The new EU green growth opportunity

Green Infrastructure and the European Structural and Investment Funds:

Liverpool City Region briefing

Natural Economy Northwest Investment Forum *August 2013*

1. Overview and summary

This briefing, prepared for Local Nature Partnerships (LNPs) by the Natural Economy North West Investment Forum, suggests how business support for entrepreneurial green infrastructure business and high impact projects and programmes could contribute to the development of the Local Enterprise Partnership's (LEP) *"European Structural and Investment Fund Strategy"* (ESI Funding Strategy)[1].

The briefing has been modified for each LNP and so, in this instance, aims to highlight opportunities for the Liverpool City Region. In particular the focus on the Mersey from the Heseltine and Leahy Report, the excellent track record of green infrastructure and rural business support and project delivery provide a strong foundation for this work. Examples and case studies, however, also come from across the North West of England.

Over 80% of Liverpool City Region is green infrastructure. Over 8000 jobs are sustained by and £300m of GVA are generated through businesses that are supported by Liverpool City Region's green infrastructure or its products. Green Infrastructure helps to create a city that is resilient across a wide range of risks. The City Region has a Green Infrastructure Framework Document that has been consulted on and is now being finalised. It will be launched in November 2013. This Framework provides a wealth of data to support the ESI Funding Strategy.

LNPs are identified as one of a number of partners that the LEPs should consult as they develop their strategies. This document provides information and ideas that may be useful in developing the LNP approach to the LEP and subsequent negotiations to embed green infrastructure into the key ESI Funding Strategy.

The first draft of the ESI Funding Strategy has to be sent to government by the LEP by 7th October 2013. LEPs are working on developing their strategies now.

At an EU level, green infrastructure is specifically identified as an investment priority for the European Regional Development Fund. Green infrastructure is recognised as contributing to regional policy and sustainable growth in Europe and facilitating smart and sustainable growth through smart specialisation.

The EU Green Infrastructure Strategy[2], published in May 2013, highlights the role of EU structural and investment funds in delivering green infrastructure. The EU will issue guidance later in 2013 on how the structural funds can deliver green infrastructure – though this seems out of step with the timetable LEPs are working to.

The Liverpool City Region LEP ESI Funding Strategy will focus on all aspects of the delivery of the Regional Development and Social Funds and some aspects of the Agriculture and Rural Development Funds and the Fisheries funding.

The LEPs have been asked to develop a series of *"Strategic Activities"*. These must relate to the outputs and results that are identified for each of 10 Thematic Objectives that are set by Europe, these collectively make up the *"Common Strategic Framework"*[3]. A Strategic Activity can deliver outputs against a range of Thematic Objectives, potentially increasing the funding that can be achieved. It is anticipated that any EU funding will require 100% match funding, so LNPs will have to identify £1 of match for every £1 of EU funding bid for.

Green infrastructure delivery is an output and a *"result"* indicator for some of the Thematic Objectives of the EU funds[4] as set out in the recent guidance from government (Thematic Objectives 5, 6, and 7). It is also identified as an action within the Thematic Objective 4, Low Carbon Economy. Entrepreneurial green infrastructure based business may also find support through Thematic Objectives 1 and 3, support for innovation and SME competitiveness.

1 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224755/13-1049-development-and-delivery-european-and-investment-fund-strategies-guidance-for-leps.pdf

2 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2013:0249:FIN:EN:PDF

3 http://ec.europa.eu/regional_policy/what/future/csf_documents_en.cfm

4 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224089/13-1049ann-framework-of-european-growth-programme-priorities.pdf

There is also scope to include green infrastructure programmes that help to adapt areas to climate change, develop tourism opportunities and support whole place low carbon solutions. In addition, there is a strong emphasis on social inclusion through the European Social Fund strand of funding; an area where green infrastructure projects have a particularly good track record of delivery (Thematic Objectives 9 and 10).

Given the competition for resources, LNPs may have limited opportunities to develop multiple Strategic Activities. We suggest only one main green infrastructure Strategic Activity, with additional work to ensure that business in the green infrastructure sector (and we include agriculture and associated rural businesses) can access the broad range of business support that will be put in place through other *"Strategic Activities".*

To have the best chance of succeeding we also propose three supporting activities that will enable the LNPs to support the LEP in developing this Strategic Activity for the ESI Funding Strategy.

The briefing is for information only, it aims to support and assist LNPs in the challenge that they face. It has no official status. You may choose to ignore it all! But we hope that some will be useful in developing your thoughts and ideas.

1.1 Proposed Activities for LNPs

A: Strategic Activity - Green Infrastructure enabling sustainable growth

- Setting the Scene for Growth – Tackling pinch points[5] in key LEP investment areas, creating areas that are investable and sustainable
- Creating new jobs and business opportunities in the rural and green infrastructure sector.
- Providing opportunities for socially excluded groups and those in danger of becoming excluded to gain skills, training and links to employment.
- Creating whole place low carbon solutions.
- Supporting growth in the tourism sector.
- Managing our natural capital.

B: Strategic Activity - Signposting Business to the mainstream programme

In addition to developing a specific green infrastructure delivery Strategic Activity, it is also important to ensure that businesses and organisations in the green infrastructure sector are supported so that they can access funding for:

- innovation;
- improving competiveness;
- developing low carbon technologies and solutions;
- developing employment opportunities (particularly opportunities to support excluded groups and long term unemployed back into work).

Whilst some support may come from the EAFRD funds that DEFRA will provide to the LEP through the ESI Funding Strategy, it is important that the ERDF and ESF funds are also available to support green infrastructure based businesses. This activity will also

- Create new jobs and business opportunities in the rural and green infrastructure sector.
- Provide opportunities for socially excluded groups and those in danger of becoming excluded to gain skills, training and links to employment.

It may be that this activity could be wrapped up in Strategic Activity 1. The aim, however, is to ensure that green infrastructure and rural businesses are not siloed into one area and that they are seen as a potential applicant for the wider business support – provided that their proposals are high quality and meet the key objectives for the LEP.

5 Pinch Points in this instance are areas of projected investment wher investment is being held back due to an issue for which green infrastructure planning and delivery may provide part of a local solution to unlocking investment - http://www.merseyforest.org.uk/library/reports/economic-development/?pg=5

C: Support Activity - Providing support for the LEP

Identified by government as a key partner, LNPs provide a wealth of knowledge and evidence to help to support the development of green infrastructure Strategic Activities and wider sustainability issues. This will need resourcing. The standard of evidence and robustness of the case to include GI as a Strategic Activity will require dedicated time and an understanding of the sector as well as the *"rules"* of the ESI Funding Strategy.

D: Support Activity - Match funding and deliverability

Our sector has been successful at providing match funding for programmes. There are several organisations in the sector that have a track record of managing and delivering projects and programmes, including Leader, using these funds efficiently and achieving excellent results. Capturing the likely match funding available is an essential task.

E: Support Activity - Developing the business case and monetising the benefits

The LNP has the potential to develop the business case and assist in completing the ESI Funding Strategy template for a green infrastructure *"Strategic Activity"*.

2: Why green infrastructure?

Green infrastructure has been explicitly developed as an approach that promotes the value of the natural environment to the wider economy. One study indicates that £1 invested in green infrastructure £2.30 of GVA was created, and a further £6.90 of wider economic benefit[6].

8000 jobs are directly linked to, or depend upon, green infrastructure. These generate £300m of GVA for Liverpool City Region, £37,000 GVA/Full Time Equivalent job.

Over 80% of the LEP area is green infrastructure; a significant asset that cannot be ignored when looking at developing strategies for growth.

Green infrastructure as an approach provides a sound business case for investment and wide basis for collaborative working which can provide additional impact for the EU investment.

We have knowledge and expertise in green infrastructure planning, monetising the benefits and delivering green infrastructure in the Liverpool City Region area – it is part of *"smart specialisation"*.

The EU adopted a Green Infrastructure Strategy in May 2013. By the end of 2013, the Commission will develop guidance to show how green infrastructure can be integrated into the implementation of EU Funding from 2014 to 2020.

2.1 What is the Offer to LEPs?

Based on the criteria for the structural funds[7], our offer is:

LNPs can provide support to LEPs to develop the ESI Funding Strategy, taking into account EU, national and local strategies and policy for green infrastructure and rural matters.

LNPs have the knowledge and expertise in green infrastructure planning and delivery to help the LEP to deliver Strategic Activity that supports job and GVA growth, sustainable development, and ensures an integrated programme that meets EU and national policy and strategy.

Green infrastructure planning and delivery in conjunction with other programmes can enable cost effective solutions to issues that act as barriers to growth. The term *"Pinch Points"* has been used to identify these barriers.

LNPs can identify green infrastructure job and business growth opportunities that help to increase GVA and also address issues of inclusion.

As a sector, we are often a good source of match funding to draw down EU funds.

The LNP has access to a variety of tools to help monetise the benefits of green infrastructure to enable sound investment decisions and develop a strong business case for investment in the proposed Strategic Activity.

In this brief, we have tried to look at rural and wider green infrastructure issues together. We feel that this is valid at the strategic level and is essential in realising the full value of green infrastructure planning and delivery. However, it is also recognised that full details for the delivery of the EAFRD from DEFRA are awaited.

In particular Leader programme will offer opportunities to target investment at areas that are seen by the rural sector as being critical. At least 5% of the EAFRD will be delivered through Leader.

