Green		Green	Green	Orange	Green	Green	Green		Green	Green	Orange	Red	Green
Yorkshire and Humber Biodiversity Delivery Plan (2010)										Red	Green	Orange		Orange		
PDNP Core Strategy (2010) (Barnsley MBC only)	Green	Orange	Green		Orange	Green	Green	Green	Green	Green			Green			Green
PDNP National Park Management Plan (2006 - 2011) (Sheffield CC/Barnsley MBC only)				Orange									Orange	Orange	Orange	Orange
PDNP Recreation Strategy (2010) (Sheffield CC/Barnsley MBC only)	Red	Orange			Orange	Orange	Orange		Orange	Orange			Orange			
LCR GI Strategy (Barnsley only) (2010)	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
LOCAL Barnsley																
Corporate Plan (2008 - 2011) Mid-term Review 2009/10		Red		Red	Red	Red	Red	Red	Red	Orange	Green					Green
LDF: Core Strategy submission September (2010)	Green	Green	Green	Green	Orange	Red	Red	Orange		Orange	Green	Orange	Red	Red		Red
Regeneration policies/plans: Remaking Barnsley (2003)	Red	Red			Red	Red	Red	Red	Red	Red			Red			
Regeneration policies/plans: Barnsley Dearne ADF (2005)	Orange									Red						
Sustainable Communities Strategy (2008)	Red	Red	Red		Red	Red	Red			Red		Red				
Local Area Agreement (2008)	Orange	Orange	Orange		Red	Red					Orange	Orange			Orange	Orange
Barnsley GI Strategy (2010) draft	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Green Space Strategy Part 1(2006)	Red	Red	Red		Red	Red									Red	
Landscape Character Assessment (2002)			Red		Red	Red	Red	Red	Red	Red			Red	Red		
Outdoor Sport and Playing Pitch Strategy (2010) draft	Red	Red			Orange	Orange			Orange			Orange			Red	
Local Wildlife Sites review (2010) draft	Red	Red	Orange				Red	Red	Red	Red	Red	Red				
Sport and Active Lifestyles Strategy (2010) draft		Red				Red						Red				
Barnsley Biodiversity Action Plan (2009)	Red		Green				Red		Red							
Barnsley SFRA (2010)	Orange	Red		Green		Red				Red						
LOCAL Doncaster																
Corporate Plan (2009)			Red	Orange						Red	Red	Red	Green			Orange
Core Strategy Revised Preferred Options Consultation Draft (2010)	Green	Orange	Green	Green	Orange	Orange		Orange		Red	Green	Red	Orange			Green

POLICY and STRATEGY	Green Infrastructure	Accessible Public Open/Green Space	Biodiversity	Contribution To Mitigating Flood Risk	Accessibility	Recreation	Cultural	Landscape	Education	Quality Environment	Climate Change	Health	Tourism	Products from the Land	Land and Property Values	Economic Growth
Regeneration policies/plans: Dearne ADF (2005)	Red	Red								Red					Red	
Doncaster's Borough Strategy (2010)								Green		Green	Green	Green				Green
Development and Flood Risk SPD (2010)				Green												
Landscape Planning on Development Sites SPD (2008)			Green					Green								
Local Wildlife and Geological Sites SPD (2010)			Green													
Planning for Trees and Hedgerows SPD (2008)								Green								
Planning for Nature SPD (2008)			Green					Green								
Residential Backland and Infill Development SPD (2010)								Green		Green						
Biodiversity Mitigation and Compensation SPD		Green														
Doncaster SFRA (2010)	Orange	Red		Green		Red					Red					
LOCAL Rotherham																
LA Corporate Plan (2008 update)	Orange	Orange	Orange													
Core Strategy Revised Options (2009)	Orange	Orange	Orange	Orange	Red	Orange		Orange		Red	Red					Red
Regeneration policies/plans: North ADF (2005)	Orange	Orange			Red	Red				Orange						
Regeneration policies/plans: South ADF (2005)	Orange	Orange		Red	Red					Orange						
Sustainable Communities Strategy (2008 update)	Red		Red							Red	Red					
Local Area Agreement (2009)						Red				Red	Red					
Green Space Strategy (2010)	Orange			Orange	Orange			Orange	Orange			Orange	Green			
Rotherham SFRA (2008)	Orange	Red		Green		Red					Red					
LOCAL Sheffield																
LA Corporate Plan (2008)	Red	Orange		Red						Orange	Red					Red
LDF Adopted Core Strategy (2009)	Green	Green	Orange	Green	Green	Green		Orange	Red	Green	Orange	Orange	Red		Red	Red
Regeneration policies/plans: City Centre Masterplan (2008)	Orange	Red	Red	Red			Orange		Orange		Red					Red
Regeneration policies/plans: East ADF (2005)	Red	Red								Red						Red
Regeneration policies/plans: North ADF (2005)	Orange	Orange			Orange			Orange		Orange						
Regeneration policies/plans: South ADF (2005)	Orange	Orange										Red			Red	Red
Sustainable Communities Strategy: Sheffield City Strategy (2007)	Orange	Red			Red					Red	Red	Red				Red
Local Area Agreement (2008)						Orange				Orange	Red					
Green and Open Spaces Strategy (2010)	Green	Green	Green	Red	Green	Green	Green	Red	Green	Green	Green	Green	Orange	Orange		Green
Sheffield SFRA (2008)	Orange	Red		Green		Red						Red				

