

Opportunities and threats to the local economy from environmental dependencies

Final Report of the application of the LEED toolkit for the Heart of the South West Local Enterprise Partnership



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1. Executive Summary

Purpose of report

This report identifies the key *opportunities from and threats to the economic plans of the Heart of the South West Local Enterprise Partnership (LEP)* which stem from the *economy's dependence on the environment*. These are significant, but until now have had insufficient consideration in economic development planning, partly because the complexity of the evidence base makes them hard to assess. The evidence in this report is based on a thorough and systematic process, which draws on economic and environmental expertise and data, as well as the experience of key partners in the local area. This process is called the Local Environment and Economic Development (LEED) process and is available to other LEPs. The information presented here is a product of the LEED Level 1 workshop held in Exeter on 6 February 2014. Both the findings and the proposed solutions/next steps would be tested through further work and exploration in Level 2. Details of the LEED process can be accessed on the [Natural England website](#).

Key partners

The key partners who have contributed to the project are:

- Dartmoor National Park Authority
- Devon County Council
- Devon Local Nature Partnership
- Exmoor National Park Authority
- Forestry Commission
- Heart of the South West LEP
- Natural England
- Plymouth City Council
- Plymouth Local Nature Partnership
- Somerset County Council
- Somerset Local Nature Partnership
- South West Water
- The Environment Agency

Economic context and plans

The Heart of the South West is a dynamic partnership that stretches across Devon, Somerset, Plymouth and Torbay. Whilst 91% of our area is considered rural, over 40% of our population live in cities and urban areas, with particular concentrations in Plymouth, Exeter, Torbay and Taunton.

We have world class advanced manufacturing ranging from aerospace in Yeovil, to a high tech, electronic and photonic cluster in Torbay, to a marine manufacturing and research sector, centred on Plymouth. We host a number of internationally recognised businesses such as Agusta Westland, Flybe, Honeywell Aerospace, Babcock Marine, the Meteorological Office, Princess Yachts International, Yeo Valley Organics, EDF Energy and IBM, to name but a few. In addition, our region has a number of award-winning SMEs and one of the highest concentrations of social enterprises and community based businesses in the country. We also have a growing low carbon and energy sector; the development of Hinkley C will have a substantial economic impact and our wider renewable energy sector continues to blossom. In addition, we have a world class knowledge base

which includes three universities, two medical schools as well as 10 FE colleges and specialist research centres.

Our ambition is to realise our potential from our considerable and distinctive environmental assets, to capitalise on golden opportunities, and inspire innovation and entrepreneurship to create long term economic growth. Most of our businesses (75%), particularly in rural areas, are SMEs with fewer than five employees. This provides an entrepreneurial heartland rich in diversity, with potential to grow. We are known for our natural and cultural heritage, including two national parks, two world heritage sites, a biosphere reserve and countless sandy beaches. These assets fuel the largest tourist economy of any LEP, with 26.7m visitor nights/year.

Our three core aims for growth are: building on our distinctiveness; creating conditions for growth; and maximising employment opportunities.

Golden opportunities - activity/major projects which have the potential to exert a transformational impact through integrated investments – include:

- Marine sector growth through the Plymouth and SW Peninsula City Deal
- Construction and legacy of Hinkley C
- Supercomputer investment and global environmental analytic capabilities
- Aerospace and advanced manufacturing

And, more generally:

- A step change in the commercialisation of innovation
- Extending and embedding Rural Growth Network Pilot lessons, outputs and rural business support

These golden opportunities will be approached with an eye on sustainable legacy and wider application. There are consequently a number of place, business and people priorities.

The top opportunities identified

The top eight opportunities identified during the workshop were:

- **O1: Green infrastructure**
- **O2: Natural hazard regulation**
- **O3: Natural resource-based products and materials**
- **O4: Research / test / commercialise natural environment-related products, services and technologies**
- **O5: Climate change related markets, services and skills**
- **O6: Renewable energy and energy efficiency**
- **O7: Tourism**
- **O8: High quality natural environment attracts business**

The top threats identified

The top eight threats identified during the workshop were:

- **T1: Degradation of habitats**
- **T2: Flooding**
- **T3: Poor water quality**
- **T4: Degradation of cultural heritage/ landscape**
- **T5: Loss of soil productivity**
- **T6: Loss of biodiversity and species**
- **T7: Population / development pressure**
- **T8: Extreme weather**

Next steps

A number of options to help realise the opportunities and mitigate the threats were identified and discussed:

- Incorporating the following in the Strategic Economic Plan:
 - Growing skills for ‘green’ growth
For example, the Heart of the South West has a growing low carbon and energy sector. Its wider low carbon sector continues to develop, with renewable energy capacity increasing approximately 10 fold since 2005 and employment in the renewable energy sector expected to grow by an additional 1,300 jobs by 2020.