We have identified a number of activities that LNPs should undertake. Detail of these is set out in the next sections.

6 http://www.merseyforest.org.uk/library/reports/economic-development/?pg=5

7 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224089/13-1049ann-framework-of-european-growth-programme-priorities.pdf

3: Strategic activities for Local Nature Partnerships

3.1 Strategic Activity - Green infrastructure enabling sustainable development

LNPs need to shape the specific detail of this Strategic Activity to suit local need, availability of match funding and the capacity to deliver. In Liverpool City Region work to inform the ESI Funding Strategy has developed through the LNP, co-ordinated by MEAS, and focuses on an agreed concept of :

Coast – City – Countryside

as a framework for the new programme. The following activities fit neatly into this framework.

These six stands of activity may help to shape discussion and negotiation with LEPs.

A: Setting the scene for growth - creating areas that are investable and sustainable

Tackling pinch points, areas of potential investment where current or projected issues, such as image, flood risk, climate change etc. either limit or prevent investment at present. Using green infrastructure to overcome these issues (the pinches) enables investment and helps to create sustainable, high quality places for people to live and work places that are resilient to environmental change[8] and attractive places for the establishment and development of SMEs. Appendix 1 provides some examples to support this approach and Appendix 2 provides some of the supporting evidence.

B: Creating new jobs and business

The sector has a rich array of SMEs that can add jobs, improve skills, offer traineeships and apprenticeships

8 http://www.merseyforest.org.uk/library/economic-development/?pg=4

Figure 1: An example of green infrastructure leading to jobs, setting the scene for growth and as part of a whole place low carbon solution, creating active travel links to areas of new investment and jobs (£2m investment in GI at Wirral Waters).

and develop business opportunities, building on the 7,000 jobs and £225m of GVA in the area. Sector specific approaches for agriculture, waterways and woodland and wider land management can support the *"Setting the Scene for Growth"* and *"pinch point"* activity.

Creating conditions that support eco-innovation, linking business, public and voluntary sector with universities and colleges that have an international reputation for green infrastructure development, rural land management and business and planning. This mix of academic, planning, development and delivery is particularly strong in the area.

Increasing productivity through new approaches to delivery, increasing use of technology (see eco innovation) and ensuring best practice is widespread in the sector.

A large proportion of the new job and business opportunities will be in the low carbon sector, providing innovative wood products, developing the biomass supply chain and ensuring that rural businesses maximise their contribution to the low carbon sector.

Appendix 3 provides information on the types of job, direct and indirect that may be considered.

C: Providing opportunities for socially excluded groups and those in danger of becoming excluded to gain skills, training and links to employment.

Green infrastructure projects have a good track record in supporting excluded groups back to work through skills development, training and practical activity. There are a wide variety of skills and levels of knowledge needed across the sector, providing opportunities for individuals to find the level that suits their capabilities.

Many organisations in the sector have specialist skills and the support infrastructure to manage groups such as ex-offenders or those still in prison; long term unemployed; and those with low or no academic qualifications.

Many individuals within these organisations have moved onto full time jobs, or in many cases, have stayed and progressed within the organisation, with additional training and personal development.

D: Whole Place low carbon solutions

Green infrastructure planning and delivery can help to deliver whole place low carbon solutions. There is a wealth of evidence to support green infrastructure as part of urban design to adapt places to projected climate change and to reduce greenhouse gas emissions. The GRaBs programme helped to develop an action plan for each LEP area (sub regions as they were!) and this may provide a resource that provides evidence base, mapping tools and can be used in the development of LNP ideas[9]. The TCPA publication, *Climate Change Adaptation by Design* also provides a wealth of information for urban design solutions[10].

The guidance for this activity includes:

> **"whole place" low carbon solutions (including heat and cooling networks, urban design, sustainable urban mobility, decentralised energy systems such as local heat or electricity grids and off grid energy systems such as biomass heating (see case study below)[11], community energy solutions, climate change adaptation measures and demand management);**

and:

> **activities that accelerate the development, innovation, adoption and deployment of low carbon technologies and related supply chains/ infrastructure.**

Data such as that shown in Figure 2, indicating the density of off gas grid homes in the NW can assist in targeting and assessing potential programmes.

E: Supporting tourism growth

Green infrastructure is the setting for many of Liverpool City Region's iconic landmarks, environmental attractions and leisure/recreation facilities.

Sefton Coast attracts over 1m people annually.

9 http://www.greeninfrastructurenw.co.uk/climatechange/framework.htm

10 http://www.tcpa.org.uk/pages/climate-change-adaptation-by-design.html

11 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224089/13-1049ann-framework-of-european-growth-programme-priorities.pdf

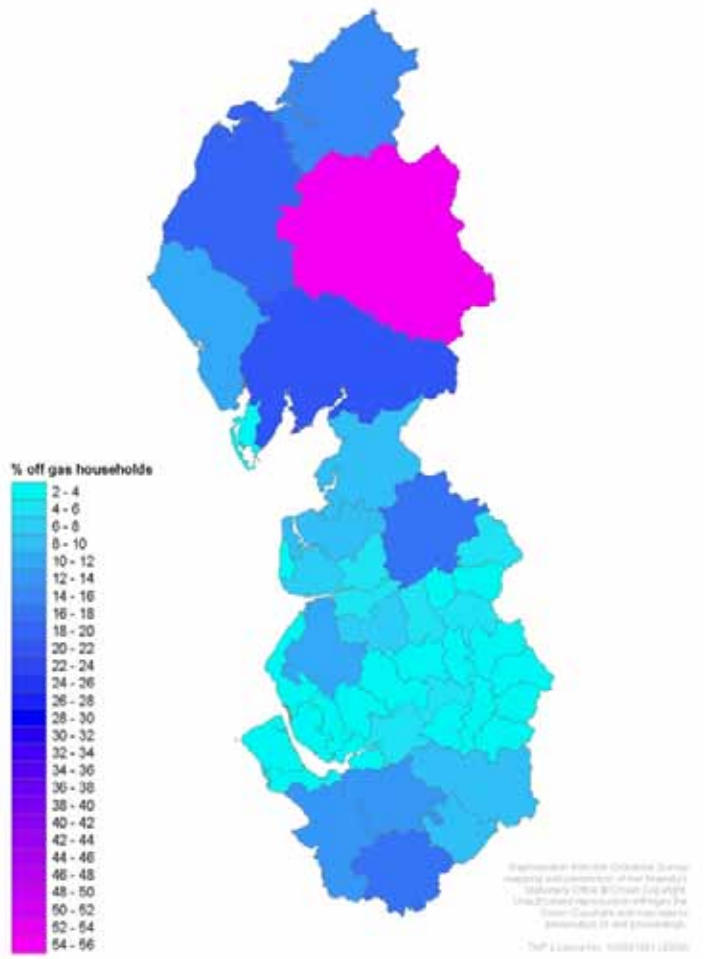


Figure 2: Percentage of homes off gas grid in the NW

Forest Parks, such as Bold, attract hundreds of thousands of visitors each year to new and developing resources.

Areas managed by RSPB, National Trust and Wildlife Trusts also attract visitors and support the wider visitor offer.

The coastal paths and Trans- Pennine Trail can support tourism growth.

F: Integrating and getting the best from our natural capital

Increasing the value of our natural capital and promoting sustainable use of local materials is a key national and international priority.

Progressive cities and city regions across the world are investing in their natural capital, not just to conserve biodiversity or abide by regulations, but because they have identified that it is the basis for a strong economy and the wellbeing of communities.

To support these *'Strategic Activities'* within the European Structural and Investment Funds Strategy, we have proposed three support themes that enable the strategic activity related to rural and green infrastructure to be included within the ESI Funding Strategy.

3.2 Strategic Activity - Signposting Business to the mainstream programme

In addition to developing a specific green infrastructure delivery Strategic Activity, it is also important to ensure that businesses and organisations in the green infrastructure sector are supported so that they can access funding for Innovation, improving competiveness, developing low carbon technologies and solutions, developing employment opportunities, particularly opportunities to support excluded groups and long term unemployed back into work. Whilst some support may come from the EAFRD funds that DEFRA will provide to the LEP through the ESI Funding Strategy, it is important that the ERDF and ESF funds are also available to support green infrastructure based businesses. This activity will also

Create new jobs and business opportunities in the rural and green infrastructure sector.

Provide opportunities for socially excluded groups and those in danger of becoming excluded to gain skills, training and links to employment.

Table 1 shows some of the potential support that could be looked at, in particular, but not exclusively in the Thematic Objectives where it is likely that EAFRD funding will be delivered through the ESI Funding Strategy. Thematic Objective 2 mainly relates to roll out of broadband and has not been highlighted as a key opportunity in this briefing.

Table 1: Thematic Objectives

Description	Comments
Research and innovation	Commercialise products, links to HE, links to Smart Specialisation Strategy - Agriscience one of the eight Great Technologies, innovation in health and wellbeing
Competitiveness of Small & Medium-Sized Enterprises (SME)	Development of general and, potentially, industry specific business skills. Provide support, advice and funding to businesses and entrepreneurs to support the development of SMEs and Micro Businesses, including the uptake of new/ improved business processes and technology. Provide support, advice and funding to businesses and entrepreneurs to support the creation and development of SMEs and Micro Businesses, including the uptake of new/ improved business processes and technology.
Shift to a low-carbon economy	Skills/ employment development for low carbon including via Higher Apprenticeships, University Technical Colleges and placements/ working with industry. · Low carbon power and heat skills. · Urban design/ construction/ planning skills. · Low carbon land use skills. · Help those without jobs and labour market entrants gain accredited low carbon skills/ employment. · Sustainable Land management and forestry skills. · Skills/ employment for retrofitting and low carbon heating. · Skills to enable knowledge transfer.

