

# The Economic Value of Green Infrastructure





## Foreword

In recent years, thinking on green infrastructure has moved from ecology to economics. Resources such as the countryside, coast, wetlands, urban parks, street trees and their ecosystems are seen as critical for sustainable economic growth and social goals, not just a way of supporting wildlife and 'the environment'.

This publication is the result of a partnership between the Northwest Regional Development Agency and Natural England. Together they commissioned reports by ECOTEC and AMION, designed to help practitioners make the case for investment in green infrastructure.

This summary sets out the many benefits of green infrastructure

and the way in which it can underpin the success of other economic sectors, offering an improved environment, jobs, sustainable business enterprises, social benefits, economic security and cost savings.

These savings include a reduced need for healthcare, better employee productivity and better adaptation for climate change. The summary also shows how more credible and consistent tests and measures are being developed to assess the value of green infrastructure projects.

It emphasises, too, that green infrastructure is dynamic – it must be strategically planned for, invested in and managed at local and regional levels, if it is



to function in underpinning and providing for a prosperous and sustainable economic future.

This management requires in-depth understanding of the role green infrastructure plays throughout our everyday lives, and of the need for co-ordination and co-operation across political, sector and administrative boundaries.

Dr Will Williams  
Programme director  
Natural Economy Northwest

• *Natural Economy Northwest is a joint programme of NWDA and Natural England to place the natural environment at the heart of the Northwest's future prosperity.*

### Key messages

- The Northwest's environment generates an estimated £2.6bn in Gross Value Added (GVA), and supports 109,000 jobs.<sup>1</sup>
- The environment is critical to sustainable economic prosperity by contributing to the conditions for growth and economic security, as well as providing healthy ecosystems.
- Green infrastructure can mitigate and alleviate the effects of climate change and pollution, reduce the impacts of flooding, and improve public health, civic pride and educational opportunities.
- Environmental attractiveness draws in investment and jobs and enhances the value of property.
- Workers with access to green infrastructure are healthier and more productive, and green infrastructure is vital to key Northwest sectors such as tourism and agriculture.
- Assessing the value of green infrastructure is still a work in process. Economic value is complemented by the non-market social and environmental benefits that green infrastructure can offer. The development of the tests described in this report offers ways of asserting the full value of green infrastructure in the most hard-headed of environments.

# Introduction

Sustainability and environmental concerns have moved from the niche to the mainstream in recent years, placing new demands on economic policymakers. On the one hand local authorities and policymakers are under pressure to safeguard jobs and attract investment. On the other, rising awareness of the environment and economic security means that a wider and sometimes conflicting range of concerns is brought to bear.

A key challenge for policymakers and economic development practitioners has been how to shape a strong economic case for environmental improvements. 'Green' issues might be very attractive, it's argued, but where are the economic benefits? What difference will they make to jobs, health and the economic strength of areas struggling with deprivation and social problems?

