Strategic Environmental Assessment of the EU Structural Funds Convergence Programme for Cornwall and the Isles of Scilly 2007-2013

Environmental Report

Fraser Associates November 2006 – Updated May 2007

Introduction

The process of preparation of the EU Structural Funds Convergence Programme for South West England 2007-2013¹ is subject to a Strategic Environmental Assessment (SEA). SEA aims to ensure the Programme will deliver a high level of environmental protection and enhancement.

This document is the updated Environmental Report for that Strategic Environmental Assessment. Its original purpose was to provide a description of the likely effects on the environment of the activities proposed in the draft Operational Programme, together with options and recommendations for enhancing likely positive impacts, and reducing potential negative impacts, as a basis for consultation. This Report, including the detailed assessment, has now been updated to take account of the (significant) changes made in the Programme as a result of the consultation process.

The report takes account of the suggested structure and required content, in accordance with the EU Directive on SEA² and Government guidance³. The content of individual Chapters is set out below:

- 1. The first Chapter provides an outline and key contacts for the Operational Programme and SEA.
- 2. The second Chapter details the focus of the Programme, and factors in its development.
- 3. The third Chapter gives a description of the SEA process in theory, and explains the way it has been tailored to better reflect the requirements of the Operational Programme.
- 4. The fourth chapter provides a summary of the key environmental policy issues and environmental context in which the Operational Programme will be delivered, including lessons from previous Programmes and wider political changes. Specific assessment criteria for use in the SEA have been developed on the basis this information.
- 5. The fifth Chapter concentrates on the assessments of the detail of the Programme. Following convention, these assessments are presented in matrix format, and the conclusions summarised.
- 6. The sixth Chapter considers issues which flow from the findings of the assessment process, particularly in relation to the implementation of the SEA,

¹ The terms Convergence Programme, Operational Programme and OP are used interchangeably in this report

² Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment

³ A Practical Guide to the Strategic Environmental Assessment Directive, ODPM and Administrations in Scotland, Wales and Northern Ireland, 2005

and discusses in detail the approaches taken to consideration of alternatives and to mitigation. It also presents recommendations on monitoring of the SEA, and finally, some concluding comments.

Annex 1 presents the environmental baseline information which informed the development of the SEA as a whole.

The draft OP and Environmental Report were available for consultation from late November 2006 until mid-February 2007, and a series of meetings and presentations were undertaken with stakeholders in the Programme area in January 2007.

Although specific questions were included in the Environmental Report (and remain in this version, for reference), the intention, as far as possible, was for the environmental aspects of the Programme to be addressed in an integrated way. Consequently, the main consultation on the Programme included a number of environmental questions. In addition, there was considerable consultation with regional partners during the production of the Environmental Report, and the majority of suggestions were already incorporated by the time the consultation version was issued. Consequently, feedback specifically on the SEA was very limited, although almost all responses to the OP consultation covered environmental issues.

Feedback on those environmental issues, together with issues raised in the Report itself, was subsequently summarised to draw out key recommendations for changes in, or enhancements to, the Programme and its delivery structure. These recommendations were presented to South West of England Regional Development Agency, the agency which will be responsible for the delivery of the new Programme, and representatives of the agency, following discussion, responded in detail to the recommendations made. The majority of recommendations have been accepted.

A summary of those recommendations and responses is included in the OP, and is available in the SEA Statement. The SEA Statement is attached as Annex II to this report.

This Environmental Report has been prepared by Fraser Associates on behalf of the Government Office for the South West.

Outline and Key Contacts for the Convergence Programme for Cornwall and the Isles of Scilly 2007-2013

1.1 Responsible Authority

Following the publication of the revised UK National Strategic Reference Framework, the Authority responsible for the Programme has changed from the Government Office for the South West (GO-SW), and is now the South West England Regional Development Agency. Ultimate responsibility still rests with the UK Government Department of Communities and Local Government.

1.2 Lead Contact

The lead contacts for the Programme are:
Gareth Grimshaw, Government Office for the South West.
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Phil McVey
Head of European Programmes
South West Regional Development Agency
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The lead contacts in relation to this SEA are:
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1.3 Programme Title

The Programme Title is *The Convergence Programme for Cornwall and the Isles of Scilly, 2007-2013*

1.4 Programme Area

The Programme will cover whole of the County of Cornwall plus the Isles of Scilly, part of the South West of England region.

1.5 Purpose of the Programme

Structural Funds are used to promote regeneration and economic development in regions and areas of the EU which are lagging compared to the average. The Funds are delivered within the wider context of EU Policy, including those on the environment and sustainable development. Convergence funding is targeted at areas with per capita GDP less than 75% of the EU average.

Structural Funds Programmes provide only a proportion of total costs for projects. Individual projects can be led by public, private or voluntary

organisations, but must contribute directly to the overall aims of the Programme. A wide range of activities can potentially be supported, from a menu of possible activities which is set out by the European Commission and which is then focused by the Governments of individual Member States. The detailed decisions on which activities will be taken up are made by regional partners. More detail on the options and guidance for the 2007-2013 period is given in the next section.

The Cornwall & Isles of Scilly Convergence Programme sets the framework for resources available through the European Regional Development Fund (ERDF). However, it also has a strong influence on the way that the portion of the portion of the UK allocation of the European Social Fund (ESF), which is ring fenced for Cornwall and the Isles of Scilly, is delivered. The Programme will also be developed to complement activities which will be supported by other European Funds, most importantly the European Agriculture Fund for Rural Development (EAFRD), delivered through the Rural Development Programme for England (RDPE).

Cornwall and the Isles of Scilly was previously covered by an Objective One Programme, which ran from 2000 - 2006. That Programme, in which the European element was worth around £350m, brought together elements of all of the above funds. The financial allocations for the new Programme are €406m ERDF (approximately £270m) and €174m ESF (approximately £115m).

1.6 Frequency of Update

Previous European Programmes have had a formal requirement to undertake two evaluations, the first at the Mid Term stage, and the second following completion of the Programmes. The new ERDF regulation is less clear on the requirements for evaluations. While it is beyond the scope of this SEA to decide on the approach which will be taken to evaluation of the Programme, the comments on monitoring do provide recommendations for areas which might usefully be examined.

1.7 Ex-Ante Evaluation and Relationship to SEA

All EU funded programmes are subject to a process known as Ex-Ante Evaluation. Ex-Ante evaluators are external consultants, who provide quality assurance and mentoring role to those developing the programme. Ex-ante evaluators are not responsible for writing material which will form part of the plan, but, rather, are responsible for commenting on it, or for producing guidance and checklists to which those writing the plan can refer.

The overall aim of this process is to ensure that the programme is clearly set out, that activities proposed are justified by reference to the evidence base provided, and therefore to reduce the time required for negotiation when the programme is formally submitted for approval to the European Commission.