The detail for the *"Inclusive"* Thematic Objectives is long, and LNPs will need to assess the opportunities by reading the guidance. However, in principle there is a great deal of opportunity to develop skills, create jobs and target areas of activity which the green infrastructure sector has had a long history of successful working. The *"Blue Sky"* case study (Appendix 1) is one example, there are lots of others.

Liverpool City Region has a good track record of delivering high quality and good value for money rural business support programmes. This was initiated through the Integrated Countryside and Environment Programme and then evolved into the Merseyside Leader programme. This programme has delivered 5% of Leader funded jobs, with just 2% of the programme. It has strong private sector links through the Leader Advisory Group which acts as the board for the programme[12].

12 http://www.merseyruralleader.org.uk/index.shtml

4: Support activities for Local Nature Partnerships

4.1 Providing support to the LEPs

EU law requires programmes to promote environmental sustainability and to work with environmental and rural partners in developing their strategies; hence LEPs will need to include sustainable development principles in their proposals. Strategies will have to show how LEPs intend to promote environmental protection requirements, resource efficiency, climate change mitigation and adaptation, disaster resilience and risk prevention and management in their activities.

There is a wealth of knowledge and experience within the LNP and Rural and Farming Networks[13] that can be used by the LEP rather than having to set up new groups and/or sub groups. This makes best use of the existing, and statutory, support infrastructure.

These groups also have the ability to bid for additional resources to support the Growth Plan from a range of sources not immediately accessible to the LEP and can link to wider programmes of activity to improve the scale, scope and impact of delivery.

With their links to the wider green infrastructure and rural business community, these groups can also support and enable the extension of the Leader programme so that the maximum benefits in terms of funding from the Rural Development Fund can be achieved.

Importantly, these groups also provide a wide network to improve communications about the delivery of the ESI Funding Strategy. Many members of the partnership and network are membership organisations with access to a significant proportion of the population.

Liverpool City Region also has a Green Infrastructure Framework, supported by the LNP. This can provide a wealth of information to enable targeting and delivery of green infrastructure programmes that can deliver Thematic Objective outputs.

4.2 Match funding

The green infrastructure and rural sector has in the past been successful at providing match funding for programmes from both private and public sources. There are several organisations that have a track record of managing European funds, experienced with the audit, administration and cash flow management procedures that are required.

These are both key areas that LEPs need to consider in order to deliver action on the ground as set out in the Supplementary Guidance to LEPs on the Development and delivery of European Structural and Investment Funds.

For example, match funding may come from a wide range of sources including, inter alia:

- Landfill tax
- Lottery funding
- Organisations' own unrestricted income
- Public fundraising
- Trust funding
- Landowner and business contributions

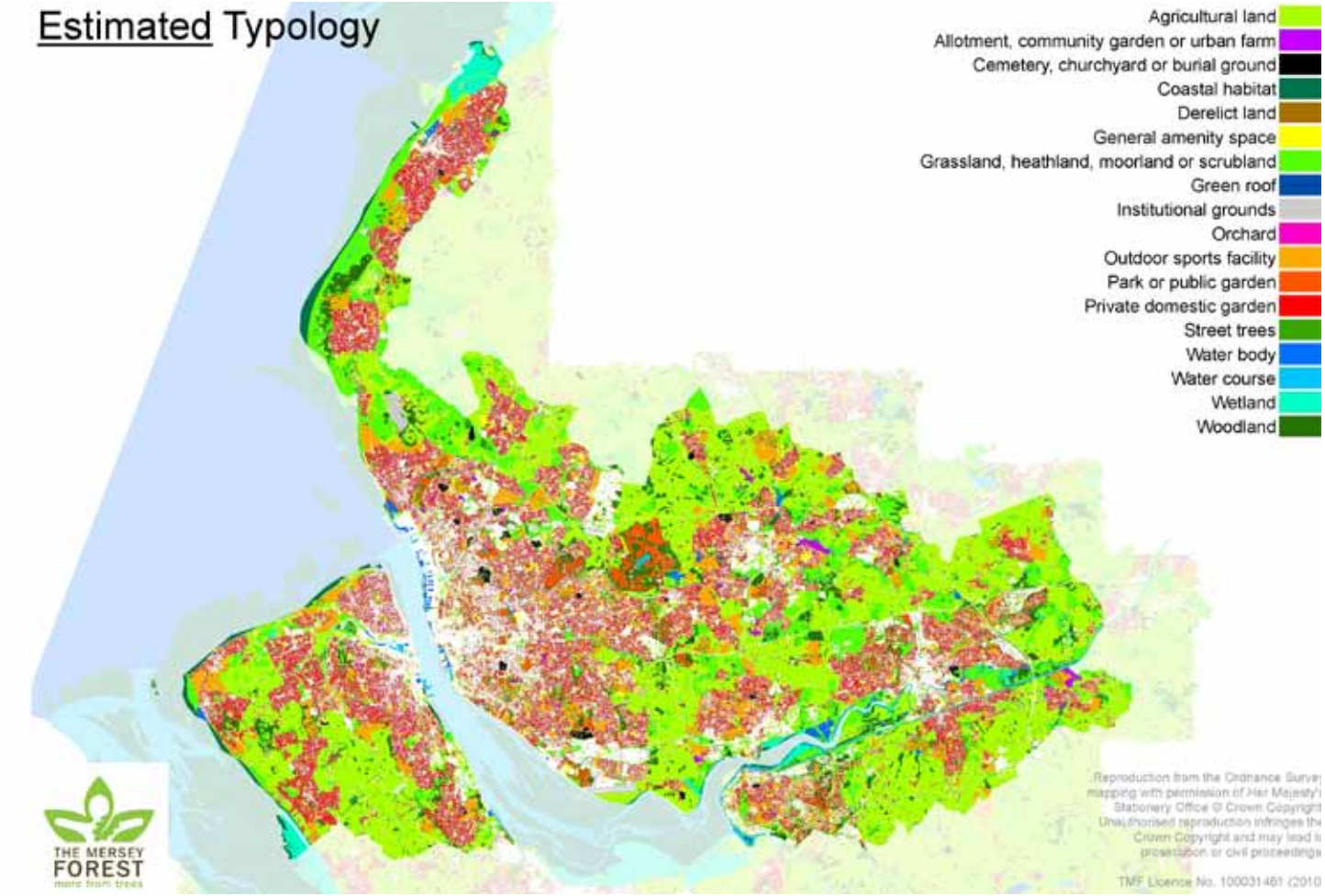
4.3 Developing the business case and monetising the benefits

We are also able to monetise the benefits that green infrastructure approaches can bring in terms of both GVA and wider economic benefit. A good source of information on is available on the Natural England website[14]. In addition, other examples have looked at practical application of tools to get economic valuations of green infrastructure investment For example, Regeneris reported on The Mersey Forest Objective One funded

13 https://www.gov.uk/government/policies/making-sure-government-policies-and-programmes-benefit-rural-businesses-and-communities/supporting-pages/details-page-rural-and-farming-network

14 http://publications.naturalengland.org.uk/publication/32031?category=49002

Figure 3: Green infrastructure in the city region and Warrington – for the first time we have complete data coverage to support strategy development.



programme[15] delivered across Merseyside with a wide range of partners. Their analysis identified a gearing of 1:2.6 for increase in GVA and 1:8.4 for wider economic benefits from the investment made. The assessment discounted value that could not be shown to be additional, removed any double counting of benefits and also did not take into account benefits where there was an economic impact, but the level of evidence available to support the value ascribed to the benefit was not robust enough for inclusion.