Appendix E: Natural England Fifteen Functions of GI

E1

Natural England's extensive, GI mapping exercise was undertaken with the purpose of increasing opportunities for investment. This mapping data sought to create a consistent approach to delivering GI, at a regional scale. Areas of landscape are grouped and defined as "corridors". NE has sought to be a regional facilitator, and consulted organisations to identify strategic GI that runs across administrative boundaries. The result of the consultation was to create a map showing the places ("corridors") and to sort them into a hierarchy based on quality (number of functions present) to show which corridors were of regional, sub-regional, district or local relevance:

Table 10: Hierarchy of Relevance for GI

Regional	Likely to cross several local authority boundaries. Demonstrates 13-15 functions at a strategic scale. This level no longer exists in terms of planning, but is still relevant in terms of resource distribution.
Sub-Regional	Likely to cross two or more local authority boundaries. Demonstrates 10-13 functions at a strategic scale. This level reflects the scale of the evolving LEP, Sheffield City Region and SYFP.
District	Connects only one or two local authorities. Demonstrates 8-11 functions at a strategic scale.
Local	Contained within one locality. Demonstrates 4 to 8 functions.

Table 11: Natural England's 15 functions for GI⁷³

1	Open/accessible space	Open space assets such as parks and woodlands.
2	Biodiversity	Contributes to BAP targets. Sites of SINC status or higher wildlife value.
3	Climate change	Opportunities for climate change mitigation such as carbon sequestration, air flow and cooling or energy crops; requirements for climate change adaptation.
4	Health	Creates opportunities for addressing air quality issues; includes places to exercise particularly in areas with populations with poor health.
5	Mitigating flood risk	Floodplain or areas at risk of flooding.
6	Accessibility	Links from town to country. Rights of way allowing access by foot, cycle or horse riding.
7	Recreation	Informal and formal outdoor recreational assets such as golf courses, play areas and sports pitches.
8	Cultural	Formal gardens, cemeteries, historic features.
9	Landscape	Contains specific landscape feature worthy of protection or enhancement.
10	Education	Provides educational opportunities such as a visitor centre. Definite opportunities for safe routes to schools.
11	Quality environment	Opportunities to improve poor quality environments and increase investment.
12	Tourism	Includes tourism assets which would form part of at least a day trip for people outside of the immediate area.
13	Products from the land	Areas in agricultural production.
14	Land and property values	Investment in GI would be likely to positively affect local land and property values.
15	Economic growth	Increased GI likely to attract further investment. GI integration into development sites.

Appendix F: Area Assessment

F1

This table builds upon the Natural England “green corridor”⁷⁴ assessment and briefly summarises the baseline situation for each “area” of South Yorkshire. It provides the background the masterplan and table in the main body of the document. Reference numbers relate to the masterplan in the main body of text. This information supports development of the delivery plan in Phase 2. National Character Areas have been taken into account in defining initiative areas.