In the past, Ex-Ante evaluation has included an examination of the environmental elements of the Programme in question, and the European Commission has indicated that, for this Programming period, single contracts bringing together ex-ante evaluation with SEA were preferred.

2. Focus of the Programme

2.1 EU Proposals for the New Programme

EU Structural Funds promote cohesion across Europe, by supporting economic development activities which will address regional disparities within existing and candidate Member States. A number of factors influence the form of the new Convergence Programmes across Europe, including the one in Cornwall & Isles of Scilly:

There is a concentration of available resources for mainstream economic development and basic infrastructure towards the new Member States – those in Central and Eastern Europe, Malta and Cyprus. These resources will be delivered through the Convergence objective, the successor to the current Objective 1 status, and at a higher per capita rate than is currently the case.

Fewer areas in other Member States are eligible for these higher levels of Convergence support.⁴ The resources available for regions covered by Competitiveness and Employment Programmes – the successor to the current Objective 2 status - are likely to be significantly lower than at present. Because of this, the range of activities which can be carried out under these Programmes is more focused.

The European Commission has emphasised the need for all Programmes to contribute towards the Lisbon agenda⁵. This refers to the aim of making the European economy more competitive at a global level, and the implementation of this agenda is taking the form of greater emphasis on support for innovation and enterprise.

At the same time, wider social and environmental EU policy aspects – the Gothenburg agenda – have also clearly influenced the range of possible activities which can be supported, including focuses on environmental issues as they relates to economic development, and on sustainable urban development, which highlights more socially based issues.

The Commission has adopted regulations on the use of Structural Funds on Community Strategic Guidelines⁶, which provide more detail on the range of activities which are eligible for support, and which target the areas outlined above. A wide range of revenue and capital projects is envisaged for Convergence areas, and a similarly wide approach to environmental issues will therefore be taken in this SEA.

2.2 UK Proposals

The UK Government has set out, in the National Strategic Reference Framework, its expectations for the coverage of the Cornwall & Isles of Scilly Programme. The text in the box below is reproduced from the NSRF. As the only part of England which qualifies for Convergence funding, Cornwall and the Isles of Scilly has a dedicated section in the NSRF.

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⁴ Cornwall and the Isles of Scilly is the only part of England that qualifies for Convergence status in 2007-2013.

⁵ Competitiveness Programmes are expected to contribute a minimum of (75%) and Convergence Programmes (60%).

⁶ Adopted on October 6th 2006

STRATEGY FOR THE CONVERGENCE OBJECTIVE IN ENGLAND

Cornwall and the Isles of Scilly is the only English region with a GDP per capita below 75% of the EU25 average. It will therefore qualify for full funding under the Convergence Objective for the 2007-2013 Financial Perspective.

ERDF

The three main priorities for ERDF spending within the Cornwall and the Isles of Scilly Convergence Programme will be: first, to promote innovation and knowledge transfer; secondly, to stimulate enterprise and business development; and thirdly, to improve accessibility and connectivity.

Priority 1: Promoting innovation and knowledge transfer

This priority will focus on promoting innovation, knowledge transfer and the transition to a more knowledge-based economy. Examples of actions that may be supported include: supporting innovation networks, increased investment in research and development, improving Cornwall's capacity to capitalise on research and development by supporting knowledge transfer and spin-offs (for example, building on the Combined Universities in Cornwall and the Knowledge Spa centres of excellence in academic, science and business research); offering high-technology facilitates for incubators; supporting the development and exploitation of environmentally friendly technologies; and encouraging the use of renewable energy and promoting greater energy and resource efficiency.

These activities will support CSGs 1.2 (Improving knowledge and innovation for growth), 1.2.1 (Increase and better target investment in RTD), 1.2.2 (Facilitate innovation and promote entrepreneurship) and 1.1.3 (Address Europe's intensive use of traditional energy sources). They will also support NRP 3.51-3.67 (Innovation).

Priority 2: Stimulating enterprise and business development

The purpose of this priority will be to create the conditions for enterprise and the development of sectors with strong growth potential. Examples of actions that may be supported include: offering technical and business advice, consultancy and investment for SMEs; supporting the growth of high-value businesses and assisting them to access global markets; improving access to finance and encouraging business investment; promoting the awareness of entrepreneurship among young people; encouraging business internationalisation; providing the necessary infrastructure for enterprise; developing new areas of activity (for example, in environmental technologies, renewable energy, creative industries, food, tourism, the health sector and the maritime industry); promoting the sustainable use of environmental assets and natural resources for economic regeneration and jobs (for example, landscape, climate, and natural and cultural heritage); marketing Cornwall and the Isles of Scilly as a dynamic sub-region; and creating a more attractive environment for investors, including contributing to the Government's liveability agenda.

These activities will support CSGs 1.2.2 (Facilitate innovation and promote entrepreneurship), 1.1.2 (Strengthen the synergies between environmental protection and growth) and 1.2.4 (Improve access to finance). They will also support NRP 3.24-3.50 (Enterprise).

Priority 3: Improving accessibility and connectivity

The purpose of this priority will be to improve Cornwall and the Isles of Scilly's accessibility and connectivity. Examples of actions that may be supported include:

building on Cornwall and the Isles of Scilly's existing transport infrastructure to improve connections and reduce peripherality; building on Cornwall and the Isles of Scilly's ICT infrastructure and encouraging broadband usage; improving connections between key towns; improving the accessibility of public services in urban and rural areas; and regenerating town centres.

These activities will support CSGs 1.1.1 (Expand and improve transport infrastructures) and 1.2.3 (Promote the information society for all). They will also support NRP3.36-3.37 (Promoting use of ICT).

ESF

There will be two broad priorities for ESF spending in Cornwall and the Isles of Scilly under the Convergence Objective: first, to tackle barriers to employment, and secondly, to improve the skills of the local workforce, particularly ensuring that the workforce has the skills to take part effectively in the knowledge economy. These priorities will encourage the skills and jobs needed for an innovative, enterprise economy. These priorities will be incorporated within an England ESF programme that covers both the Convergence Objective and the Regional Competitiveness and Employment Objective. The ESF priorities of the two objectives are broadly similar and a multi-objective programme will avoid the additional administrative burdens and costs of a separate, small Convergence programme for Cornwall and the Isles of Scilly.

Priority 1: Tackling barriers to employment

The purpose of this priority will be to tackle barriers to employment and increase the rate of employment. Examples of actions that may be supported include: tackling the causes of worklessness, in particular for people on incapacity benefits and in the most deprived areas; increasing childcare provision; supporting community economic development; promoting diversity and equality and supporting social enterprise within deprived communities.

These activities will support CSGs 1.3.1 (Attract and retain more people in employment and modernise social protection systems) and 1.3.2 (Improve adaptability of workers and enterprises and the flexibility of the labour market). They will also support NRP 4.1-4.51 (Delivering employment opportunity for all).