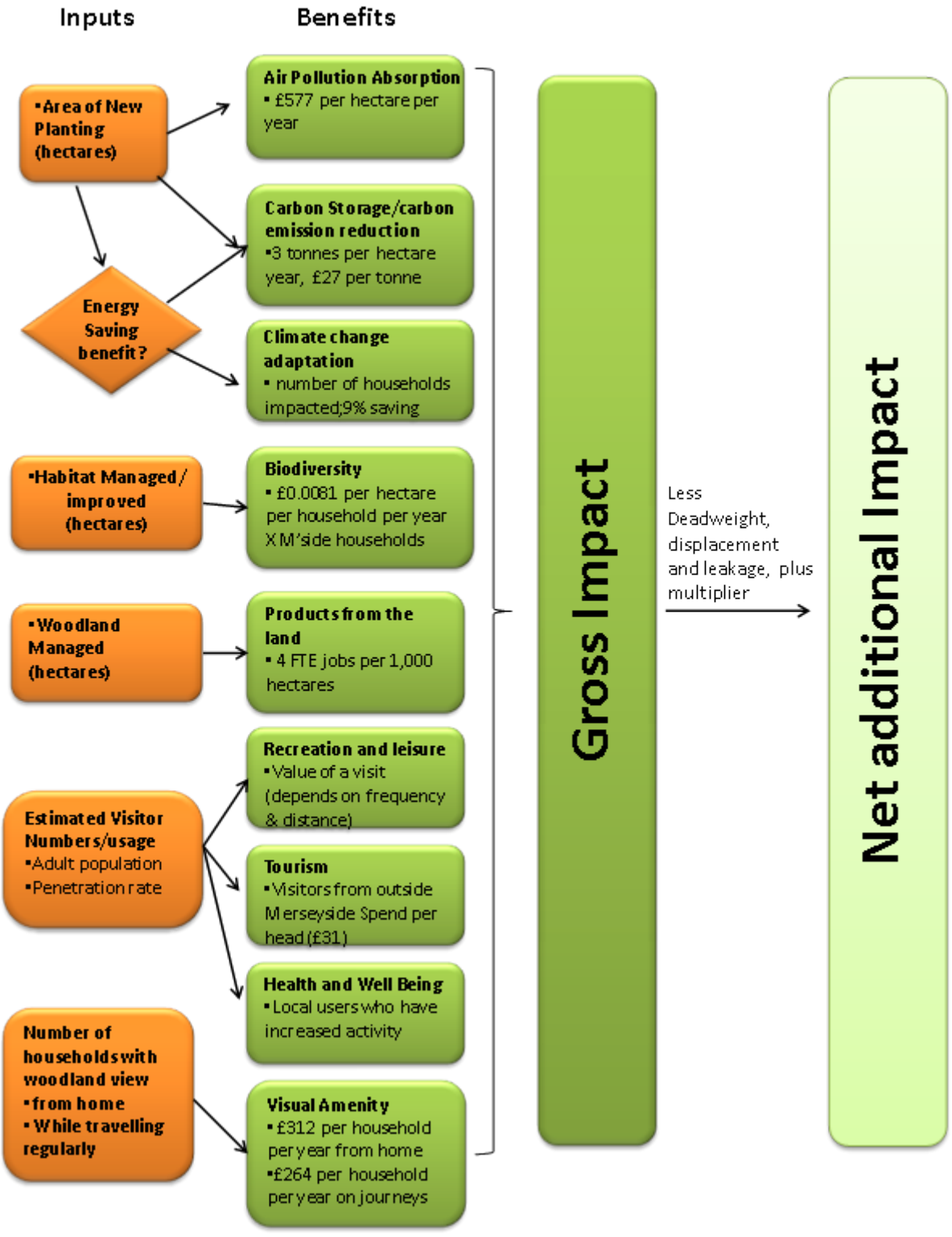
The Prototype Green Infrastructure Valuation Toolkit[16] can also assist in assessing the GVA and wider economic benefits and start to help to develop Cost Benefit analysis of programmes. However, the toolkit is not recognised as being able, in isolation, to provide Treasury Green Book type Cost Benefit Analysis. For that bigger budgets and a team including economists will be needed. The toolkits and examples can however start to provide indicative economic assessments, to show that it may be worthwhile having more in depth assessment of the options.

This type of information is part of the development of any Strategic Activity for inclusion in the ESI Funding Strategy.

15 http://www.merseyforest.org.uk/files/Economic%20Contribution%20of%20The%20Mersey%20Forest's%20Objective%20One-Funded%20Investments.pdf

16 http://www.greeninfrastructurenw.co.uk/html/index.php?page=projects&GreenInfrastructureValuationToolkit=true

Figure 4: Inputs-IMPACT, taken from Regeneris assessment of Mersey Forest Objective 1 Programme



5. What are the opportunities in the new Programme?

Figure 5 provides an overview of the way in which the different funds will be delivered. Whilst the Growth Programme and Rural Development Programme are delivered separately, elements of the Rural Development Programme will be delivered through the Growth Programme[17], managed by the LEP.

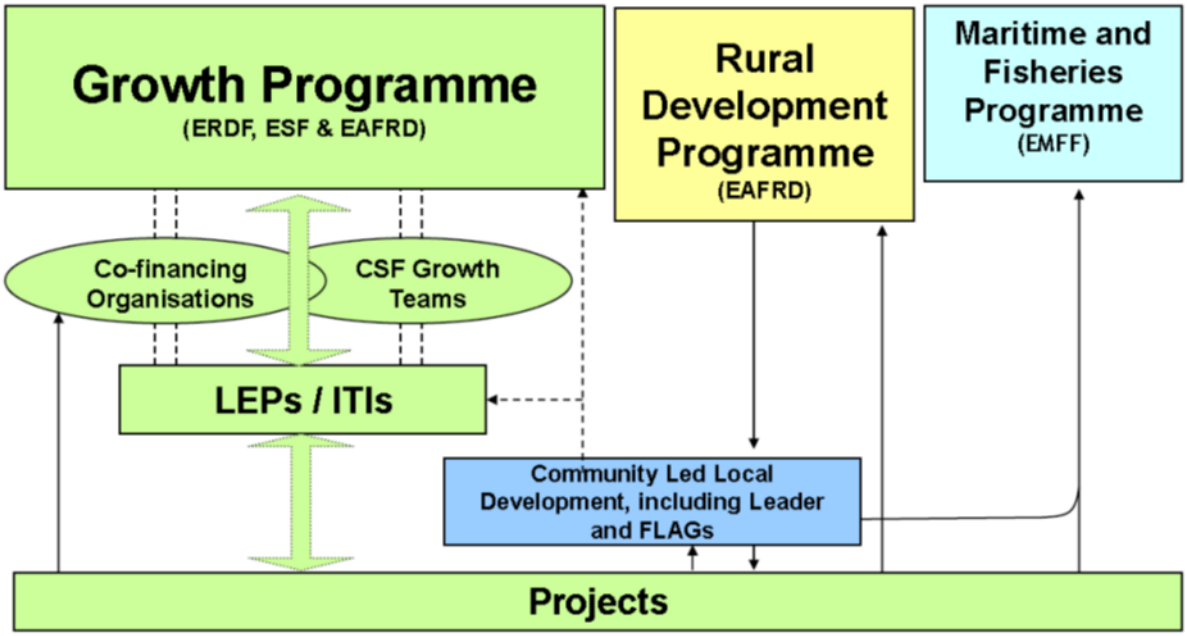
The diagram also highlights the opportunity for Community Led Local Development and Leader delivery. Leader will deliver at least 5% of the Rural Development Programme.

EU Regulations are aligning the four funds (ERDF, ESF, EARDF and EMFF) under a Common Strategic Framework. This Framework has 11 Thematic Objectives.

Government has also indicated the level of EU Funding that will be available for each LEP to allocate through its ESI Funding Strategy. This is set out in Table 2, split between the Thematic Objectives (TOs), ERDF and ESF based on the Government Guidance. LEPs may choose to ask for flexibility to alter this split, but it is unlikely to be a major change. The table above is based on the minimum amounts that can be allocated for Thematic Objectives 1-4, these are likely to increased, reducing the amount in TOs 5-8.

Government guidance identifies LNPs as one of a number of consultees that LEPs should involve as they develop their ESI Funding Strategy.

Figure 5: How the different funds will be delivered



17 At present we are not considering the EMFF Programme, as this tends to be a more specialised programme and we have no experience of dealing with it. LNPs may want to bring this into their discussions with LEPs

Table 2: ERDF and ESF allocations for the Liverpool City Region.

	Thematic Objective	Description	ERDF	ESF	EAFRD
SMART	T01	Research and innovation	51.3 minimum		Not Known
	T02	Information and Communication Technologies			
	T03	Competitiveness of Small & Medium-Sized Enterprises (SME)			
SUSTAINABLE	T04	Shift to a low-carbon economy	17.1 minimum		
	T05	Climate change adaptation and risk management	No minimum spend - minimum spend in T0 1-4 would leave approx. £45m for these thematic objectives. This would be the maximum possible.		
	T06	Environmental protection and resource efficiency			
	T07	Sustainable transport and major network infrastructure			
INCLUSIVE	T08	Employment and support for labour mobility		76	
	T09	Social inclusion and poverty reduction			
	T010	Education, skills and lifelong learning			
Total			114	76	0.0

In May 2013 the European Commission published its Green Infrastructure Strategy, setting out the intention that green infrastructure delivery should be supported through a variety of mechanisms including EU Structural and Rural funding streams and stating that green infrastructure is;

> **"…addressing the spatial structure of natural and semi-natural areas but also other environmental features which enable citizens to benefit from its multiple services. The underlying principle of Green Infrastructure is that the same area of land can frequently offer multiple benefits if its ecosystems are in a healthy state. Green Infrastructure investments are generally characterized by a high level of return over time, provide job opportunities, and can be a cost-effective alternative or be complementary to 'grey' infrastructure and intensive land use change."**

5.1 Developing the ESI Funding Strategy

Government has now issued detailed guidance on how LEPs should develop their ESI Funding Strategy. It is likely that most LEPS will try to identify a limited number of Strategic Activities – in Liverpool City Region's case it may be 20.

The LEP also has to provide the evidence base to justify the need for Activities, the scale of funding ascribed to each, the outputs, results and deliverability. The Strategy also has to have a Sustainability Appraisal carried out.