Table 12: Area Assessments

Area of South Yorkshire	Ref.	Area Assessments Existing character, opportunities, assets and issues needing to be addressed
Upper Don	A	<p>Upper reaches of the major river corridor in SY.</p> <ul style="list-style-type: none"> • Predominantly rural and well wooded Wharnccliffe/Oughtibridge area. • Heathland at Wharnccliffe Heath Local Nature Reserves. • Wharnccliffe Craggs important Mesolithic site. • Dramatic scenery: Millstone Grit to the west and valley sides rising to 150m at the Craggs. • Trans Pennine Trail runs through the corridor with links to local trails and bridleways. • South Yorkshire Navigation.
Lower Don	B	<p>Lower reaches of the major river corridor in South Yorkshire (Doncaster to Sheffield).</p> <ul style="list-style-type: none"> • Don Gorge is an important geological and archaeological landscape in South Yorkshire. • National cycle and recreation routes including Trans Pennine Trail with links to local trails (e.g. Five Weirs Walk, Sheffield). • Major visitor destinations: Kelham Island Museum, Sheffield Ski Village, Magna, Cusworth Hall and Park and Conisbrough Castle. • River floodplain includes a number of wetland habitats. • Enhanced public health programme areas: Masbrough, Rotherham town centre, Aldwarke, Rawmarsh, Kilnhurst and Conisbrough. • Areas of poor health in Sheffield: City Centre, Netherthorpe/Upperthorpe, Tinsley/Darnall. • Areas needing restoration and/or environmental enhancement include former quarries and Parkwood Springs in Sheffield. • Sheffield and South Yorkshire Navigation Canal.
River Dearne	C	<p>Dearne Valley is an area of major regeneration.</p> <ul style="list-style-type: none"> • Restoration of former coal and heavy industry sites in the 1990s leading to large-scale, open green space around established communities. • Dearne Valley Eco-Vision and Dearne Valley Green Heart Futurescape. • Areas of poor health throughout the north east corridor (north of Barnsley town centre, Darfield, Worsborough and Bolton upon Dearne). • Dearne Valley Country Park. • RSPB Old Moor Wetland Centre. • Trans Pennine Trail with links to local trails. • Significant areas of new woodland planting.

Area of South Yorkshire	Ref.	Area Assessments Existing character, opportunities, assets and issues needing to be addressed
River Rother	D	<p>Rother Valley incorporates a series of established woodlands, regenerated parks and open spaces including Rother Valley Country Park.</p> <ul style="list-style-type: none"> • Areas of statutory washlands manage flood risk to Rotherham town centre. • Ancient woodlands and greenspace (e.g. restored opencast coal areas at Rother Valley Country Park). • Advanced Manufacturing Park at Waverley attracting higher value industries. • Waverley regeneration scheme includes privately owned and managed parkland, integration of drainage, public rights of way, allotments etc. • Tree planting has been undertaken to improve landscape value, capture carbon and address issues of motorway noise and air quality. • Restoration of former coal and heavy industry sites in the 1990s.
River Sheaf	E	<p>Sheaf Valley forms main transport corridor (roads, river, railways) from south.</p> <ul style="list-style-type: none"> • Remains of early water powered industry along river. • Riverside footpath provided piecemeal by redevelopment in old industrial area south of city centre. • Valley contains ancient woodland including the regionally important Ecclesall Wood. • Regeneration of sheaf park and station area presents opportunity for transformation of run down area incorporating landscape improvements and sustainable building features. • Sheaf drains into the River Don where flooding is an issue, exacerbated in places, by canalisation and culverting.
River Loxley	F	<p>Wooded river valley, containing protected species.</p> <ul style="list-style-type: none"> • History of water power with evidence of dams and mills. • Loxley and Wadsley commons Local Nature Reserves. • Well subscribed footpaths.
Rivelin	G	<p>Wooded river valley, containing protected species.</p> <ul style="list-style-type: none"> • History of water power with evidence of dams and mills.
Porter Brook	H	<p>Striking and valued landscape designated as a Local Nature Reserve.</p> <ul style="list-style-type: none"> • Remains of early traditional water-based industries. • Important corridor for recreation and wildlife. • River becomes partly culverted to the east.