Priority 2: Improving the skills of the local workforce

The purpose of this priority will be to improve the employability of local workforce, by addressing gaps in skills levels. Examples of actions that may be supported include: improving basic, vocational and technical skills; and increasing ICT, business, research, enterprise, management and leadership skills in small and medium-sized enterprises.

These activities will support CSGs 1.3.2 (Improve adaptability of workers and enterprises and the flexibility of the labour market) and 1.3.3 (Increase investment in human capital through better education and skills). They will also support NRP 3.77-3.90 (Skills).

The NSRF also notes that:

- Biodiversity issues are seen as more directly relevant to the Rural Development Plan for England (RDPE);
- The role of Environmental Sustainability Theme Managers (ESTMs) is highlighted as an aspect of good practice central to delivery of environmental aims under existing and future Programmes; and that

• Climate change is an increasingly important issue for the new Programmes.

2.3 Regional Economic Development Policy

The NSRF also emphasises the need for the new Programmes to contribute towards regional priorities, as set out in respective Regional Economic Strategies (RES). The South West has recently completed its RES. The RES is a comprehensive document, which identifies and addresses a wide range of generic, sectoral and spatial issues in the region under three Strategic Objectives:

- 1. Successful and competitive businesses
- 2. Strong and inclusive communities
- 3. An effective and confident region.

A strong sustainable development ethos underpins the RES, formalised in the concept of the Environment as an economic driver. This has six detailed components:

- 1. Conserving environmental assets
- 2. Environment sector business development
- 3. Attracting and retaining skills, business and investment
- 4. Environmental Management skills for business
- 5. Resource efficiency for convergence
- 6. Use of environment in branding and niche marketing

The implications for economic development of climate change and of the need for economic development to take place within environmental limits are both recognised as key issues in the RES.

2.4 Key Challenges for Programme Development

The current Objective 1 Programme, which runs from 2000-2006, has a combined ERDF, ESF, EAGGF⁷ (now EAFRD) and FIFG (now EFF) allocation of some £350 million in total. The Programme has supported, and continues to support, a mix of business development, capital, community economic development and training activities across all sectors, as well as projects more specifically aimed at the agricultural, food, forestry and fishing sectors.

The new Programme, to which this SEA relates, directly plans ERDF and strongly influences ESF. It has no EAFRD or EFF elements. Nonetheless, the scale of the Programme, as noted above, has increased.

The Cornwall and Isles of Scilly Programme is therefore likely to be very different from those in other English regions. Elsewhere, EU Funds will be

⁷ The European Agricultural Guidance and Guarantee Fund (EAGGF) has now been renamed the European Agricultural Fund for Rural Development (EAFRD), and will be distributed in England through the Rural Development Plan for England (RDPE). A SW Regional Implementation Programme is being developed in parallel with the Convergence Programme and will describe regional priorities and delivery mechanisms. EAGGF resources originally allocated under the 2000-06 Programme are described using the original name.

very limited in comparison to domestic resources, and are also more limited in the scope of eligible activities. The key challenge in other regions is to focus EU Funds where they can make the greatest difference, taking into account what is already being done.

In Cornwall and Isles of Scilly, the programme will be considerably *more* significant in comparison both to GVA⁸, and also to the available public resource. However, there is no guarantee that future funding will be available at significant levels – indeed, the aim of Convergence funding is to improve the economy of the sub region to the point where the levels of funding required are on a par with those in other parts of England and the South West.

This implies a focus on 'transformational' projects, and on activities to build the capacity of economic actors in the region to take advantage of the opportunities such projects will bring.

In the case of Cornwall and the Isles of Scilly, it is likely that environmental strengths will provide the focus for some of these opportunities; at the same time, it is recognised that environmental protection and enhancement is critical to maintaining the existing quality of life in the region, in the context of greater economic activity. This is particularly the case in connection with climate change – there is a strategic commitment in the Operational Plan to ensure economic development takes place in conjunction with a responsible approach to carbon emissions, and this is a strong theme throughout this Environmental Report.

The proposals, as set out in the draft Operational Programme, flowed from the above, and were centred around four key areas:

Priority 1: Innovation and research and development will seek to increase the rate of innovation and the economic benefits arising from the commercial application of research and development and other intellectual assets. This Priority will aim to raise the productivity of companies through the application of a wide range of knowledge including product and process improvements. It will address the low levels of innovation evident in the economy, and will seek to provide the key infrastructure and support service needed to develop and sustain a culture of innovation.

Priority 2: Enterprise and investment will focus on accelerating the growth of businesses, with a focus on high value added companies and developing high value added sectors with growth potential. The Priority will focus on addressing constraints and barriers to growth including lack of exports, low levels of investment, and seek to accelerate the adoption of new opportunities arising from digital and ICT. While Cornwall and the Isles of Scilly has a good record of employment growth and enterprise formation, the focus will be on the quality of opportunities, rather than magnitude.

Priority 3: Learning and Skills – This priority will follow the national agenda for ESF, but with specific activity within Convergence relating to 'the skills needed to foster an innovative, knowledge driven economy', 'upskilling the

⁸ Gross Value Added (GVA) in the Cornwall and Isles of Scilly sub region is estimated at £5,500 million pa. For comparison, the current programme, is worth some £350m over 7 years.

workforce' and the 'funding of research'. This Priority will seek to reduce the high level of worklessness and develop a much more highly skilled workforce, with a particular emphasis on graduate and post graduate level skills. This will complement and support the emphasis of Priorities 1 and 2 on a more productive and higher value added business base.

Priority 4: Economic Infrastructure and Place Based Regeneration – This priority will focus on improving internal and external connectivity, with a focus on allowing people and business to access new opportunities. This will be complemented by addressing economic and business infrastructure constraints which inhibit new investment by the private sector. This will include ensuring that new investments is secured at a scale which suits the town and/or location, taking account of the need to protect and enhance the built and natural environment and the quality of life. With a distributed employment base and a number of key towns, there is an opportunity to capitalise on the quality of life as a key asset in attracting and retaining talented and enterprising people and new investment.

2.5 Changes to the Programme Following Consultation

Significant changes were made to the Priority Structure and content following consultation. While Priorities 1 and 2 remained very similar, Priority 3 removed references to the national ESF programme, and is now focused on *Transformational Infrastructure*. This covers three main areas – development of and around Newquay Airport, Digital Infrastructure, and infrastructure in support of learning activities which will be delivered by the ESF Programme.

Priority 4 now concentrates on *Place Based Regeneration*, with a strong physical development focus, and allows for different levels of support based on identified needs at local level.

It is also worth noting that the proposed approach to *Carbon Management* has changed. In line with feedback from the consultation – including considerable discussion with environmental partners – the focus for the Programme is now on *Moving to a Low Carbon Economy*. More discussion on this is provided in Chapter 6, and, in greater detail, in the SEA Statement (annex II).