The potential arrival of Europe’s most powerful supercomputer at the Met Office and expertise in big data analysis sees Exeter emerging as a cutting edge place for environmental technology and modelling.
 - Linking priority projects and golden opportunities to green growth, etc
The LEP has identified some immediate opportunities that are unique to the area and have the potential to be transformational. This includes driving the growth of the marine sector across the Heart of the South West area through the Plymouth and Peninsula City Deal. Securing investment in the Met Office supercomputer in Exeter Science is also linked to the establishment of a Global Environmental Futures Campus with the University of Exeter.
 - Applying the lessons to the broader economy
- Ensuring business support includes resource/energy efficiency within its scope
- Recognising that green growth can help to mitigate the threats and enhance the opportunities
- A catchment management based approach to address environmental challenges
- A focus on ‘responsible’ growth and development

This list is intended to be a starting point for further discussion and development.

Figure 1 (overleaf) gives an overview of the Heart of the South West LEP Priorities for Growth.

Part 2 of the Strategic Economic Plan provides an extensive summary of green growth areas, with the ‘Environment’ section mirroring the outputs from the LEED Toolkit Workshop.

Figure 1: Heart of the South West LEP - Priorities for Growth

	Creating the Conditions for Growth - <i>Improving our infrastructure and services to underpin growth</i>	Maximising Productivity and Employment Opportunities - <i>stimulating jobs and growth across the whole economy</i>	Building on our Distinctiveness - <i>Utilising our distinctive assets to create opportunities for business growth and better jobs</i>
Place	<p>Infrastructure for growth:</p> <ul style="list-style-type: none"> • Transport and accessibility • Digital infrastructure • Sustainable solutions for flood management • Energy Infrastructure 	<p>The infrastructure and facilities to create more and better employment:</p> <ul style="list-style-type: none"> • Enterprise infrastructure • Strategic employment sites • Unlocking housing growth 	<p>The infrastructure and facilities needed to support higher value growth:</p> <ul style="list-style-type: none"> • Specialist marine sites • Science/Innovation infrastructure • Maximising our environmental assets
Business	<p>Creating a favourable business environment</p> <ul style="list-style-type: none"> • A simpler, more accessible, business support system, tailored to our needs <ul style="list-style-type: none"> ○ Improving access to finance ○ Stimulating enterprise and growth 	<p>Achieving more sustainable and broadly based business growth:</p> <ul style="list-style-type: none"> • Reaching new markets (on-line, supply chains, public sector) • Globalisation (exports and inward investment) 	<p>Supporting higher value growth:</p> <ul style="list-style-type: none"> • Innovation through Smart Specialisation • Building our capacity for innovation
People	<p>Creating a responsive environment, where businesses and individuals can reach their potential:</p> <ul style="list-style-type: none"> • Skills infrastructure and facilities • Accessibility to education/employment (transport, careers advice and digital inclusion) • Employer engagement and ownership 	<p>Increasing employment, progression and workforce skills.</p> <ul style="list-style-type: none"> • Moving people into employment • Supporting people to progress to better jobs • Improving workforce skills 	<p>Creating a world class workforce to support higher value growth:</p> <ul style="list-style-type: none"> • Enterprise and business skills • Technical and higher level skills development and retention • Maximising the skills and employment opportunities aligned to our transformational opportunities.

2. Opportunities Summary

The opportunities on this page are the top eight identified by the research, but are not ranked.



O1: Green infrastructure

Green infrastructure can deliver a range of benefits in urban and rural areas across the LEP area including habitats, water management (quantity and quality), carbon sequestration, recreation/access, health and wellbeing, sustainable transport, visitor destinations, jobs and skills. Green infrastructure can be an enabler of green growth. It should be delivered strategically, potentially at a catchment level.



O2: Natural hazard regulation

The natural/managed environment has the potential to contribute more in terms of regulating natural hazards affecting the economy and people, such as flooding and coastal erosion. A good example includes the Mires on the Moors project on Dartmoor and Exmoor which is slowing down water run-off amongst other things. Efforts and investments in natural hazard regulation (including Payments for Ecosystem Services) need to be aligned to benefit strategically important areas.