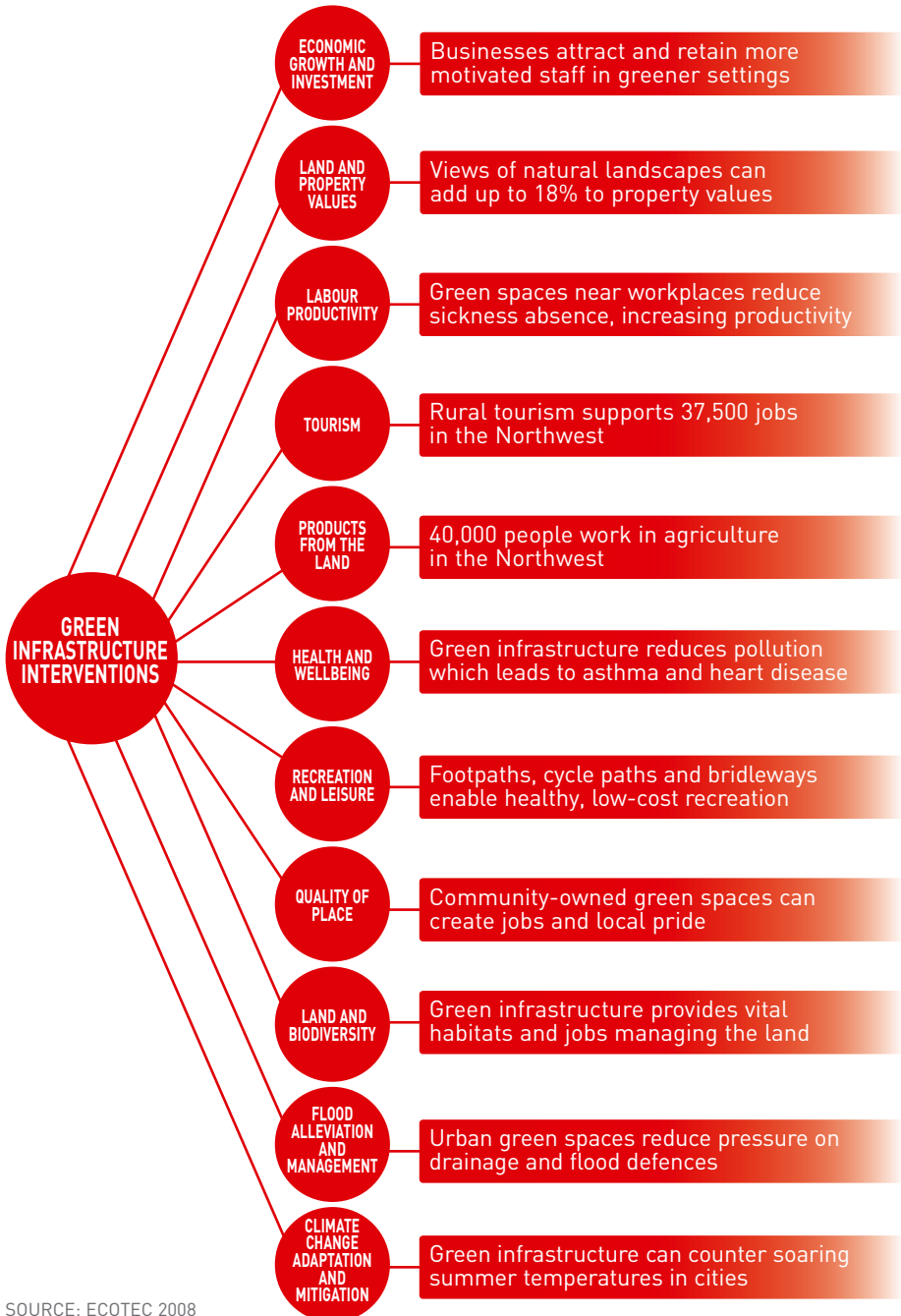
New research from ECOTEC and AMION brings together a wealth of evidence from many disciplines and provides strong grounds for seeing green infrastructure as adding real value to the Northwest's economy. The research highlights green infrastructure's role in economic prosperity and stability, with a direct gross value added (GVA) from the environment calculated at £2.6bn, supporting 109,000 jobs in environmental and related fields.<sup>2</sup> Other benefits include long-term employment, better health, more engaging education and social

cohesion. Green infrastructure (GI), the reports show, should be central to economic and environmental policy.

The research also proposes tests that policymakers and public bodies can use to measure the benefits of green infrastructure projects, making solid cases in line with government targets and spending priorities.

This publication is drawn substantially from three reports commissioned by Natural Economy Northwest (NENW) and the Northwest Regional Development Agency (NWDA) and published in 2008. ECOTEC's *The economic benefits of GI: The public and business case for investing in GI and a review of the underpinning evidence* and *The economic benefits of GI: Developing key tests for evaluating the benefits of GI*, and AMION's *The Economic Benefits of GI – an Assessment Framework for the NWDA* are among a series of reports that inform the Natural Economy Northwest programme, focusing on the Regional Economic Strategy priority of optimising the natural environment's contribution to the regional economy and quality of life. This contribution does not happen by itself. The role of green infrastructure in the economy is growing, and well-managed, proportionate levels of investment can set the scene for sustainable, high-quality economic growth and more sustainable communities.<sup>3</sup>

**Figure 1: The economic benefits of green infrastructure**



SOURCE: ECOTEC 2008





Moston Vale, Manchester:  
Investment in green  
infrastructure can  
enhance quality of life