The assessment matrices which are presented in Chapter 5 of this Report, have been updated to take account of the new aspects of the Programme, but also highlight ways in which content has changed from the consultation version.

Consultation Questions

• Do you have any comment on the range and depth of background information provided?

3. Developing the SEA Process for the New Programme

3.1 Stages in SEA

The overall aim of SEA is to ensure a high level of environmental protection; SEA contributes towards this aim by providing the best possible information to decision-makers, so that they are able to take informed judgements. The SEA process involves a number of stages:

- Screening is undertaken to determine whether there are significant environmental effects⁹.
- Collation of baseline environmental information provides a background for further stages.
- Scoping determines the range and detail of information which will be needed, and the criteria to be used in assessment. A scoping report is produced for comment by the designated SEA Consultation Bodies.
- Assessing the likely effects of the plan, including alternatives, forms the main element of the SEA.
- This assessment, together with an explanation of the process involved and the results, are published in the Environmental Report, in parallel with the consultation draft of the Operational Programme itself.
- Public consultation on the draft Operational Programme and Environmental Report is undertaken to gather feedback from stakeholders.
- The plan is finalised, taking into account the views expressed during the consultation. An SEA Statement is produced which details the key issues raised in the Environmental Report and consultation, together with the responses to those issues on the part of those developing the Plan itself.
- Monitoring and review are undertaken throughout delivery of the plan to help identify adverse effects and to provide information for the next programming iteration.

The SEA process has been developed, to a large extent, for use in informing strategic plans with a strong physical component, and which, like the Regional Spatial Strategy, have major influences on the region. In those cases, it is possible to describe in some detail the baseline situation with respect to the environment, and to consider different ways of meeting the aims of the plan against that setting.

While these principles clearly remain valid, there are detailed issues involved in following a similar approach in the case of revenue plans such as the Convergence Programme. In particular:

 Despite its relative importance, the Programme represents only a small proportion of the total public and private sector resource available in the area. Many other issues will affect the state of the environment indicators which provide the context in which the Programme operates. It is therefore necessary for the SEA to retain a clear focus on what the Programme can do.

⁹ Screening is not required in this case – the European Commission has issued guidance confirming that SEA is required.

A significant proportion of the available resource, as described in the Operational Programme, is targeted at revenue based actions, the detail of which is not yet known. Only a small number of capital projects are specifically identified in the Plan. In this circumstance, it is possible to identify, for the bulk of the programme, only the range of and scale of impacts which might result, but not the impacts themselves. Detailed project selection which will to a large extent determine the environmental and economic impacts of the programme will take place at the level of regional decision making over the 7 years of operation of the Plan.

A tailored approach has been developed in order to meet both the detail and spirit of the SEA requirements in this context. Specifically:

The environmental context material has been expanded to cover the interaction of the environment and economy, including, for example data on energy costs, and emerging studies on the likely impacts on the economy of climate change. There is also recognition that key issues for the environment in the sub-region at times require translation, to ensure they are relevant to the activities which are likely to be supported by the Programme. The overall aim has been to reflect the approach, taken in the RES, of making explicit that the environment is an economic driver, not just the passive setting against which economic development takes place.

Although this is the first time that SEA has been formally required in the context of EU Structural Funds Programmes, it is important to note that very similar work to that required by SEA has, in practice, been undertaken and evaluated in the current 2000-06 programming period. Notably, this body of evaluation material shows that implementation and delivery arrangements are as important in determining eventual environmental impacts as are strategic aims. This finding has been reflected in the SEA approach, which examines and presents clear recommendations on these issues.

Monitoring indicators have been proposed which reflect the activities likely to be undertaken by the Programme, but which link to the strategic issues discussed in the context material. This has been done to ensure that the progress of the Programme in relation to SEA aims can be recorded clearly.

3.2 Process of Programme Development

The process of developing the OP is set out in the table below, with the relevant SEA steps set out in parallel. The process ran from August 2006 until May 2007.

Steps in Programme Development	Steps in SEA Process		
EC documents and the (then draft) NSRF set	These documents provided context for the		
out the broad areas which can be covered by	SEA Scoping Report.		
the OP, and also emphasise the need for			
connection to regional priorities as set out in			
the RES.	A 0(1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
SWRDA and GOSW, with Cornwall County	A Steering Group was been set up to		
Council and regional partners, co-ordinated	contribute to the environmental aspects of		
the production of detailed socio-economic material, with support from Ekos Consultants.	the Convergence Programme, and also to oversee the SEA process. Representatives		
material, with support from Exos Consultants.	from GOSW, SWRDA, Environment Agency,		
A number of Task and Finish Groups were	English Heritage, Natural England, and the		
set up and provided input into the draft	Objective One Partnership contributed.		
Programme; a large scale consultation event			
was held in Newquay at the start of October	In addition, wider consultation on the Scoping		
which also helped develop the approach.	Report was undertaken with Environment		
	Kernow, an environmental umbrella		
	organisation.		
The draft Operational Programme was	The Environmental Report was produced,		
developed, taking into account summary	based on the actions set out in the draft OP,		
findings from the SEA process and the	and taking into account responses on the		
finalised NSRF.	Scoping Report.		
Consultation on both the draft OP and Environmental Report ran from late November 2006			
	until February 16 th 2007. In addition to written submissions, a series of meetings		
(concentrating on the environmental element) were held with interested stakeholders in January 2007.			
A revised OP, taking into account	The Environmental Report was updated (this		
consultation responses, will be submitted to	document) taking account of changes made		
the European Commission by the end of May	in the structure and content of the OP.		
2007.	in the structure and someth of the of .		

3.3 Partnership Involvement and Consultation

One of the strengths of EU Programmes, often highlighted in evaluations, is the high degree of partnership involved. In line with this, a steering group was been established to oversee the SEA. It involved representatives of the Environment Agency, Natural England, English Heritage, South West RDA, and GO-SW. The group contributed to, and commented on, the material which has been used in this Environmental Report, and, subsequently, on the content of the SEA Statement.

Consultation Questions

 Do you have any comment on the approach proposed to undertaking the SEA?

4. Environmental Policy Context

4.1 Approach to Determining Relevant Plans, Programmes and Policies

This section outlines the relevant plans, programmes and policies (PPPs) which provide the context for the OP. Its aim is to show how the OP has been developed, and the extent to which actions are informed, constrained or focused by that context.