Area of South Yorkshire	Ref.	Area Assessments Existing character, opportunities, assets and issues needing to be addressed
River Dove	I	<p>Wooded area with important archaeological assets and access via Trans Pennine Trail.</p> <ul style="list-style-type: none"> • Significant areas of ancient woodland. • Restored former opencast areas incorporating new woodland. • Trans Pennine Trail and linking paths. • Dearne Valley Country Park and Phoenix Park provide large-scale recreational landscapes close to urban centres. • Industrial heritage sites include Cultural Romano-British settlement in Wombwell Woods, Rockley Blast Furnace and Engine House, and Worsbrough Mill. • Wentworth Castle Gardens and Stainborough Park – the only Grade 1 registered landscape in South Yorkshire – contains a fascinating collection of 26 listed buildings and monuments as well as national collections of rhododendrons, camellias and magnolias. Rare formal gardens have been rediscovered.
Gleadless, Manor & Park Hill	J	<p>Dense suburb of central Sheffield.</p> <ul style="list-style-type: none"> • Important historic landscapes (Norfolk Park, City Road Cemetery, archaeological remains at Manor Lodge). • Green Estate community enterprise. • Remnant ancient woodlands, with access from adjacent housing areas.
Chesterfield Canal	K	<p>Attractive area of hamlets and features associated with the historic Chesterfield Canal.</p> <ul style="list-style-type: none"> • Heavily wooded and agricultural landscape with tourism and recreation opportunities. • Includes a partially restored navigable waterway (Chesterfield Canal) and areas of ancient woodland. • National cycle route (e.g. Trans Pennine Trail) and other path networks.
Thorne and Hatfield	L	<p>A unique part of the Humberhead Peatlands area.</p> <ul style="list-style-type: none"> • The Humberhead Peatlands National Nature Reserve contains Hatfield and Thorne Moors and is the largest area of lowland raised mire in Britain (representing around 31% of the total land area).⁷⁵ • Rich in biodiversity assets including a distinctive flora, rich invertebrates assemblage and key species such as nightjar. • The area forms the southern part of the Humberhead Levels with its component parts Goole Moors, Crowle Moors and Rawcliffe Moors. • The area includes internationally important conservation sites (Sites of Special Scientific Interest, Special Protection Areas under the European Birds Directive, Special Areas of Conservation under European Habitats Directive and wetlands of international importance under the terms of the Ramsar Convention). • Carbon storage opportunities within the peatlands and surrounding areas. • Stainforth and Keadby Canal. • Rich in biodiversity assets including Potteric Carr nature reserve. • Thorne and Hatfield Moors Conservation Forum.

Area of South Yorkshire	Ref.	Area Assessments Existing character, opportunities, assets and issues needing to be addressed
MI Corridor & Blackburn Brook	M	<p>Urban location with remnant natural elements in an area of poor health.</p> <ul style="list-style-type: none"> • Varied landscape including the urban open spaces and ancient woodlands of Northern Sheffield (Woolley Wood, Wincobank, Concord park, Firth park). • Trans Pennine Trail runs through the area. • Poor health and low sports participation in urban areas of Burngreave and Firth Park. • Includes areas of undermanaged open space and the unrestored coal tip at Hesley Wood.
North Barnsley	N	<p>Urban and suburban area characterised by areas of open green spaces on former industrial sites and areas undergoing urban regeneration.</p> <ul style="list-style-type: none"> • Including Barnsley Town Centre and Royston. • Within the Growth Point area of Barnsley. • Redevelopment of low quality environments. • Rabbit Ings restored coal tip. • Areas of relative poor health around Royston and Cudworth. • Trans Pennine Trail link.
Doncaster	O	<p>Former coal mining areas and associated settlements undergoing restoration.</p> <ul style="list-style-type: none"> • Ongoing social problems linked to deprivation and low quality environments, but includes valuable woodland and heath habitats. • Extensive recent regeneration including restoration of Edlington Colliery, which is adjacent to existing Edlington Wood.
Maltby, Thurcroft, Dinnington	P	<p>Potentially valuable wildlife habitats in the midst of social issues.</p> <ul style="list-style-type: none"> • Areas of ancient woodland. • Characterised by areas of social deprivation and former mineral workings areas. • Restoration of Thurcroft Colliery includes maintenance of area for biodiversity (Great Crested Newts found). • Restoration of Maltby Colliery (including the Stainton Quarter) will yield significant biodiversity benefits (limestone habitats). • Maltby is within top 25% most deprived areas in the Borough.
Grimethorpe & Dearne	Q	<p>Former coal mining area has undergone extensive restoration.</p> <ul style="list-style-type: none"> • Characterised by areas of social deprivation. • Some valuable wildlife habitats. • Former mineral workings areas have undergone restoration to create large scale open green space. • Newly regenerated landscapes around Grimethorpe. • West Haigh and Howell are important areas of ancient woodland.