## The scope and scale of green infrastructure

**The North West Green Infrastructure Guide defines green infrastructure as:**

***“the region’s life support system – the network of natural environmental components and green and blue spaces that lies within and between the Northwest’s cities, towns and villages which provides multiple social, economic and environmental benefits.”***

**In practical terms, the broad concept of green infrastructure can encompass:**

- managed and natural green areas in rural and urban environments, including woodlands, gardens, and formal parks; green corridors such as bridleways, railway and road verges and cycle paths; street trees; waterways; and open

countryside. These might be public or private assets;

- the strategic connection of open green spaces through planning and policy;
- the understanding that an area’s green infrastructure should provide many benefits for people living in and visiting an area;
- the importance of ecosystem services within green infrastructure, to provide the required functions and quality.

Within a region as diverse as Northwest England, green infrastructure can mean settings as varied as rare green spaces within urban neighbourhoods, or remote parts of Cumbria and Lancashire.

Its role in the regional economy is also broad and varies according to context. Green infrastructure makes towns and cities better places to live

CASE STUDY

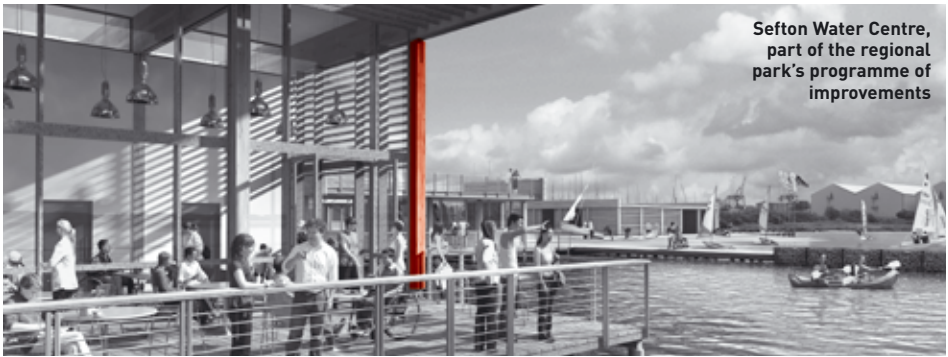
## Mersey Waterfront Regional Park

Mersey Waterfront Regional Park aspires to be ‘a local, national and internationally renowned location – where community and commerce thrive together in an inspiring natural setting’. Established in 2002, Mersey Waterfront encompasses and connects environments in a 70-mile stretch from Southport to the River Dee, from the docks of Liverpool city centre to endangered natural habitats such as coastal wetlands.

The park’s strategy to 2020 focuses on three themes: regenerating the waterfront; recreation and the regional park; and preserving and promoting the environment. Projects already completed include Southport Eco Centre, improvements to Crosby Coastal Park and a role in marketing the wider Merseyside area.

Funding for Mersey Basin Week encouraged local people to use the regional park for outdoor activities. Many programmes, such as improvements to the Otterspool waterfront as part of the Pride in our Promenades scheme, focus on upgrading facilities through measures such as new lighting and seating.

One major scheme is an extension to the Leeds & Liverpool Canal, allowing canal boats to navigate to Liverpool’s waterfront. This could attract up to £3.3m in additional income and generate more than 170 new jobs.<sup>4</sup>



Sefton Water Centre, part of the regional park's programme of improvements

in. It raises property values, attracts investment or stimulates economic activity. In rural settings, the focus may be on biodiversity or climate change mitigation and adaptation, or economic sectors such as tourism and agriculture. In all this, the quality and management of green infrastructure will determine the

value of the benefits it provides.

As awareness grows of the need for regeneration and development to maintain harmony with regional, national and global environments, it is increasingly difficult to ignore the case for economically and environmentally sustainable approaches.

# The economic benefits

The Northwest's Regional Economic Strategy, published in 2006, sets out a vision for the region over the next two decades, identifying priorities and objectives for economic growth. It aims to 'develop the economic benefit of the region's natural environment through better alignment of environmental activities and economic gain', incorporating green infrastructure into mainstream economic planning and promoting the role of assets such as regional parks into economic goals.