It is not possible for this list to be exhaustive. The range of policies, plans and strategies which could potentially be relevant in some way to projects ultimately supported by the OP, could extend to virtually all of those with a bearing on economic, social and environmental issues affecting Cornwall and the Isles of Scilly. However, the extent to which many of those documents would influence the OP or individual projects supported by the OP, is likely to be marginal in many cases. Further, there would be considerable duplication between them, since many policies essentially focus on the same generic aims, albeit at different geographic or strategic levels, and many – for example the Regional Spatial Strategy – already summarise and take account of the considerable library of research and policy development in Cornwall and the Isles of Scilly. It is more appropriate for this SEA to refer to that work than to repeat it.

Accordingly, the documents below have been identified as the most directly relevant to the development of the Programme. Wider concepts, notably Defra's commitment to *one planet living*¹⁰, have also informed the digest of key issues.

4.2 Key Strategic Documents

European Level

Lisbon (1997) and Gothenburg (2001) European Councils

Council Regulation (EC) on the European Regional Development Fund (ERDF), European Commission, 2006

Council Decision on Community Strategic Guidelines for Cohesion, European Commission, (2005)

6th Environmental Action Programme (2002)

EU Sustainable Development Strategy (2005)

Water Framework Directive, European Commission, (2000)

Natura 2000:

- Habitats Directives (92/43/EEC)
- Birds Directive (79/409/EEC)

EU Landscape Convention

National Level

UK National Strategic Reference Framework (2006)

Securing the Future – delivering UK Sustainable Development Strategy (2005)

Climate Change: the UK Programme (2006)

Landscape Character Assessment: Guidance for England and Scotland (2002)

¹⁰ See, for example, the Ministerial speech at http://www.defra.gov.uk/corporate/ministers/speeches/david-miliband/dm060703.htm

Regional Documents

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Regional Economic Strategy for the South West (2006) and associated SEA
Regional Spatial Strategy (consultation draft, 2006) and associated SEA
Regional Sustainable Development Framework for the SW
SW Regional Environment Strategy & Implementation Plan
SW Regional Assembly Waste Strategy 'From Rubbish to Resource'
South West Biodiversity Implementation Plan (2004)
South West Nature Map
South West Historic Environment Strategy (2005)
The Way Ahead – Delivering Sustainable Communities in the South West (2005)
Just Connect – The Integrated Regional Strategy, SW Regional Assembly
Strategy & Action & Associated SEA

4.3 Environmental Context

As with policies, plans and strategies, a great deal of data is clearly available on different aspects of the state of the environment in Cornwall & the Isles of Scilly. However, much of the data is only indirectly relevant, to the aims and activities which will be influenced by the Programmes. The detailed context material is available in Annex 1. The material below summarises the key points which emerge, together with key policy points from the documents and strategies above.

SEA Topic	Data	Trends and Key Points
Population	Population estimates and trends will be included in socio- economic data, as will data on demographic structures and trends.	The population of the SW has been rising at the fastest rate of all English regions. This trend is also evident in Cornwall and the Isles of Scilly, and is expected to continue, driven in part by the high quality of life in the region. There is increasing demand for housing, for the use of transport infrastructure, and on environmental resources. Existing policy, as set out in the RSS, is to accommodate that growth in ways which minimise negative environmental impacts.
Human health	Data on life expectancy is included in the socio-economic profile, along with wider information where related to the aims of the OP. Some information on health and environmental quality is also included.	Life expectancy in the SW is among the highest in England. Studies generally show a positive relationship between employment (and voluntary work) and health. Local environmental improvements can also be linked to health improvements, and to a number of key health aims, especially around promotion of active lifestyles.
Biodiversity, Flora and Fauna	Data on designated areas are included, together with assessment data on their condition. Trend data on bird species, including farmland birds, is one of the government's headline indicators of sustainable development.	The proportion of SSSI's in target condition is continuing to increase, but a significant minority remain in poor condition. One of Defra's PSA targets is to have all SSSI's in favourable condition by 2010. All Natura 2000 sites are also designated as SSSI's. The majority of current pressures on biodiversity (and on countryside landscape and water quality) are most directly associated with agricultural practices, and with demand for products from the food and drink sector. There has been a long-term decline in farmland bird numbers, although there is some evidence of populations stabilising more recently. Agri-environment schemes which have nature conservation (and landscape quality) central aims have been introduced and expanded in recent years.
Landscape & cultural heritage	Data on landscape designations such as National Parks and Areas of Outstanding Natural Beauty are available, as are data on the occurrence of historic and distinctive landscape features, and on landscape change. It is important to note that the built landscape, in terms of the use of local materials, building design and the layout of towns and villages, is also very distinctive in the county. Data are also available on the extent to which landscape, countryside and coast represent attractions for tourists.	In common with other parts of England, there has been a long term decline in a number of distinctive landscape features over the long term, largely associated with agricultural practice. The natural and historic landscapes of the SW are widely recognised as forming the primary attraction for tourists and are also a central aspect of quality of life in Cornwall and the Isles of Scilly. There is some evidence of landscape change which is out of character with existing features.
Soil / Change of land use	Soil condition in the Programme area is closely associated with agriculture, and direct effects from the Programme are therefore unlikely. However, increasing development and expansion of urban areas implies a wider change in land use. Data on the reuse of previously developed land is included.	The re-use of brownfield land for housing within the SW is at lower levels than in England as a whole. However, RSS acknowledges that, although the SW has large areas of brownfield land, much of it is located in areas where its re-use would worsen other environmental trends, particularly in terms of transport and climate change emissions. Existing policy, endorsed by the SSA / SEA of the RSS is to concentrate development in existing towns and cities, re-using land where possible in that context.
Water	Data are available on water quality, availability, and cost	Water quality has been improving, but there remain some poorer areas in terms of biological quality in particular. There is also increasing pressure on water use, and water availability may be a constraint on development in some areas in future. Water costs per unit have been rising in recent years, although standing charges have fallen.