Area of South Yorkshire	Ref.	Area Assessments Existing character, opportunities, assets and issues needing to be addressed
Thrybergh	R	<p>Varied landscape with great potential.</p> <ul style="list-style-type: none"> • Characterised by areas of social deprivation. • Attractive landscape with parkland and historic villages. • Recently restored mineral workings. • Parkland, reservoirs, restored colliery sites.
Askern & Adwick	S	<p>Rich biodiversity potential in formal parkland and restored brownfield sites.</p> <ul style="list-style-type: none"> • Area characterised by Parkland including Campsall country park, and small woodland, includes former colliery workings. • BAP habitats including Deciduous Woodland, Fen and Lowland Meadow.
Little Don	T	<p>Varied area includes steel town of Stocksbridge surrounded by woodland and farmland with attractive millstone grit farm buildings and enclosures.</p> <ul style="list-style-type: none"> • Steel making heritage at Stocksbridge. • Rural Character around Stocksbridge, with attractive countryside and well used path network including interpreted Stone to Steel heritage trails. • BAP habitats including Deciduous Woodland, Upland Heath, Blanket Bog and Lowland Dry Acid Grassland. • Stone to steel project. • Areas of blanket bog that could be managed for carbon sequestration.
River Went	U	<p>A tidal river catchment area comprising woodland, grassland and intensive farmland offering good access to neighbouring districts via the Trans Pennine Trail.</p> <ul style="list-style-type: none"> • Species rich meadows and wet grassland along the river corridor (Went hay meadows SSSI, Low Ings Lane Meadows SSI and Sykehouse). • The river flows along a narrow gently sloping gorge on the magnesium limestone ridge. • New Junction Canal. • The waterways are popular for recreational activities such as fishing and walking. • Trans Pennine Trail and a wide network of footpaths and bridleways.

Appendix G: Datasets Used in Scoping and Masterplanning

Dataset	Source
Regional/National	
GI asset mapping	Yorkshire and Humber Biodiversity Forum
GI asset mapping	Natural England
Climate Change projections	UK Climate Impacts Programme outputs from UKCP09
National Character Areas	Natural England
Sub-Region	
GI asset mapping	South Yorkshire Forest
Settlements	TSY
Growth Points	TSY
Cross-borough	
Waverley advanced manufacturing park	Regional Spatial Strategy
Dearne Valley investment/regeneration area	Regional Spatial Strategy
Local – Barnsley	
Area Development Framework boundaries	Transform South Yorkshire
Employment sites	LDF Employment Sites Profiles
GI	Core Strategy
Green belt	Core Strategy
Local – Doncaster	
Area Development Framework boundaries	Transform South Yorkshire
Employment land	Employment Land Review
Principal growth, renewal and conservation towns	Core Strategy: Development Strategy
Green belt	Core Strategy: Development Strategy
Countryside policy areas	Core Strategy: Development Strategy
Local – Rotherham	
Area Development Framework boundaries	Transform South Yorkshire
Neighbourhood Renewal Areas	RMBC
Urban extension	Core Strategy: Strategic Locations
Major settlement expansion	Core Strategy: Strategic Locations
Potential strategic employment locations	Core Strategy
Green belt addition	Core Strategy: Strategic Locations
Local – Sheffield	
Area Development Framework boundaries	Transform South Yorkshire
Business/manufacturing, office development	Core Strategy
District centre/extension	Core Strategy
Gateway location	Core Strategy
Green belt	Core Strategy
Major open space improvement	Core Strategy
Strategic green network	Core Strategy