O3: Natural resource-based products and materials

More can be made of the area's rich natural resources in terms of the provision of products and materials. This includes greater quantity, adding value and new types of products and materials. The local supply chain can be strengthened increasing local consumption and production of both commodities and specialised products. Examples include food, wool, shellfish/fish and other marine products; also branded products linked to the environment.



O4: Research / test /commercialise natural environment-related products, services and technologies

There is an opportunity to build on the area's natural environment-related research base (Plymouth marine; North Wyke land-based, etc.). This includes attracting research(ers), expanding research into natural environment related products, services and technologies, testing them in the area's 'outdoor lab' and commercialising them.



O5: Climate change related markets, services and skills

The market for climate change related products and services is growing, and the area can capitalise on this, building on existing research and activity, in terms of low carbon and climate change adaptation products and services. This will include researching and demonstrating best practice. Growing the skills to participate in the green economy will be important. There is real potential for the Exeter Science Park and related organisations to become one of the world’s major concentrations of weather and climate research expertise, knowledge and data modeling infrastructure at a single site.



O6: Renewable energy and energy efficiency

Renewable energy in the form of biomass, solar, hydro, wind and wave power etc. could be further developed, building on the already good uptake in the area, including in new developments. There are also opportunities to improve resource/energy efficiency across SMEs, generating cost savings. Both link to developing a low carbon future.



O7: Tourism

Tourism is an important sector in the LEP area, and it is dependent on a high quality natural and historic environment. The tourism offer could be maximized by being more joined up/smarter, broadening the offer and telling the story in terms of interpreting the area’s rich environmental and cultural assets.



O8: High quality natural environment attracts business

The Heart of the South West has an outstanding natural environment that provides a draw for businesses including those in the priority sectors, and is important for staff retention and recruitment. More could be made of this link. Economic development should maintain this attractiveness and ideally drive a positive rather than a negative impact on ecosystem services. Green infrastructure is an element of this.

3. Threats Summary

These are the top threats identified by the research, but are not ranked compared to each other.



T1: Degradation of habitats

Degradation of the habitats can contribute to increased risk of flood, coastal erosion and other hazards (alongside climate change), impact on water quantity and quality, and on wildlife and other environmental assets. These in turn affect the economy and economic growth potential, and the area's reputation as a great place to work and live.



T2: Flooding

An increasing risk and severity of flooding, linked to habitat degradation and climate change, impacts on transport and business resilience and results in additional costs to the economy and society. It will be important to consider flooding, flood resilience and improving land management in growth locations. There is a risk of becoming known as an area that is prone to flooding, which could deter future business investment. Common Agricultural Policy reform will also play a part.



T3: Poor water quality

Poor water quality in the form of sediment, pollution and other issues can impact on a number of important economic sectors including marine, fishing, recreation, tourism and drinking water. This applies to both freshwater and coastal/marine water (e.g. in/around Plymouth).



T4: Degradation of cultural heritage and landscape

Degradation of cultural heritage and landscape can adversely impact tourism in specific locations and potentially more generally. It can also affect an area's sense of place and attractiveness for existing residents/businesses and those considering relocating/investing in an area.



T5: Loss of soil productivity

Reduced soil productivity due to poor land management processes, erosion, poor structure, low organic matter etc can impact farming and food supply. Poorly managed soils can also adversely affect water quality and increase flood risk, affecting other parts of the economy. It will be important to maintain and enhance soils to make them more resilient to climate change (including drought).



T6: Loss of biodiversity and species

A loss of biodiversity, including bees and other species, can adversely impact on pollination required for agriculture and horticulture and reduce the genetic base for natural environment related products and materials. It can also affect quality of life and tourism. This will have clear implications for the agri-food and agri-tech markets.



T7: Population / development pressure

Population growth and development do not tend to consider the capacity of the natural environment to support growth. This carrying capacity relates to the supply of water, the regulation of hazards, quality of life etc. This will be important to assess, especially in key growth locations, as not doing so could adversely affect planned growth.