Table 3: Timeline

Month	Milestone	Potential LNP or LNP Partners Activity
August 2013	Developing the ESI Funding Strategy	Support LEP in developing green infrastructure proposals
	Developing the ESI Funding Strategy	Support LEP in developing green infrastructure proposals
October 2013	Submission to Government of ESI Funding Strategy	Continue to develop the case
November 2013	Formal response to submission from national Growth Board	Support LEP in revising green infrastructure proposals in response to feedback
December 2013	GI Guidance for Structural and Investment Funds available?	Ensure that this is reflected in the submissions to LEP
January 2014	Final Strategies submitted	Based on the final submission assess what needs to be done in order to support delivery
Mid 2014	Expenditure starts	Promoting delivery of GI projects!

5.2 Embedding green infrastructure programmes into the ESI Funding Strategy

There are numerous hooks in the EU and national Government guidance to support green infrastructure delivery and businesses in this sector within the new programmes.

We are suggesting that, given the timescale involved, there are two main strands of work.

Firstly, to highlight that rural and green infrastructure businesses and enterprises are eligible (as set out in the guidance) for support through what we may call the *"mainstream"* programmes for the Thematic Objectives with the largest funding allocations. For example, the Rural Statement on Growth set out the contribution that rural businesses should make to national growth (TO3). Businesses in the green infrastructure sector that can demonstrate good opportunities for new products (TO1), SME growth (TO3), or organisations that can develop and improve supply chains, or deliver whole place low carbon solutions(TO4), at a significant scale that offer a good return on the EU investment, should be eligible for this "main programme" support. This approach is also supported by the sustainable development cross cutting theme of ESI Funding Strategy.

An issue to discuss with the LEP will be the need for sector specific advice to support businesses to access the funding that should be available. This could be a role that LNPs may seek to develop.

Secondly, LNPs may consider developing a specific Strategic Activity with/for the LEP around the green infrastructure and the sector that compliments the approach described above.

It is suggested that perhaps only one or two Strategic Activities are developed across the Atlantic Gateway LNPs. This reflects the likely scale of funding available, the fact there are unlikely to be very many Strategic Activities listed, the scale of work likely to develop the case and coordinate the match funding etc. and the pressure from a wide range of other sectors and priorities to develop Strategic Activities for their area.

In Lancashire and Cumbria, the greater focus on rural issues may mean that there are more opportunities for Strategic Activities.

In this briefing we have outlined one approach to developing a Strategic Activity *"Green infrastructure enabling sustainable growth".*

6. What might a GI programme look like?

If we were to be successful what might the green infrastructure programme look like?

One version may be:

Based on the two strands of activity suggested above. In order to support access to support for business and product development, ICT and Low Carbon by rural and green infrastructure businesses and enterprises specialist sector support is put in place. This provides advice, guidance and signposting to the right areas for support, whether that is in product or supply chain development. Evidence has shown that the support needs to be specialist due to the nature of the businesses operating in the green infrastructure and rural sectors. There are particular issues, practices, regulations and skills that need to be considered that are not available from mainstream support.

For the Strategic Activity, a targeted programme of activity is developed that focused on key investment locations, *"Pinch Points"*, opportunities for whole place energy solutions and areas of most the important *"natural capital"* to identify places for green infrastructure investment and the issues to address to provide a setting for sustainable growth and/or tourism development. The programme also identifies key skills needed, opportunities for eco-innovation, business development and job growth to deliver and sustain this investment. It also looks at how this investment can have major social benefits by providing opportunities for skill development, engaging those who are excluded for whatever reason at the moment, in training and opportunities to find meaningful work.

Table 4 shows the Thematic Objectives that that could be targeted for these two approaches.

The scale and scope of activity will be driven by the willingness of the LEP to include the work, by the match funding available and by the capacity of organisations to deliver the support and activity on the ground.

Table 4: Targetable thematic objectives

	Thematic Objective									
	T01	T02	T03	T04	T05	T06	T07	T08	T09	T010
Business Support										
Strategic Activity										

Appendix 1: Case studies

Below are some examples of activities that demonstrate elements that may be taken forward by LNPs. They come from across the region. LNPs will want to add to these and ensure that they reflect local examples and the specific types of activity that they are proposing.

A: Setting the Scene for Growth

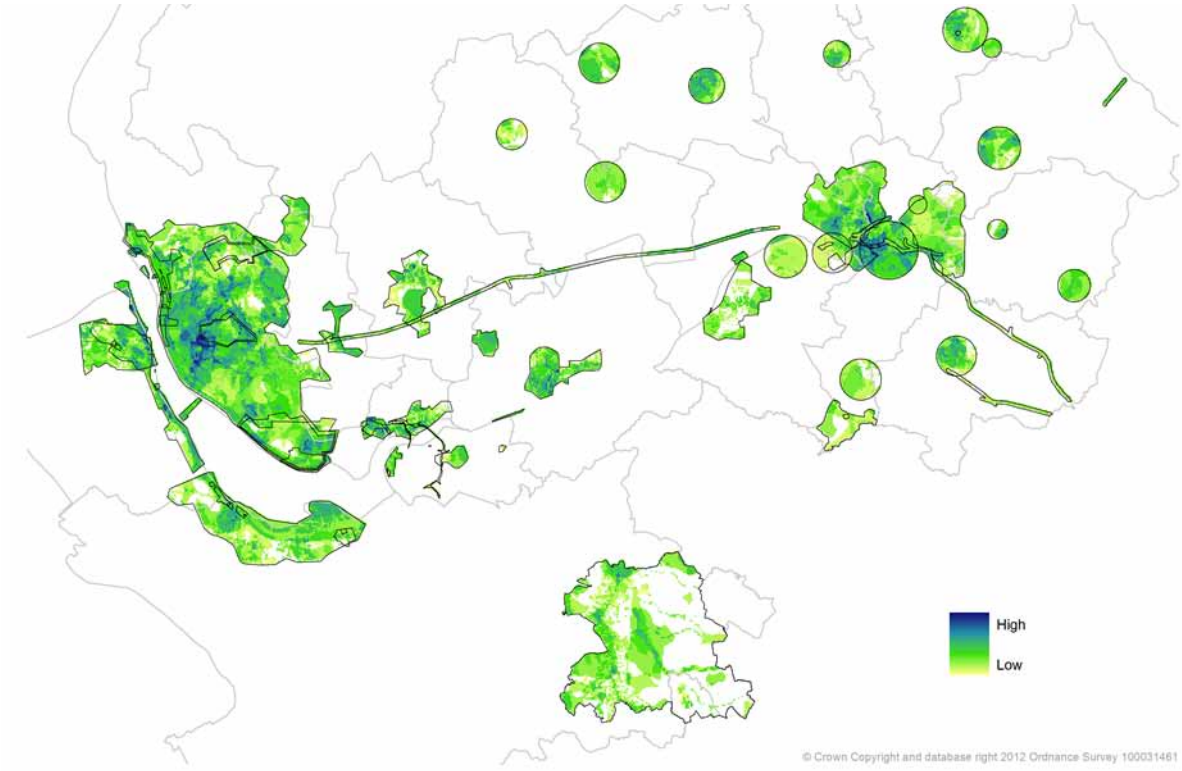
Theoretical basis:

Setting the Scene for Growth: improving the setting for investment and attracting *"knowledge"* workers and talent to the area, providing wider social benefits. Evidence points to investment decisions being partly based on the quality (and reputation for quality) of a place. At a high level entrepreneurial activity is best supported by providing the opportunities to bring investment capital and skills together. High quality green infrastructure can help support a positive entrepreneurial environment for micro, small and medium businesses.

Tackling investment Pinch Points: Pinch points are defined as areas where investment ins planned but where there are issues (the pinches) that are reducing opportunities for investment or undermining existing investment (for example a pinch may include need for adaptation to climate change (based on projected change and risk) flood risk, water supply, etc.). Green infrastructure planning and delivery can help to overcome these issues, increasing the likelihood of investment whilst also delivering wider benefits also. Many Pinch Point issues cross administrative and site boundaries and need extensive activity rather than a single point intervention; pinch points are suited to strategic planning and delivery through, for example Local Plans and the LEP Growth Plan.

Pinch Point studies have been carried out at a North West England scale, but the data can be examined at any scale, down to individual investment zones or development sites.

Figure 6: Pinch point map of Atlantic Gateway programme area



Pinch Points across Atlantic Gateway, within the Greater Manchester, Manchester and Liverpool City Region LEPs, were assessed, using the Atlantic Gateway and LEP priority investment areas as the focus to look for issues (pinches) that may impact these target areas. The study also suggests the types of green infrastructure interventions, whether it is sustainable urban drainage systems, wetland creation or urban woodland, that can help tackle the pinches affecting potential investment in the area.

Example: Wirral Waters

Investment in green infrastructure around the £8bn investment at Wirral Waters is *"Setting the Scene"* for new jobs, creating attractive places to live and work, tackling pinch points of air quality, image, health and climate change adaptation. The landowner describes *"Tree planting leading to jobs"* and also reports that his land valuation has increased leading to greater opportunities to finance capital projects on site.

Example: Fylde Dunes

The Fylde Dunes Project is focussed on maintaining and restoring the coastal dune system of the Fylde Peninsula as a sea-defence, tourism and local recreational amenity, and nature conservation resource. Capital funding has employed Lancashire-based contractors in ecological assessment, restoration and public access works.