Green infrastructure is highlighted as an important resource to support the Regional Economic Strategy's three main strategic drivers for the Northwest:

- *improve productivity and grow the market*, increasing the individual gross value added (GVA) by: promoting enterprise, including social enterprise; working with companies to invest in product, process and market innovation, management, ICT and sustainable production; working with individuals to develop higher level skills;
- *grow the size and capability of the workforce*, getting more people working and encouraging a variety of economic activities in the most deprived communities in the region; and
- *sustainable growth*, investing in the region's environment, culture and infrastructure, improving quality of life, tackling deprivation, valuing diversity and social inclusion, and

recognising the wider social and environmental implications of economic growth.

The Northwest's environment already supports 109,000 jobs and is worth up to £2.6bn in GVA to the region.<sup>5</sup> Indirect benefits include cost reductions to the public and private sectors and risk management. In 'hard' terms, the main economic benefits are identified as:

## 1. Economic growth and investment.

The most direct economic argument for green infrastructure is its contribution to GVA. This comes about through improvements to a region's image, helping to attract and hold high value industry, entrepreneurs and workers.

In cases like this, green infrastructure can be credited with helping to attract, create and safeguard new jobs and startup businesses. It increases the scope for levering in private sector investment, reducing unemployment and increasing GVA.

Green infrastructure can play a vital role in combating poor perceptions of the Northwest from outside, even though they are frequently unfounded. Such views can deter businesses from trying to attract high-level staff in the Northwest or relocating to the region.<sup>6,7</sup>

## 2. Land and property values.

Figures from the Commission for Architecture & the Built Environment



(CABE) show that property values increase near green spaces, with houses close to parks averaging 8% higher prices than similar properties further away.<sup>8</sup> Green infrastructure investment can therefore offer higher returns for the property sector. Higher property values in themselves are also believed to improve an area's image. Greener cities attract more visitors, bringing with them retail and leisure spending and providing job and rental opportunities.

**3. Labour productivity.** Better working environments can significantly affect productivity. Not only do studies suggest that employees work better and more productively in greener, more attractive environments, but health benefits such as lower stress levels can reduce sickness and absenteeism. High-grade staff say they stay in their jobs longer if there is a pleasant physical environment, which reduces the costs of recruiting and training new staff.<sup>9</sup>

Green infrastructure has also been used as a valuable education resource, and has the potential to



improve educational achievement, eventually helping to create a better-qualified and more highly skilled workforce, and to bring higher salaries and more valuable business investment into the region.<sup>10</sup>

**4. Tourism.** Visitors are already worth £10.9bn per year to the Northwest, supporting 200,000 full-time equivalent jobs, and the rural economy element of this is worth around £770m a year. More than 8m visitors each year from outside the region visit the Northwest, while residents of the Northwest itself

**Figure 2: How green spaces affect property prices**

How nearby green spaces can enhance property values. The figures show the uplift for different types of property.

	<b>DETACHED</b>	<b>FLAT</b>	<b>NON-DETACHED</b>
CITY PARK	19.97%	7.54%	2.93%
LOCAL PARK	9.62%	7.92%	9.44%
OPEN SPACE	2.71%	4.70%	0.44%

SOURCE: NEIL DUNSE 2007, URBAN PARKS, OPEN SPACE AND RESIDENTIAL PROPERTY VALUES, RICS

take 195m day trips to countryside areas within the region.<sup>11</sup> Green infrastructure plays a key part in this and represents a major opportunity to increase the region's GVA further. The natural environments of the Northwest are acknowledged as some of the best in the UK, but with the exception of the Lake District are largely under-recognised and under-promoted. Environments such as the Sefton Coast sand dunes and the Forest of Bowland, if well managed, offer significant opportunities for sustainable economic activity.<sup>12</sup>

### **Figure 3:**

#### **The tourism value of forests**

- It is estimated that woodland recreation in England has a value of between £1.66 and £2.78 per visit;
- An additional 330,000 visitors to the National Forest since 1995 have contributed an additional £128m annually, creating and supporting more than 500 full time equivalent jobs;
- The annual value of forests in the UK in terms of recreation and landscape value equates to some £400m. In the Northwest the annual value has been estimated at £35m;
- Research indicates that residents in suburban settings are willing to pay £7,680 per household for views of broadleaved forests, which would equate to £4.2bn across the UK.