Air quality	Local air quality data are limited; where problems exist, they are concentrated in urban centres, and are most closely associated with emissions from transport.	Local air quality has improved in recent years in line with technological advances in road transport engines and emissions. However, rising volumes of road transport and congestion mean that isolated issues remain, concentrated in urban centres.
Climatic Factors	Climate change emission data by source are available. Trend data on transport use, the fastest growing source of emissions, is available. Limited data exist on the generation of renewable energy in the region. Data are also available on the benefits from existing energy efficiency work, at both project and programme level, and on energy costs.	The twin issues of reducing climate change emissions and adapting to unavoidable effects of climate change are highlighted across all policies, from EC to regional level. The issues are also recognised in the RES. Existing trends at UK level show a slight fall in emissions from industry, but a consistent rise in emissions from transport, and these trends are thought similar in the SW. More detailed analysis was undertaken in support of the SSA for the RSS, which highlights the scale of change of approach that would be necessary to reduce emissions, especially in relation to transport (including air travel, where emissions are increasing rapidly). Experience elsewhere suggests that significant savings from more efficient use of energy are possible within business, more so in the context of rising energy prices. Discussion on the most effective ways to address climate change emissions in the context of the Programme is likely to be a major focus for the SEA, particularly in the context of the strengthened focus in the finalised NSRF and considering wider developments including changing political emphasis and the publication of the Stern Report.
Material	Data on waste arisings by source (domestic, industrial,	Volumes of waste generated in the region are of comparable levels to those elsewhere in
assets	commercial) are available, as are data on recycling. It is also hoped that data on the costs of waste disposal	England. Construction waste forms the largest single component of all waste, and volumes are rising. Volumes of industrial waste are falling slowly.
	will be available.	Landfill and recycling are the main method of disposal, and there is increasing pressure on
	Data on the benefits from waste minimisation projects are	landfill availability. Volumes recycled are rising.
	also being sought.	Costs of waste disposal are also rising, driven jointly by the need to meet higher standards and increases in landfill tax.
		ed with the agreement of the steering group as being relevant to the aims and activities
of the Program		No trando are available, there is a greater concentration of ICO 14004 registrations in areas
Environmental performance	Data are available on ISO14001 registrations, but may not be complete. Other data, for example, on registrations of	No trends are available; there is a greater concentration of ISO 14001 registrations in areas with large manufacturing industry bases such as the Midlands, than in the SW.
of business	BS8555 (environmental standard for SMEs) are being investigated.	Registrations overall represent a very low proportion of the business base.
Local	Information on the role of the environment as a	Case studies illustrate the contribution that environmental actions can make to local
environmental	component in local regeneration is being sought.	regeneration. Generally, activities focus either on improvements to the local environment, or
quality		on the development of social economy businesses which focus on recycling. Such projects
		are frequently undertaken as a focus for volunteering, training and work experience, and
Obilla Acciois		have can particular benefits in engaging those furthest from the labour market,
Skills, training & awareness		In the longer term, higher levels of understanding of environmental issues and solutions will be critical to delivery of a more sustainable economy.
a awaitiitss		be chilical to delivery of a filore sustainable economy.

4.4 Issues in Data Availability

Government guidance on SEA recommends that gaps in data should be highlighted, so that data collection can be improved to better inform future environmental work. The data on the broad state of the environment is generally good in most cases, and it has been possible to find at least some material on environment / economy drivers. However, as noted in the table above, data is much less consistent in relation to a number of areas where the Programme may support project activity. For example:

- Information on the relative environmental performance of, and issues facing, different industry sectors is not available, beyond very broad categorisations.
- Systematic data on the quality of, and access to, greenspace in urban areas is not available.
- Data on the outcomes from environmental activities is available, but generally on the basis of case studies, rather than from consistent, large-scale evaluations.
- Data on the integration of environmental issues within training content is very limited.

4.5 Past Environmental Performance of Past European Structural Fund Programmes

As noted above, considerable work has been undertaken in respect of environmental integration into economic development in the context of all EU Structural Fund Programmes during the 2000-06 period. In 2005, Fraser Associates undertook a large scale study¹¹ for Defra, which looked at all Programmes in England and which analysed:

- The depth and quality of environmental integration in written Programme materials;
- Centrally, the extent to which the environmental aims of the Programmes were delivered by projects in practice; and
- Based on extensive consultation, the reasons for variations in performance between regions.

The Cornwall and Isles of Scilly Objective One and SW Objective 2 Programmes were, respectively, the first and second most successful Programmes in England in delivering environmental integration through the projects supported by the Programmes.

This integration was evident in two types of project:

Vertical projects are those with an environmental theme, but which also deliver economic and social benefits. In the Programmes in the South West, these included a number of green tourism projects.

Horizontal projects have a mainstream, traditional economic development focus, but were delivered in ways which incorporated higher environmental standards. Examples are business development projects which encourage better environmental performance as an integral aim.

The graph below shows the incidence of vertical and horizontal projects in all English Programmes. A key point is that addressing issues like climate change in the context of climate

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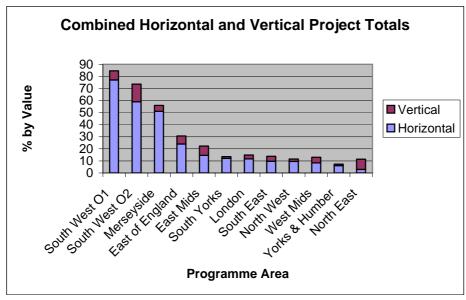
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¹¹ The Effectiveness of EU Structural Funds in Delivering the Government's Environmental Objectives, Fraser Associates with the Rural Development Company for Defra, 2005, http://www.defra.gov.uk/rural/structure/default.htm

change cannot be done by individual projects, but rather require smaller but more consistent actions – both South West Programmes have a strong track record in this respect.

Lessons from Other Regions

Notwithstanding the strong performance in the SW, the study found examples of other environmental project types which were more common in other areas, particularly around local environmental improvements and support for the (environmental) social economy sector. Depending on decisions taken in respect of the broad scope of the Programme, it may be appropriate to learn from experience elsewhere, particularly in relation to the increased focus on those furthest from the labour market.



Source: Objective One Website

Success Factors

The study found that the range of data used in preparing environmental profiles was similar in most Programme areas. While these data could provide a useful, if partial, outline of the environmental characteristics of Programme areas, the profiles were found not to have been a strong driver of Programme content.

Where integration in the aims of Programmes was more effective, it was generally as a result of the activities of environmental champions who understood the processes involved, and had promoted the greening of generic economic instruments.

Integration of environmental concerns into programme documents, application forms, specific guidance, monitoring indicators etc, was seen as a precondition for success, rather than being sufficient on its own. The findings from the consultation phase of the study, consistently across England, emphasised that the integration of environmental advice and expertise in decision-making processes, and during the development and delivery of projects, was the greatest single factor in achieving success.

This is consistent with the situation in the 2000-06 Objective One and Objective 2 Programmes in the South West of England. Both employ in-house environmental specialists who are able to translate policy aims into actions on the ground for those delivering projects, thereby helping them meet the overall aims of the Programme in environmental as well as economic terms. The posts are funded through Technical Assistance, with support from environmental agencies and other regional partners, and post-holders led on the co-ordination of material during the production of the respective SEAs for the new Programmes.

4.6 Developing SEA Criteria

Ultimately, the aim of considering the material above is to provide the best possible understanding of, in turn:

- The environmental situation in the region overall
- The likely areas of interaction between the environment and the Programme
- The extent to which past work around these areas of interaction has taken place.

Building on the above, SEA criteria have been developed which are used, below, in assessment matrices. Discussion with the SEA Steering Group suggested that two levels of criteria would be appropriate. These would assess:

Firstly, the likely impacts of individual elements and activities proposed. These will be linked to specific environmental issues, as developed above, and will be more closely related to SEA topics.

Secondly, and building on the above, the extent to which the overall proposals, and individual elements in combination, contribute towards agreed aims. These criteria should be closely linked to aims agreed in regional strategy material.