Pinch points – flood risk, Climate Change adaptation (+ tourism growth)

Figure 7: Green infrastructure planned around Wirral Waters

B: Jobs & Skills

Recent studies have shown that the natural environment supports almost 750,000 Full Time Equivalent (FTE) jobs and over £27.5 billion of economic output across the UK. RSPB reserves alone across the UK attracted £66 million into the surrounding communities in 2009, supporting 1,872 FTE local jobs. This figure shows an 87% increase since 2002, while visits to RSPB reserves increased by 28% between 2005 and 2009. These benefits are more often than not located in more remote, rural or coastal areas, where economic opportunities tend to be fewer and less diverse.

Draft work funded by Merseycare NHS Trust, in partnership with Liverpool Vision and Mersey Forest has shown that there are 75000 jobs in the Northwest in the green infrastructure sector, generating around £1.5bn GVA.

Timber and forest related industries

Timber and forest related industries are worth over £435 million to the Northwest's economy. Timber-related industries employ 69,000 people in the Northwest. [18] In Cumbria alone there is an available annual timber yield of 78,000 tonnes from currently under-managed woods. There is the potential to create 275.5 new sustainable jobs by bringing Cumbria's fallow woodlands into management (reference Cumbria and the Lake District Trees, Woodlands and Forestry Strategy and Action Plan).

Greener on the Outside

There are sixteen prisons in the Northwest. Greener on the Outside is a Pan-Regional Prisons Partnership that includes a number of Government delivery agencies, environmental charities, University of Central Lancashire and prisons. There is compelling evidence that offenders who take part in environmental work and training whilst completing their sentence are 50% less likely to re-offend. Offenders are more likely to secure employment and the programme addresses social and health challenges within an excluded group.

Volunteer Project Assistant Programme

Groundwork's 12 week Volunteer Project Assistant programme in Oldham and Rochdale has helped over 2,000 unemployed graduates into work by putting their skills into action to gain real project management experience. The variety of projects that have been completed and the impact of the work of PVA's has helped to improve the local area both socially and environmentally, setting the scene for growth.

Wildlife Trust volunteers

In the last financial year the Lancashire Wildlife Trusts recorded that 987 volunteers contributed a phenomenal 55,986 hours of volunteering. This equates to 32.9 man years based on a 37.5 hour week which if earning national minimum wage (£6.19) and being paid by the hour would cost £346,553. These volunteers were crucial to the delivery of projects that improved the quality of Green Infrastructure and helped make best use of environmental assets.

Bowland Initiative

The Bowland Initiative in North Lancashire was a national pilot for integrated business and environmental support to the land based sector. This was developed into Lancashire Rural Futures, the UK's largest specialist service delivering business and environmental support to all rural business sectors. It facilitated over £26million of public and private investment into the area, created over 1200 new jobs and placed 12,000ha of land under positive environmental management.

Supporting farmers, foresters and other land-based SMEs through knowledge transfer, information and advice to increase competitiveness and resource efficiency.

The Rural Sustainable Marketing Programme was a £2.3M EU funded programme delivered by Rural Futures in partnership with Lancashire County Council using the LEADER method of delivery. It supported in excess of 300 businesses across north and east Lancashire in a broad range of sectors including:

18 Prospects for Growth - Building a stronger and more competitive forest industries sector for England's northwest

Knowledge based economy,

Creative industries, Food & drink, Tourism,

Innovation,

Renewable energy,

and waste management

Supporting sea (as opposed to land!) based SMEs through knowledge transfer, information and advice to increase competitiveness and resource efficiency

The Wild Oceans project worked in partnership with local fishermen, fishmongers, cookery schools, restaurants, fish and chip shops, supermarkets and chefs to raise awareness of alternative sustainable seafood options available both locally and from other regions of the UK. It targeted the economically and socially deprived coastal communities of Cumbria to deliver sustainable seafood events and activities where participants could try seafood and learn how to cook it. Local retailers, restaurants, chefs have been engaged. Opportunities to open a specific outlet on the Cumbria west coast have been fulfilled through the work with the Cockermouth fishmongers who have started to make locally-sourced products available.

C: Low carbon and whole place energy solutions

There is potential for wood to be a significant fuel for generating clean heat and power on both small and industrial scales. 8.3% (117,100 hectares) of the Northwest area is woodland, 50% of which is currently under-managed. This represents a fantastic opportunity to realise sustainable timber and fuel yield create long-term jobs.

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Figure 8: Biomass boiler installation

Community innovations for sustainable energy are flourishing in the UK: by 2005, over 500 community projects were involved in activities such as renewable energy production, household energy efficiency measures and behaviour change to reduce energy demand. Since 2008, 30 community-owned renewable energy co-operatives have been set up, there are many more in the pipeline, and there is huge potential for growth.

The **Cheshire Rural Biomass project (CheRuB)** helps people and organisations who live in Cheshire's rural areas to benefit from wood-fuelled heating systems. In addition to installing a range of wood heating systems, the project aims to train both operators of woodfuel systems, and existing heating engineers in modern woodfuel systems.

With the price of fossil fuels constantly rising – particularly for those living in rural areas – these modern, reliable heating systems are an ideal alternative to their mains gas and oil counterparts.

The systems are almost carbon-neutral, and in certain cases have been proven to reduce carbon emissions by 90% compared to electricity-powered equivalents.

There are other benefits, too: using woodfuel creates a localised supply chain, stimulating the local economy.

Targeting *"off gas grid"* areas and areas of high energy demand will both improve the competitiveness of businesses in these areas and also help to develop and sustain the biomass supply chain.

Figure 9: Off Gas Grid density map for Greater Manchester

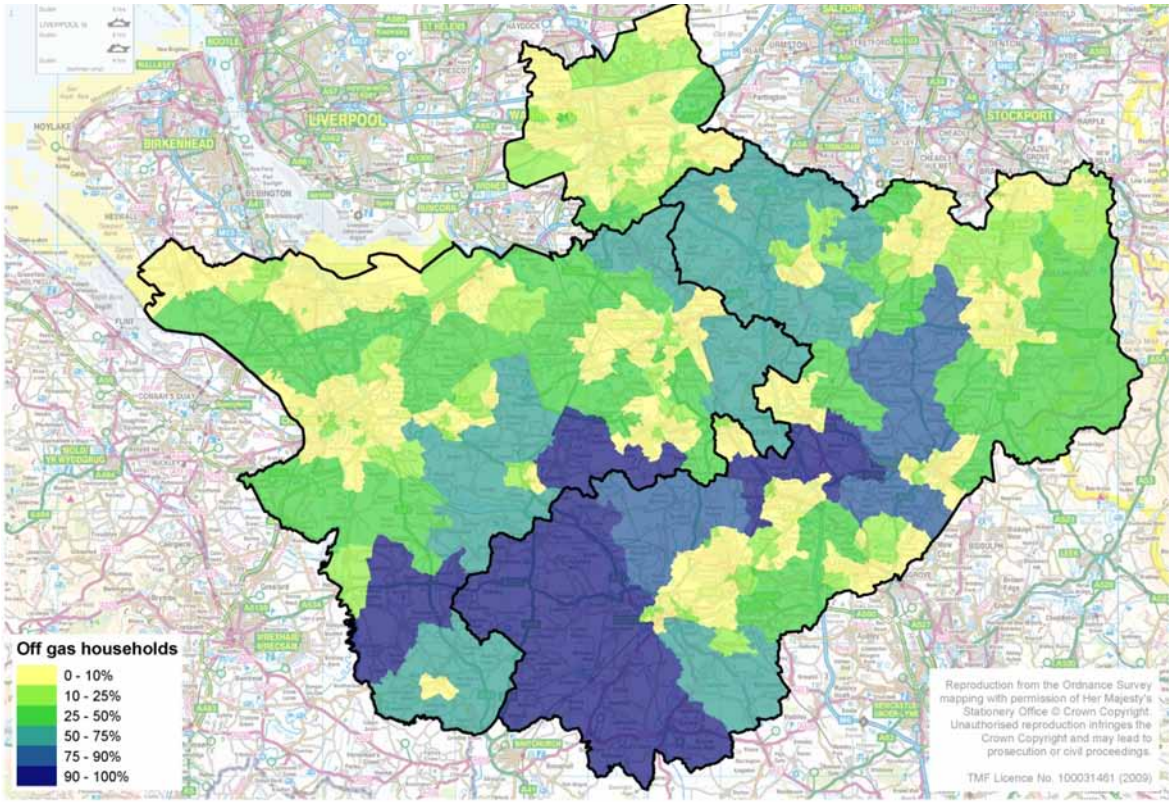
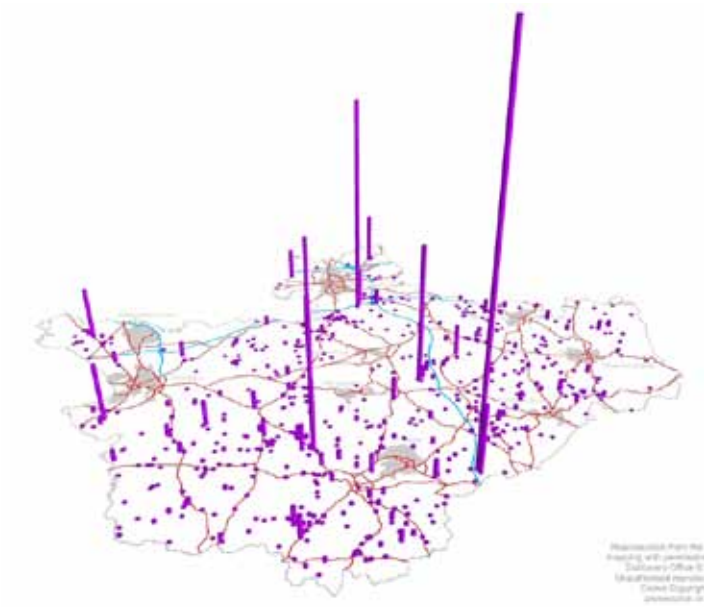


Figure 10: Cheshire and Warrington energy density maps: bars indicate amount of energy used in off gas grid areas. Spikes are business parks



Further analysis of off gas grid data can identify energy density maps, showing where there are high energy demand businesses, off gas grid. These may be key targets for whole place low carbon solutions as part of Thematic Objective 4.