SOURCE: AMION 2008, ECONOMIC VALUE OF GREEN INFRASTRUCTURE

Green infrastructure is central to the task of managing and preserving some of the Northwest's most valuable tourism resources, ensuring they remain an economic asset and a source of pleasure for future generations. Even urban green spaces and less well-known natural areas offer tourism opportunities by incorporating visitor attractions, preserving attractive landscapes, and generating economic activity in sectors such as agriculture, forestry, public services and hotels and catering. Green infrastructure in cities helps support urban tourism and shopping, making city centres more attractive and softening extremes of weather.

**5. Products from the land.** Despite extensive urban areas around Manchester and Liverpool, the Northwest is still predominantly rural. Four fifths of its land is agricultural, with 40,000 people employed in the agriculture sector and 2,800 in forestry. Agriculture accounts for 2% of UK GDP.

This offers diverse economic opportunities. Traditional sectors such as food are seeing new possibilities as interest grows in local, regionally distinctive food and drink, and as some farmers develop new crops and products.

Despite the focus on wind and solar power, biomass is still the major source of renewable energy in the UK. According to the Forestry Commission, woodlands in the UK are still significantly underused, and

## CASE STUDY

# Bassenthwaite Ospreys

Ospreys are one of Britain's rarest and most spectacular birds. In 2001, after hard work by a handful of enthusiasts, a pair of ospreys settled in a purpose-built nest on the edge of Bassenthwaite Lake near Keswick. They reared a single chick – the first ospreys to breed in the Lake District for 150 years.

The ospreys have returned every year, fledging a total of 13 chicks between 2001 and 2007. But they have also attracted half a million visitors, two dedicated viewing areas and even their own special bus service.

The ospreys' return was the culmination of several years' work by the Forestry Commission, Royal Society for the Protection of Birds and the Lake District National Park Authority. These organisations have worked closely with a community-led environmental programme, Bassenthwaite Reflections, to launch the Osprey Bus, a link from Keswick to major attractions around the lake.

Around 100,000 people visit the ospreys each season. A study in 2003 found that these visitors spent £1.68m, of which £420,000 was directly attributable to the ospreys. This spending supported the equivalent of 34 local jobs over the four months of the osprey breeding season.



Left: Visitors gather at the Dodd Wood viewpoint.  
*Picture: LDOP*

Far left: Osprey chicks pictured in the nest at Bassenthwaite Lake.  
*Picture: LDOP*

using more domestically-grown wood for renewable energy could result in a 60% increase in wood production, with significant opportunities to create jobs in woodland management and product processing.<sup>13</sup>

**6. Health and wellbeing.** According to the Office for National Statistics, the Northwest exceeds the UK average for long-term illnesses.<sup>14</sup> Many of these, such as heart disease, diabetes, obesity, asthma and some

cancers, are directly associated with low rates of exercise, high stress levels and polluted environments. Green infrastructure investment can encourage leisure and exercise activities such as walking, cycling and sport which directly address these problems. This not only reduces demands on public finances from sickness benefits and NHS costs, but also reduces the burden of sick pay and absence for employers and can improve productivity.<sup>15</sup>

**7. Recreation and leisure.** As well as improving and maintaining an attractive environment for tourists, green infrastructure offers recreation and leisure activities for the region's residents. There are direct economic benefits from employment and visitor spending, while facilities such as footpaths, cycle paths and bridleways support healthy leisure activities. Good local leisure opportunities can also help protect the global environment by dissuading local residents from travelling long distances for leisure and holidays.

**8. Quality of place.** Despite internationally famous national parks such as the Lake District and Peak District, the Northwest falls below UK averages in indicators such as tree cover and green space, and has high levels of derelict land and buildings. Green infrastructure plans, in line with government policies such as the Urban White Paper and the Sustainable Communities Plan, can create 'an improved sense of quality of place', attracting visitors and new residents, and rooting existing residents in the region. This has knock-on effects on land and property values, while improving the quality of place can also create new jobs.