The criteria set out below were circulated in the Scoping Report, and reflect comments received. They have also been focused to reflect the conclusions from the policy review and profiling exercise.

The full list of specific criteria is presented in the table overleaf. In order to present the assessments in a more concise form, only the headline questions (those in bold, below) are reproduced in the individual tables; the full version is presented to make explicit the underlying aspects of the questions being asked of the Programme.

The following are proposed as criteria for higher-level assessment:

To what extent does the range of activities proposed within the Programme...

- Promote a sustainable approach to the use of environmental resources?
- Manage risks associated with future environmental change, especially in relation to climate change?
- Protect and enhance the natural environment?

Table 4.2: Detailed SEA Criteria

SEA Issue	Assessment questions
	To what extent will the activities proposed under the programme
Climate change	address climate change by:
	 Reducing emissions associated with organisations receiving support through the Programme?
	Promoting the development and use of renewable energy?
	Supporting projects which reduce emissions?
	Affecting trends in transport use?
	include actions to mitigate the existing and predicted effects of climate change?
Material assets	encourage greater efficiency in the use of materials by:
	Promoting the efficient use of materials in (particularly) new and existing industrial processes?
	Encouraging organisations receiving support through the programme to move up the waste hierarchy?
	Promoting the use of recycled materials in construction projects?
Water quality and	contribute towards improvements in water quality and management, by:
management	 Promoting efficient use of water and improving the quality of waste water produced by organisations supported through the programme?
	 Ensuring capital projects incorporate technique to minimise pollution from run off, and capture greywater?
	Contributing towards management of water catchments to reduce flood risks?
Climate change, air	reduce emissions and development impacts associated with transport by:
quality	Encouraging developments in locations served by public transport?
	Promoting green transport plans as part of all developments?
	Reducing the need to travel through the use of ICT?
	Encouraging exports based on intellectual and high value, low bulk products and services?
	Encouraging local supply chains?
Landscape	consider landscape impacts by:
	Ensuring built developments and their setting contribute to landscape character and local distinctiveness?
	Promoting the economic re-use of historic buildings?
	Managing tourism impacts associated with visits to historic sites and features?
Biodiversity, flora and	contribute towards improvements in biodiversity, by:
fauna	Ensuring the setting of built development, and local environmental improvements to incorporate habitat creation in line with biodiversity
	targets?
	 Developing, through the promotion of sustainable purchasing, the market for local agricultural goods produced to high environmental standards?
Development of the	seek to develop sustainable technologies, both as a sector in their own right, and as a tool for improving the wider environmental
environmental	performance of the programme area?
economy	
Raising awareness of	improve understanding of environmental issues and solutions among, and appropriate to, all organisations receiving support
environmental issues	through the Programmes?
and solutions	

Consultation Questions

- Do you have any comments on the range of environmental policies and data which have been used to focus the assessment questions?
- Do you have any comments on the assessment questions themselves?

5. Assessment of the Draft Operational Programme

5.1 Overview of the Process

This chapter presents, in matrix form and using the criteria described above, the assessment of the draft Operational Programme. The overall structure of the Programme is set out in the table below. This table, and the remainder of this chapter, have been updated to reflect the change made following consultation. Activities which have been removed are shown in *italics* in the sub-heading column; those which have been added are shown in *bold italics* in Priorities 1 and 2:

Table 5.1: Overview of the Convergence Programme

Priority	Sub-Heading		
Priority Axis 1:	(Stimulating) Research and Development		
Innovation and	(Supporting) Ideas, Innovation and Knowledge		
Research &	Specialist Infrastructure for Innovation and R&D changed to		
Development	Innovation and Incubation; some overlap in activity		
	Environmental Technologies and Renewable Energy		
Priority Axis 2:	Enterprise Culture		
Enterprise and	New Starts changed to High Growth Companies, similar content		
Investment	Increasing ICT Take-up and Use		
	Increasing Investment by the Private Sector		
	Accessing National and International Markets		
	Business Infrastructure for a Modern Economy		
	Accelerating Business Growth		
	All of the above retained as elements under a general heading of		
	productive business, which also now includes environmental		
	performance, but it is not clear how this will operate in practice.		
	Therefore, individual assessments have been retained for clarity.		
	Environmental Technologies and Renewable Energy		

There has been much more significant change in relation to Priorities 3 and 4. In the consultation draft, Priority 3 reproduced, from the National ESF Programme, the types of activity likely to be support in Cornwall and Isles of Scilly. The role of the (ERDF) OP was limited to the provision of infrastructure in support of those activities. Priority 4 then focused on transport infrastructure, including Newquay Airport, digital infrastructure, and on place-based regeneration.

The revised Programme has now removed all reference to ESF activities, and has separated and expanded the activities proposed under Priority 4, so that they now allow for three levels of depth, from major regeneration to support for individual projects. The activities in the current OP are set out in the table below, and the assessment matrices which form the main part of this chapter have been updated accordingly.

Priority Axis 3:	Newquay Airport
Transformational	Digital Infrastructure
Infrastructure	Knowledge Infrastructure
Priority Axis 4:	Integrated Place Regeneration
Place Based	Realising Place Potential
Regeneration	Place Based Investment Fund

Levels of Assessment

The assessment has been undertaken at three levels.

- Firstly, there is an assessment of the broad environmental approach proposed by the Programme, as set out in the strategy and in the Environment Cross-Cutting Theme Chapter of the Programme.
- Secondly, individual matrices are presented on the basis of each sub-heading in the table above.
- The third level draws together the above, and assesses the overall likely impacts of the Programme.

Determination of 'Significance'

Conventionally, impacts are described in text, with impacts summarised by the use of symbols such as:

- ++ significant positive environmental impact
- + limited positive environmental impact
- 0 no impact
- limited negative environmental impact
- -- significant negative environmental impact
- ? impact to be determined, but likely to be limited
- ?? impact to be determined, and likely to be significant

The assessments show that the nature of likely impacts will vary depending on the precise projects supported, the detail of which is not determined during the OP process. Accordingly, some assessments combine symbols (? / + impacts probably positive but uncertain), and the 'mitigation' column in each matrix explores the conditions which would be necessary to ensure positive impacts at the delivery stage.

The extent to which an impact is significant or not, especially in the situation where detailed impacts are very difficult to predict in the first place, is obviously difficult. In practice, the findings reflect the combined judgement of the consultants and SEA steering group. These judgements have been informed by previous, project and programme level evaluation work in EU Structural Funds.

It is also important to note that the significance of impacts discussed is relative – although the Programme is relatively large in terms of public sector spend, it remains very small in comparison to the GDP of the area as a whole. As a result, the various environmental impacts associated with the Programme are also likely, for the most part, to be limited in absolute terms, but can be assessed as relatively larger or smaller.