Microgeneration & decentralised energy systems

Community innovations for sustainable energy are flourishing in the UK: by 2005, over 500 community projects were involved in activities such as renewable energy production, household energy efficiency measures and behaviour change to reduce energy demand. Since 2008, 30 community-owned renewable energy co-operatives have been set up, with many more in the pipeline, and huge potential for growth. In Germany, renewables account for 20% of electricity production, 25% of which is community-owned. In April 2012, community groups Repowering South London and Brixton Energy installed the UK's first inner-city co-operatively owned solar power plant on social housing. As well as generating clean energy, the project promotes low-cost energy efficiency measures and provides work placements for local people.

D: Inclusion programmes

Green Infrastructure as a training ground

Over the past 7 years Groundwork has employed over 700 ex-offenders in its innovative **Blue Sky** social enterprise. They have all been employed in roles that support the development and/or maintenance of Green Infrastructure. Working as a contractor, Blue Sky is funded by winning commercial contracts - delivering improved GI for organisations such as the Environment Agency, the Forestry Commission, Lancs County Council and a plethora of Housing Associations. Whilst working and earning they are also being trained. After 6 months 48% have moved into permanent employment elsewhere, and the re-offending rate of Blue Sky Alumni is less than 75% of the national average.

Figure 11: Blue Sky employees at work

The economic case for this kind of work is compelling. A social return on investment study carried out by the Impetus Trust in 2010 showed that for every £1 invested in Blue Sky in the form of GI contracts then a further £12 of savings are realised by the wider public sector - in the form of offending costs (court costs, policing, prison costs) and wider unemployment costs (employment benefit, housing benefit, council tax etc).

E: Supporting Tourism Growth

100,000 people a year visit **DREAM in Bold Forest Park**, an area transformed from derelict coal tips into a large scale community woodland. There are now plans to develop the area further for a range of recreational and leisure activities, supported through an Area Action Plan.

Figure 12: DREAM - Bold Forest Park

The Sefton Coast attracts over 1,000,000 visitors a year. Research indicates that not only is it one of the most functional areas of green infrastructure in Liverpool City Region, but that its role as a destination is likely to develop significantly, providing opportunities for business and jobs in the local economy as well the challenge to ensure that the effective green infrastructure planning and delivery safeguards the natural capital.

Figure 13: Another Place, Sefton coast

The National Trust is investing £4.5m in a new Visitor **Reception Building at Dunham Massey** – it includes a new catering outlet, ticket sales, shop and garden sales, toilets. This will better serve the 500,000 visitors that come to Dunham each year and will improve visitor satisfaction and spend. It is part of a larger investment programme at the site which started with a new car park, winter garden and now new contemporary rose garden, all designed to make Dunham one of the most popular destinations in the region.

As part of their financial sustainability and widening engagement programme, Cheshire East Council is proposing a new family visitor attraction within the grounds of **Tatton Park**. Tatton is owned by the National Trust but financed and managed by the CEC. It receives 750,000 visitors per year and puts £8.8m into the local economy. The new project *'BeWILDerwood'* will turn part of the woodland into an outdoor adventure area for children, attracting 250,000 visitors per year and employing 200 local people. Some of the income from BeWILDerwood will be reinvested into conservation and maintenance of the parkland.

M**ere Sands Wood Nature Reserve:** Mere Sands Wood is a 42 hectare wetland and woodland nature reserve site close to Rufford village in rural West Lancashire. Over 80,000 people visit this site annually and for 30 years Mere Sands has been one of Lancashire's key green tourism offer sites and part of a cluster of wetland sites of national and international importance. Three staff and over 60 regular volunteers manage the site, generating over £100,000 revenue into the local economy directly. Volunteers invested 1500 days of volunteer effort worth at least £65,000.

F: Integrating and getting the best from our natural capital

The River Mersey is perhaps our most iconic natural asset and a key element of green infrastructure for Manchester, Greater Manchester and Liverpool City Region LEPs.

Not only does it provide the basis and setting for industry along its length, it also is a key transport link between the coast and Manchester and an internationally designated area for wildlife.

Its quality impacts on the ability of nearby areas to develop, for industry to use its water and on the biodiversity of the river.

Michael Heseltine wrote about the Mersey in 1983:

> *"Today the river is an affront to the standards a civilised society should demand of its environment. Untreated sewage, pollutants, noxious discharges all contribute to water conditions and environmental standards that are perhaps the single most deplorable feature of this critical part of England."*

His insight was to recognise the relationship between environmental improvement and economic regeneration. **The Mersey Campaign** worked to improve water quality in the Mersey Basin, thereby stimulating the regeneration of derelict land beside the river and its tributaries and improving water quality.

The Mersey Basin Campaign promoted improvements in water quality, mainly through United Utilities Asset Management Programmes and investment in sustainable waterside regeneration. This has led to the transformation of the fortunes of the river, allowing it to become a focus for investment as seen through the prospectus for Atlantic Gateway.

The latest call for action again comes from Heseltine and asks whether The Mersey can become the cleanest and most ecologically diverse urban river in Europe.

Figure 14: A key natural asset - the next challenge: the cleanest and most ecologically diverse urban river in Europe

G: Offsetting opportunities

In the North West there are 840 hectares of mosslands that can be restored as carbon sinks, with the potential to absorb the carbon footprints of 25,657 people. The Lancashire Wildlife Trust's **Natural Carbon Capture** scheme enables businesses to fund the North West's degraded mosses back to health, balancing out unavoidable CO2 emissions and knowing their precise carbon gain. It can help companies to gain a competitive advantage by motivating staff, enhancing corporate image and attracting positive media coverage.

Woodland Carbon, the Woodland Trust's carbon removal scheme, offers an opportunity to invest in local carbon capture projects in the UK, offsetting unavoidable carbon emissions as well as delivering a wide range of other social and environmental benefits, and in doing so accessing a compelling marketing message. The Woodland Carbon label can be used on products and marketing materials.

Appendix 2: Evidence to underpin Green Infrastructure interventions to support the economy

A: Broad economic evidence

High quality gateways to the city:

Visual amenity of green space can create attractive gateway to the city, which is often a key first impression for investors. Pleasant journeys to and from work also contribute to a higher quality of life of residents.[19] In the US, drivers' preference for roadsides increased with increased vegetation and greater height and density of trees, in particular those that screened adjacent commercial land uses[20],[21]. Commercial developments alongside major roads leading to the city, which contain trees, are generally preferred to both the developments without trees and the undeveloped agricultural land without trees.[22] In the UK, green commuting routes are preferred: the willingness to pay for woodland views on journeys to and from home has been estimated at £226.56 per annum per household (2003 prices).[23]

Attracting investment and increasing employment:

The presence of high quality green space can improve the 'investability' of an area and its competitiveness as a business location.[24] A survey of real estate developers and consultants across Europe found that 95% of respondents believe that open space adds value to commercial property and would be willing to pay at least 3% more to be in close proximity to open space.[25] An example in returned investment in green infrastructure can be seen in Riverside Park Industrial Estate in Middlesbrough, where extensive planting of trees helped to create a setting for stimulating business growth, which attracted new, high profile, occupants; increased occupancy from 40% to 78%; levered over £1 m of private investment; and saw 28 new businesses and more than 60 new jobs.[26] Landscaping improvements in Portland Basin, Tameside and Winsford, Cheshire, yielded respectively over 16% and 13% of net growth in employment. [27]

Green environment for retail:

Green infrastructure can play a role in creating a pleasant environment in city centres that increases the footfall and revenue in retail areas. In an US study, presence of trees in central business districts was tied to more positive consumer experiences and a willingness to pay higher prices for goods and services (by ~11%).[28]

Attracting and retaining skilled and productive workforce:

Quality of life is becoming an increasingly important consideration in modern business location decisions, in particular for high-tech and knowledge industry, and cities with attractive parks and natural surroundings are more likely to attract knowledge workers[29]. In particular for small businesses and individuals on high salaries, the

19 Regeneris Consulting (2009). The economic contribution of the Mersey Forest's objective one-funded investments. Regeneris Consulting. Available at: http://www.merseyforest.org.uk/pages/displayDocuments.asp?iDocumentID=246.

20 Wolf KL (2003) Freeway roadside management: the urban forest beyond the white line. Journal of Arboriculture 29(3): 127-136.

21 Sullivan WC & Lovell ST (2006) Improving the visual quality of commercial development at the rural-urban fringe. Landscape and Urban Planning 77: 152-166.