The government's Urban Green Spaces Taskforce in 2002 emphasised that the decline of urban green spaces has helped to weaken community cohesion in many deprived areas.<sup>16</sup> Creative approaches to land ownership and management,

such as community management, can offer cost savings for landowners and local authorities, encourage a local sense of community and help cut crime rates.<sup>17</sup>

**9. Land and biodiversity.** Rich biodiversity, underpinned by healthy ecosystems, is critical to the functions and quality of green infrastructure. Investment in green infrastructure can create and maintain employment in a range of rural industries, such as forestry, land management and conservation. These link with economic activities such as tourism and leisure, traditional country sports and the growing natural tourism sector. Land management and conservation projects can themselves create jobs and attract funding, whether in rural settings or in the management and maintenance of urban green spaces, including public and private gardens and other landscaped areas and urban farms. Maintaining and protecting biodiversity also creates opportunities to increase the attraction of the Northwest for tourists.

**10. Flood alleviation and water management.** Severe flooding, such as that in Carlisle in January 2005, is on the increase, causing widespread economic damage as well as human misery. Some 212,500 properties in the Northwest are already assessed as at risk, without the increased sea and river levels threatened by climate change.<sup>18</sup>

Green infrastructure measures such as protecting or promoting woodlands, water and wetland habitats and grasslands, and sustainable urban drainage systems, allow better drainage and help to prevent or alleviate flooding. Green infrastructure can potentially cut the massive costs of flooding.

**11. Climate change mitigation and adaptation.** Green infrastructure is identified in the Climate Change Action Plan for the Northwest as an important way of addressing the region's impact on the climate, and of trying to adapt the region to some of the effects of climate change on people and their surroundings. As well as providing environmental benefits, studies suggest that climate change services provided through green infrastructure are also an economic opportunity.

The Northwest's woodlands have been valued at £601m in possible markets for carbon capture and storage, while its wetlands are similarly a major resource.<sup>19</sup> Green infrastructure offers sustainable, low-cost ways to adapt to some of the challenges of climate change, because it helps to regulate temperatures, reducing the demand for air conditioning. It also reduces the impacts of extreme weather events associated with climate change, such as flooding, and can help reduce the impact of climate change on biodiversity by offering 'green corridors' through which plants and animals can migrate.<sup>20</sup>

#### CASE STUDY

## Peatlands for People

The Solway Firth is one of the most important wetlands in the UK, both in its scale and in its biodiversity. Much of the South Solway area consists of lowland peat bogs, home to a wide range of wildlife including rare birds, insects and plants, including bog rosemary and all three British species of sundew. The South Solway Mosses, covering 966 hectares, are a national nature reserve.

The Royal Society for the Protection of Birds, Natural England, Cumbria Wildlife Trust, the Solway Coast AONB and the Environment Agency are working together in the Peatlands for People project to restore the natural wealth of Cumbria's raised peatbogs and link them to the region's culture, economy and quality of life.

It has been estimated that an additional 17,000 visits to the South Solway Mosses each year will be worth more than £117,000 to the Cumbrian economy.





# How can we assess value?

Research commissioned by NENW and NWDA has recommended the development of rigorous frameworks to assess the value of green infrastructure projects. The development of a menu of tests explores different ways of measuring the value of investment in green infrastructure, making it possible to evaluate and support policies and project proposals with clear evidence.

Work is continuing at the Department for Agriculture, Food and Rural Affairs (DEFRA), NWDA, Government Office Northwest and other government agencies to build on this research, fine-tuning a range of tests which decision-makers can use when considering investment in green infrastructure. The use of a menu of tests, set out below, could allow decision-makers charged with attaining economic, social and environmental goals to pick the tests most appropriate for them.

**1. Contribution to Gross Value Added (GVA)** through payments to employees and through profits and income for companies and other bodies trading in areas where there are green infrastructure projects. This is probably the most difficult test to fulfill for green infrastructure. Some research, however, notes that measures of GVA do not include many of the economic benefits generated by green infrastructure, and this is only a partial test.