T8: Extreme weather

Extreme weather events in the form of storm, flood, drought etc. is projected to become more frequent with climate change. Infrastructure, property and businesses will be vulnerable to these events. It will be important to identify key areas of risk and improve resilience. The LEP Strategic Economic Plan highlights the significant disruption to transport infrastructure for prolonged periods in recent winters, as well as the significant economic costs. Protecting communities, businesses and infrastructure from flooding and severe weather is a pre-condition for growth and can also be a source of job creation.

4. Developing the opportunities and mitigating the threats

A number of options to help realise the opportunities and mitigate the threats were identified and discussed:

- Incorporating the following in the Strategic Economic Plan:
 - Growing skills for 'green' growth
 - Linking priority projects and golden opportunities to green growth, etc
 - Applying the lessons to the broader economy
- Ensuring business support includes resource/energy efficiency within its scope
- Recognising that green growth can help to mitigate the threats and enhance the opportunities
- A catchment management based approach is useful in addressing environmental challenges
- There could be a focus on 'responsible' growth and development (as opposed to 'sustainable' growth and development). This encompasses responsible financial management, responsible management of the environment and social responsibility. This concept could be reflected more strongly in all the strands of the Strategic Economic Plan and when assessing projects (a checklist could be developed). This kind of assessment is being undertaken for individual projects/ initiatives such as Hinkley C and Plymouth City Deal and could be applied more widely.

This list is intended to be a starting point for further discussion and development.

5. How would Level 2 of the toolkit take this forward?

The Level 1 workshop was an interesting and stimulating exploration of the relationship between the economy and the environment. However, this relationship is very complex, and it is realistically only possible to begin to explore it in a one day workshop. Additionally, it is necessarily difficult to get all the relevant expertise in one room at the same time. For this reason the emergent list of opportunities and threats should be seen as an initial or interim assessment.

Level 2 of the toolkit is a structured process in which the views of all the relevant local partners in the areas of environment and economy are interviewed, and offer their views, and supporting evidence about what the major threats and opportunities are. This may confirm or challenge the opportunities and threats which emerged from Level 1. It is also very likely that there are additional opportunities and threats which did not emerge from the Level 1 workshop, which will also come to the surface. This grounding in the local expertise will help to provide an evidence base to influence the Strategic Economic Plan.

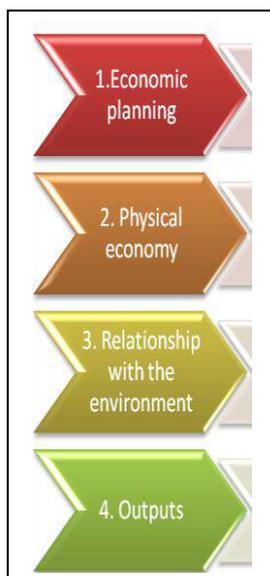
The Level 2 process would work up the opportunities and threats in greater detail, offer evidence to justify them, and make them more specific. It would also capture the views of local partners about the best approaches and solutions to them.

6. Study Methodology

Aim

The aim of this study was to support strategic economic planning, through the identification of opportunities and threats to the local economy, which stem from the economy's dependence on the environment. To do this the LEED process is designed to help LEPs make sense of the mass of complex environmental information and distil it into key points demanding action.

Process



The process starts with standard economic planning. For this study we considered the current situation and the LEP's strategic growth plan from today. This is available from economic planning documents.

In section 2 we consider what this means in physical terms, particularly in terms of energy and material inputs, and waste and emissions.

This puts us in a position to consider how the economy relates to the environment and the trajectory of these relationships in future. We do this using the Ecosystem Services Framework (explained below).

Finally we are able to list and evidence the top opportunities and threats to the economy, and consider strategic and tactical solutions.

Ecosystem Services

This study makes use of the Ecosystem Services Framework, which is recognised as best practice in scientific and policy terms for considering the environment/economy relationship. The Ecosystem Services Framework considers the dependence of the economy on the environment in four categories:

- Provisioning services - material such as timber, water and crops.
- Regulating services - the ways in which the environment provides order and structure, such as flood control. Regulating services are normally taken for granted until damaged.
- Cultural services – non-material dependencies, such as the dependence of tourism on the attractiveness of a destination.
- Supporting services – the natural cycles that the other services depend upon, such as the water cycle.

This approach ensures that the work is systematic and rigorous, and allows it to be compared to other work in this area.

Levels

The different levels of LEED process, including Level 1 just completed, and Level 2 outlined above, are set out below:



Full details of the methodology and the supporting evidence base are available from tom.butterworth@naturalengland.org.uk