Appendix H: Definitions of GI

H1

The following definitions have been used in this document:

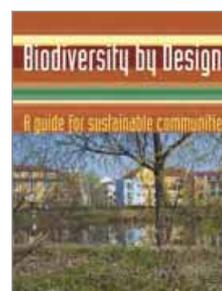
DEFRA, An invitation to Shape the Nature of England

“We know not only that parks, green spaces and waterways are valuable to the health and wellbeing of individuals and communities but also that, properly managed, they form a network of “green infrastructure” that can help us manage surface water flooding, filter pollution and cool the city.”⁷⁶



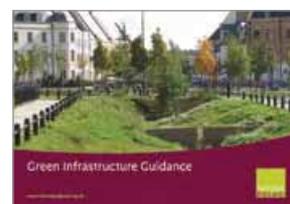
Town and Country Planning Association, Biodiversity by Design: A Guide For Sustainable Communities.

“Green infrastructure should provide for multi-functional uses as well as delivering ecological services, such as flood protection and microclimate control. It should also operate at all spatial scales from urban centres through to open countryside.”⁷⁷



Natural England, Green Infrastructure Guidance

“A strategically planned and delivered network of high quality green spaces and other environmental features. It should be designed and managed as a multifunctional resource capable of delivering those ecological services and quality of life benefits required by the communities it serves.”⁷⁸

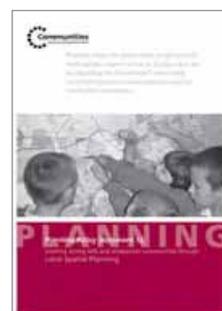


Planning Policy Statement 12

“Green infrastructure is a network of multi-functional green space, both new and existing, both rural and urban, which supports the natural and ecological processes and is integral to the health and quality of life of sustainable communities.”⁷⁹

H2

Note: The National Planning Policy Framework is intended to streamline the national planning policies set out in Planning Policy Guidance and Planning Policy Statements, as well as procedural advice such as how to compile development plans, and produce the evidence base for GI.⁸⁰



Appendix I: Acronyms

Adapt YH	Climate Change Adaptation Yorkshire and Humberside
BAP	Biodiversity Action Plan
BIS	UK Department for Business, Innovation and Skills
BRE	Building Research Establishment
CABE	Commission for the Built Environment
CC	City Council
CHP	Community Heat and Power
CIL	Community Infrastructure Levy
DCLG	Department for Communities and Local Government
DPSIR	Driving forces / Pressures / States / Impacts / Responses causal framework
CSI	Creating a Setting for Investment (Interreg IIIB)
DEFRA	Department for Environment, Food and Rural Affairs
EA	Environment Agency
EIP	Enquiry in Public
ERDF	European Regional Development Fund
GI	Green Infrastructure
ICE	Institute for Civil Engineering
IDB	Internal Drainage Boards
Interreg	Interregional Programme of the EU
IWAAC	Inland Waterways Amenity Advisory Council
LA	Local Authority
LCR	Leeds City Region
LDF	Local Development Framework
LEP	Local Economic Partnership
LiFE	Long-term Initiatives for Flood Risk Environments (BRE)
MBC	Metropolitan Borough Council
NWDA	North West Development Agency
PDNP	Peak District National Park
PPG	Planning Policy Guidance
PPS	Planning Policy Statement
RiDO	Rotherham Investment & Development Office
RSPB	Royal Society for the Protection of Birds
SCR	Sheffield City Region
SFRA	Strategic Flood Risk Assessment
SINC	Site of Importance for Nature Conservation
SY	South Yorkshire
SYFP	South Yorkshire Forest Partnership
TEEB	The Economics of Ecosystems and Biodiversity
TCPA	Town and Country Planning Association
TSY	Transform South Yorkshire
UKCIP	UK Climate Impacts Programme
UKCP09	UK Climate Projections 2009
VALUE	Valuing Attractive Landscapes in the Urban Economy

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SOUTH YORKSHIRE
forest
A National *community forest* Partner