22 See 3.

23 Garrod GD (2003) Landscape Values of Forests. Social & Environmental Benefits of Forestry Phase 2, Report to the Forestry Commission, Edinburgh. Centre for Research in Environmental Appraisal and Management, University of Newcastle upon Tyne.

24 CABE (2004) The Value of Public Open Spaces. Commission for Architecture and the Built Environment, London.

25 Gensler and Urban Land Institute (2011) Open Space: an asset without a champion? Available at: http://www.gensler.com/uploads/documents/Open_Space_03_08_2011.pdf

26 CLES POLICY ADVICE. 2007. The Contribution of the Local Environment to the Local Economy presented to Groundwork UK.

27 See 8.

28 Wolf KL (2003) Public response to the urban forest in inner-city business district. Journal of Arboriculture 29(3): 117-126.

29 Crompton JL (2007) Competitiveness: Parks and Open Space as Factors Shaping a Location's Success in Attracting Companies, Labor Supplies, and Retirees in de Brun C (Ed.) The economic benefits of land conservation. The Trust for Public Land, pp.48-54.

quality of life becomes as important as renumeration[30]. Greener settings not only attract but also help to retain workers; businesses located next to just regenerated Glasgow green recorded improve staff morale and staff retention rates due to the attractiveness of the location[31]. Green infrastructure also improves productivity: office workers who enjoyed natural view out of the window reported fewer physical ailments and greater job satisfaction compared to those workers without a view.

Higher property prices in greener areas:

In London wards, on average a 1% increase in the amount of green space can be linked to a 0.3-0.5% increase in average house price[32]. In North West England, a view of a natural landscape added up to 18% to property, and residents in peri-urban settings are willing to pay £7,680 per household for views of broadleaved woods[33]. The development of a community woodland on the former Bold Colliery site in St Helen's have enhanced existing property values in the surrounding area by £15 million[34]. In Aberdeen, properties next to the park can attract a premium of 0.4%-19% compared to a property located 450 m away from a park[35].Trees have been reported to add between 4-25% to the total value of property, depending on their size, condition, location and species [36], [37].

B: Rural economy

Increasing the productivity of land:

One of the major risks of intensification of farming is the further decline in the quality of ecosystem services.[38] Green infrastructure can increase the long-term productivity of the countryside by supporting a higher diversity of species, for example pollinators, and by being an essential element of environmentally sensitive farming practices. The value of crops pollinated by honey bees in England is approximately £117 million.[39] The bees numbers have been declining in the recent years and green infrastructure can secure presence and diversity of flowering plants in the landscape, linked to the number of insects available for the pollination of agricultural crops.[40],[41] Agri-environment schemes and organic farming tend to maintain system stability better than conventional farming, in longer term leading to improved soil quality, fertility and reduced soil erosion.[42],[43] Introducing green infrastructure such as trees, vegetated field margins and hedgerows can not only increase biodiversity,[44] but may also help to maintain the productivity of land under the changing climate. For example, an experiment in the New Forest found that river shading from new trees maintained temperatures sufficiently cool for brown trout to survive.[45]

Promoting natural tourism:

The natural tourism is an economically feasible alternative to agriculture in rural areas. Annually, visits by UK

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39 ADAS. 2001. An Economic Evaluation of DEFRA's Bee Health Programme. DEFRA. London.

40 Potts SG, Biesmeijer JC, Kremen C, Neumann P, Schweiger O & Kunin WE (2010) Global pollinator declines: trends, impacts and drivers. Trends in Ecology & Evolution 25: 345-353.

41 Carvell C, Roy DB, Smart SM, Pywell RF, Preston CD & Goulson D (2006) Declines in forage availability for bumblebees at a national scale. Biological conservation 132: 481-489.

42 Reganold JP, Eliott LF & Unger YL (1987) Long-term effects of organic and conventional farming on soil erosion. Nature 330: 370-372.

43 Mäder P, Fliessbach A, Dubois D, Gunst L, Fried P & Niggli U (2002) Soil fertility and biodiversity in organic farming. Science 296: 1694.

44 Vickery JA, Bradbury RB, Henderson IG, Eaton MA & Grice PV (2004) The role of agri-environment schemes and farm management practices in reversing the decline of farmland birds in England. Biological Conservation 119: 19–39.

45 Nisbet T, Silgram M, Shah N, Morrow K & Broadmeadow S (2011) Woodland for Water: Woodland measures for meeting Water Framework Directive objectives. Forest Research Monograph, 4, Forest Research, Surrey.

residents to the countryside and to the seaside already contribute, respectively, £5.5 billion and £7.4 billion for the English economy.[46] Visits to the countryside in 1998 generated 340,000 full time jobs;[47] walking in the English countryside alone supports between 180,000-245,000 full time jobs.[48] People are attracted to the countryside being 'the patchwork quilt of fields, woods, hedgerows and winding streams',[49] thus ensuring diversity in the landscape through green infrastructure could bring more tourists into the countryside. Woodlands and wildlife sites are important for tourism: visitors to an average forest site in England spent between £54,000 and £72,000 per year, amounting to £2.1 billion per year.[50] Forest-related tourism expenditures represent about 3.4% of total tourism spending[51]. RSPB reserves in the UK support over 1,000 full time jobs, and because they tend to be on less favourable agricultural land, tend to lead to an increase in economic activity when acquired[52]; people visiting just Osprey watching sites in the UK bring total additional expenditure of £3.5 million per year to the areas around the sites.[53]

Reducing the cost of water and flood management:

Grass buffers, temporary ponds, appropriate ditching and decanalisation can help to reverse this trend.[54] Wetlands also play a role in aquifer recharge[55]. Woodlands contribute to tackling diffuse pollution through acting as a barrier and intercepting pollutants before they reach water courses. They help to trap and retain nutrients and sediment in polluted runoff[56]. A modeling study for the Yorkshire Derwent catchment shows that converting a fifth of arable land into extensive grassland results in 20% reduction in nitrate leaching.[57] Intensification of farming resulted in loss of hedgerows, overgrazing, channelized rivers, and compacted soils (due to winter crops), which has had a negative impact on the rate of infiltration.[58]

Production of biofuels:

Changes in land use to achieve climate change mitigation are controversial from the landscape protection perspective. Also, to meet just one-third of the government's 2010 target on biofuels would require 1.2 million hectares of short rotation coppice and Miscanthus (equivalent of 20% of the UK's arable land). To achieve 5% of the country's energy from biofuels would require1.2-1.9 million hectares of additional wheat and oilseed rape. Nonetheless, bioenergy including woodfuel has the potential to fill a short-term energy gap.[59]

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54 O'Connell et al. (2005)

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57 Hutchins M, Fezzi C, Bateman I, Posen P, Deflandre-Vlandas A (2009) Cost-effective mitigation of diffuse pollution: setting criteria for river basin management at multiple locations. Environmental management 44: 256-267.

58 O'Connell PE, Beven KJ, Carney JN, Clements RO, Ewen J, Fowler H, Harris GL, Hollis J, Morris J, O'Donell GM, Packman JC, Parkin A, Quinn PF, Rose SC, Shepherd M & Tellier S (2005) Review of impacts of rural land use and management on flood generation Impact study report. DEFRA, London.

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Appendix 3: How Green Infrastructure can support jobs and growth

The following section deals mainly with the opportunities that the Growth Funds may offer.

Green Infrastructure programmes targeting the Growth Funds will need to focus on supporting Jobs and Growth. The EU 2020 Strategy focusses on *"smart, sustainable and inclusive growth"*[60] and this could be a used as a framework to support a Green infrastructure programme.

There is compelling evidence that Green Infrastructure (green infrastructure) can create jobs and growth directly, and can also help unlock jobs and growth potential by creating an attractive environment for investment and/or by addressing environmental constraints to growth aspirations.

A: Direct benefits

Jobs and businesses created directly from a programme of targeted green infrastructure interventions. In the Northwest alone there are 75,000 jobs associated with the delivery and management of green infrastructure, leading to an annual GVA of £1.5bn. The independent economic evaluation by Regeneris of the Mersey Forest Objective 1 programme indicated that for every £1 invested through EU funding (incl. match) £2.60 of GVA was created, a figure that compared well to other investments being made at the time.

B: Indirect benefits

Creating the conditions for investing in jobs and growth. Tackling environmental constraints or "pinch points can enable and accelerate investment by creating a more positive outlook for investment in key areas. Access to green infrastructure can also improve labour productivity; improve health and wellbeing as well as providing a foundation for tourism. For example, a £425,000 green infrastructure investment in Portland Basin, Tameside subsequently secured £1.8m of private investment, safeguarding 384 jobs and creating 13 new ones. Similarly the Regeneris evaluation showed that £10.20 of wider economic value was delivered through the Mersey Forest Objective 1 investments.

From the work carried out to date in developing the Green Infrastructure evidence base we have a good starting point to put forward programmes of activity to help achieve *"Smart, Sustainable and Inclusive Growth"*

60 http://europa.eu/rapid/press-release_IP-12-236_en.htm

This briefing was developed by the Natural Economy Northwest Investment Forum.

The forum is an informal group of NGOs who work with DEFRA to identify and support opportunities for additional investment in the North West's natural environment. The work was funded by the Environment Agency and the Green Infrastructure Unit.

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