**2. Ecosystem services,** sustainability and quality of life. DEFRA is constructing a framework to assess the value of 'ecosystem services' such as clean water and air, sustenance and pollination of crops and plants, and alleviation of environmental impacts. Other methods for evaluating non-market goods include the Public Benefit Recording System, developed by NWDA and the Forestry Commission, which aims to draw together a variety of public benefits and socio-economic and environmental measures to facilitate decisions on strategic projects, including the Newlands regeneration scheme (see p18).

**3. Public sector tests.** Tests relating specifically to the needs of public sector planners and practitioners include:

- Delivering against Regional Economic Strategy indicators. The Regional Economic Strategy should form the basis for evaluating many projects and demonstrates the fit between monitoring indicators and the main themes of green infrastructure;
- Contributing to Headline Strategic Added Value (SAV), an indicator which allows the impacts of green infrastructure to be evaluated beyond immediate outputs, incorporating contributions such as increased regional profile, generation of networks and learning, and adaptation to the effects of climate change;



- Contributing to Natural Economy Strategic Added Value (SAV), a specific series of SAV outcomes identified by NWDA in 2006 which allow a more comprehensive demonstration of the value of green infrastructure investment, through themes such as perception changes; lifestyle changes; downstream economic effects (see point 6) and wellbeing and security;
- Delivering against Public Service Agreements. The PSA targets, produced by central government in 2007, demand delivery of public goods against benchmarks including economic, adult and children's wellbeing, and community and environmental measurements. A clear fit can be demonstrated between green infrastructure investment and many of these indicators.
- Delivering NWDA core outputs, such as job creation, brownfield site regeneration and businesses assisted.

Logic chains allow public sector aims to be assessed together, balancing both clear identifiable outputs and the softer values arising from risks avoided or shifts in perception and attitudes. Such a framework can help to demonstrate the wider and more complex value of green infrastructure, rather than a project-by-project assessment.

The construction of logic chains is a potentially valuable means of integrating assessments of costs, benefits and value for money to see how green infrastructure investment can contribute to NWDA, local authority and central government objectives, and how far benefits can be solidly attributed to green infrastructure and not to other inputs.

**4. Private sector tests.** These include return on capital investment and costs saved through the benefits of green infrastructure, ranging from reduced sickness and absenteeism to

## CASE STUDY

# St Helens Urban Fringe

'The town in the forest' is not the image many people would have of St Helens. But the town's Urban Fringe Action Plan is based on the fact that 65% of the borough is in fact green space or rural, with all the options this presents for outdoor activities, leisure pursuits, attracting new investors and improving local health and wellbeing.

The action plan, completed in 2006, is now being taken forward by the borough's local strategic partnership and through the new local development framework. Some 96 sets of data, fed into a comprehensive geographic information system, will support a series of linked projects whose objectives will be based on solid information about their uses and objectives.

The plan draws heavily on two major initiatives. The Mersey Forest has for a decade been planting new community woodlands and reclaiming derelict land. Meanwhile, the Countryside In & Around Towns initiative has sought to demonstrate how planners can make the most of open spaces in and around urban areas, boosting health, education, recreation and regeneration.

There is evidence, too, that land values are increasing as green infrastructure becomes a greater priority. At Bold Moss, the former Bold Colliery site, derelict industrial land has been transformed into a community woodland and nearly 600 new homes built. A report by the District Valuer found property values in the area had risen by £15m as a direct result, and new developments worth £75m had been attracted.



View from hill top at Colliers Moss, St Helens – it really is the 'town in the forest'

lower expenditure on air conditioning or flood damage repairs.

ECOTEC's *Creating return on investment* test is designed to factor in the currently undervalued role of the private sector in providing investment for green infrastructure. Such roles include land management, investments by

companies through their corporate social responsibility programmes, and investment in the natural environment by developers.

**5. CITYGreen** is a US-developed system which analyses the value of ecosystem services such as rainwater runoff, air pollution

alleviation, carbon storage and energy savings. It uses these to assign financial values to the presence of trees, green areas and other components of green infrastructure. Studies are under way to adapt the CITYGreen software so it can be applied to UK contexts.

#### **6. Downstream economic effects.**

This broadly refers to benefits which help to create a setting for inward investment – creating a more attractive region and thereby drawing in businesses and business users. These could include jobs created due to an improvement in the region's image, or a reduction in lost consumer spend due to flooding or poor weather, thanks to the beneficial effects of green infrastructure.

**7. Risk reduction.** The increased costs of environmental problems and climate change are of growing significance to businesses and local authorities. While costs such as the carbon levy are easily measurable in cash terms, others – such as the impacts of flooding, 'urban heat islands' and poor health – can be less predictable. Nevertheless, green infrastructure investment clearly addresses many of these concerns. Ways to measure its impact include counting business premises protected from flooding, or calculating reduced air conditioning costs for city centre businesses, or how many skilled workers are attracted to the region.

#### CASE STUDY

## Newlands

Newlands, one of the largest green regeneration schemes in the UK, focuses on turning large areas of brownfield land into community woodlands. With total investment of £59m from NWDA, the programme will involve the regeneration of over 900 hectares of brownfield land.

At Moston Vale in Harpurhey, Manchester, an area in the worst 5% on the Index of Multiple Deprivation, £1.7m has been used to regenerate and re-landscape a former landfill site, with solar powered lighting, woodland areas and sports facilities. Partners have included the Red Rose Forest and the Forestry Commission, as well as the local authority and NWDA. The Newlands programme was the impetus behind the Public Benefit Recording System, an innovative way of recording the positive impacts of public projects.<sup>21</sup>

Expected benefits include extra investment in a nearby business park and increased property values in the vicinity.<sup>22</sup> These values are being tracked through new research by the District Valuer for all Newlands sites.



Local schoolchildren help to transform Moston Vale



## What can we do now?

Research into the benefits of green infrastructure, and the development of tests and frameworks designed to demonstrate strong economic cases for its value, send a clear message. Green infrastructure, if properly planned, managed and invested in, has a lot to offer the Northwest, and presents opportunities which should be grasped.

Regionally, there are economic benefits from improving the quality of the Northwest's environment, promoting underused natural green areas, attracting investment and developing the region's image as a green, healthy place to live, work, invest, holiday and study. On a global scale, we can address the increasingly pressing issues of

climate change, resource shortages and biodiversity loss.

Some of the practical tools policymakers and economic development practitioners need to grasp these opportunities are already in place. The North West Green Infrastructure Guide, which can be downloaded from [www.greeninfrastructurenw.co.uk](http://www.greeninfrastructurenw.co.uk), provides a detailed step by step guide to planning green infrastructure, with case studies illustrating best practice. It is particularly designed for planning authorities and seeks to inform the process of preparing the local development framework.

Other policy and information requirements are still in progress. An important role will be played by



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DEFRA's work on valuing ecosystem services, which will allow major gaps to be filled in Treasury advice on valuing non-market goods, and play a strong role in persuading public and private investors that green infrastructure can provide more valuable outputs than can be attributed using current measures.<sup>23</sup>

The tests and assessment frameworks described above provide the foundations for a clear mechanism that policymakers and budget holders can use to evaluate

green infrastructure. While this is work in progress, it is evident that economic bodies must take green infrastructure seriously, recognising its economic value and incorporating it into economic development strategies and policymaking. Organisations concerned with environmental and social goals must learn to use the green infrastructure framework to include economic factors in their plans. These different agendas can be brought closer together than ever before.

## MORE INFORMATION

Natural England [www.naturalengland.org](http://www.naturalengland.org)

Northwest Regional Development Agency  
[www.nwda.co.uk](http://www.nwda.co.uk)

Natural Economy Northwest  
[www.naturaleconomynorthwest.co.uk](http://www.naturaleconomynorthwest.co.uk)  
[www.greeninfrastructurenw.co.uk](http://www.greeninfrastructurenw.co.uk)

*these two websites contain further guidance, case studies  
and information on the benefits of green infrastructure*

**IMAGE CREDITS** [www.istockphoto.com](http://www.istockphoto.com) (pages 1, 2, 18); Newlands  
Programme (pages 6, 17); Mersey Waterfront Regional Park (page 7);  
Graham Cooper, [www.forestofbowlandimages.com](http://www.forestofbowlandimages.com) (page 9); Lake District  
Osprey Project (page 11); Mersey Forest (pages 15, 16).

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