5.2 Assessment of the Broad Aims of the Programme

The Programme objective is 12:

To establish the momentum for transforming the economy to a high value added economy where knowledge, environment and quality of life underpin sustainable economic growth.

Successfully developing a high value added, high skilled economy is a major challenge which will need long term commitment from all of the key stakeholders. The effects of peripherality are profound, and overcoming the constraints of distance from markets cannot be under-estimated. The Convergence Programme can, however, establish a momentum of change which will need to continue for many years after the Programme has concluded.

It is on this basis that four operational objectives have been set. These are:

- 1. Transforming the economy to a more knowledge based, high value added economy with a broader range of sectors, and a reduced dependence on low paid jobs;
- 2. Increasing the range of employment opportunities available to the community;
- 3. Managing economic growth in a sustainable manner; and
- 4. Take a leading role in investing in the drivers of a low carbon economy

It is clear from this that the Programme takes a strongly positive view of the integration of environmental issues into objectives at the strategic level. More detail on the approach is provided in section 1.8, under the Environment heading:

Environment

The quality of the environment is one of Cornwall and the Isles of Scilly's unique assets, generating considerable benefits for residents and providing a major draw to the area for tourists, economic migrants and businesses. However, Cornwall and the Isles of Scilly face a number of environmental challenges, including climate change and resource efficiency.

In line with the Government's sustainable development strategy, the Convergence Programme will address the Environment Cross Cutting Theme through recognising:

- the potential impact of economic regeneration on the environment; and
- the potential economic benefit that the environment can bring.

The Convergence Programme will both build on the foundations created by the delivery of the Objective One programme and reflect on the region's aim to demonstrate that economic growth can be secured within environmental limits to bring prosperity to the region. These aims will be achieved through:

- The sustainable use and management of resources, including water and waste;
- The exploitation of the research and development potential of the Combined Universities in Cornwall partnership to trigger eco-innovation, particularly for a lower carbon economy;
- The growth of the environmental technologies sector; and
- The embedding of energy efficiency and renewable energy solutions into all types of business development.
- The Convergence Programme will invest in a portfolio of projects that will include reducing carbon emissions compared with conventional approaches and projects with the potential for being carbon negative.

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 $^{^{\}rm 12}$ This text is reproduced from the Operational Programme, page 6

Chapter 7 (p90) of the OP covers Cross-Cutting Themes, with section 7.1 on the Environment. There is clear, explicit linkage between this section and the outcomes and recommendations of the Environmental Report and subsequent SEA Statement. Again, a strongly positive approach to the environment is set out, and there is a clear aspiration to move well beyond the minimum required, in order to help deliver the UK Government aims of a 'step change' in meeting – and exploiting opportunities surrounding – environmental challenges. In particular, this section seeks to promote eco-innovation, to future-proof economic activity against environmental impact, and to improve business environmental performance and efficiency. There is also clear recognition, following the discussion in the RES, that environmental limits have an impact on the type of economic development which should be promoted. Pages 102-103 of the Programme (overleaf) summarise the environmental approach by Priority Axis.

Further sections discuss issues around Carbon Management; the approach to this has changed from the initial discussion, and the original and finalised approaches are covered in more detail in Chapter 6 of this Environmental Report.

Comment and Analysis

Overall, the approach described to environmental integration is strongly positive. There is clear reference to past work and evaluations of its success, but at the same time recognition that the debate surrounding environmental issues has moved on considerably, and that a significantly stronger approach is now required, particularly in relation to emissions of greenhouse gases. There is a high degree of consistency between the aims of this SEA, and the types of activity highlight against each Priority Axis.

However, past experience shows clearly that, in order for strategic commitment to flow through to delivery, it is necessary to thread environmental issues into all Priority Texts, and also to ensure that delivery mechanisms and structures take on board the aims set out in dedicated environmental sections. The following sections test the extent to which this is done at the levels of Priorities and sub-headings.

Actions by Priority – Reproduced from the OP, pp102-103

Environment as an Economic Driver /	Priority Axis		Response to be reflected in project design and delivery
Drivers of a Low Carbon Economy		Environment	
Research, development and incubation of environmental goods and services, including Renewable Energies will result in new less resource and "green house" gas intensive technologies and the growth of emerging		construction	Projects expected to be exemplars of environmental best practice in their design, construction and operation, including resource conservation, use of re-cyclates and embedding of micro generation. / opportunities to drive the market in low environmental impact construction
sectors.	Research and	associated with new	Mainstreaming of environmental efficiency support into all mainstream and bespoke business support
The region's HE/FE institutions hold specialist knowledge in some fields of		products and services identified	Proofing new technologies against their environmental impacts
environmental science and renewable le energy. Better links with businesses operating in these fields will result in the commercial exploitation of this expertise			Product and process innovation to address environmental issues including climate change
The resource and energy efficiency and renewable energy strand of activity will support both existing and new businesses.		construction	Projects expected to be exemplars of environmental best practice in their design, construction and operation, including resource conservation, use of re-cyclates and embedding of micro generation. / opportunities to drive the market in low environmental impact construction
Growth of businesses responding to greater demands for environmental technologies, goods and services – including the potential for growth in exports.	Investment		Mainstreaming of environmental efficiency support into all mainstream and bespoke business support activity.
Environmental management training resulting in more competitive sustainable businesses.			Proofing business development activities against their environmental impacts
Development of economically transformational infrastructure in the most environmentally smart way as exemplars for other public and privates sector	HTAUSIOHHAHOHAI	associated with construction	Projects expected to be exemplars of environmental best practice in their design, construction and operation, including resource conservation, use of re-cyclates and embedding of micro generation. / opportunities to drive the market in low environmental impact construction
development		associated with new ICT	Projects expected to be exemplars of environmental best practice / use of ICT to reduce the need to travel whilst enabling connectivity both within the region, nationally and globally

Environment as an Economic Driver / Drivers of a Low Carbon Economy	Priority Axis		A package of measures to mitigate the carbon emissions, including energy efficiency targets, renewable energy systems and off-setting Response
Re-invigoration of key towns will improve their attractiveness to investors, as long as care is taken to maximise the design value of new development and maintain the historic character of areas.	Place Based Regeneration	Environmental impacts associated with construction	Projects expected to be exemplars of environmental best practice in their design, construction and operation, including resource conservation, use of re-cyclates and embedding of micro generation. / opportunities to drive the market in low environmental impact construction
Maximising the use of the embedded energy in existing economic infrastructure		Management of the need to travel	Development of sustainable local transport options within and between the urban areas

Priority Axis 1: Innovation and Research & Development

5.3 Stimulating Research & Development

Activities in bold italics have been added; the aim of promoting greater interaction between businesses and HE / FE has been moved from this to the subsequent heading.

- Enhanced research capacity in HE, particularly in growth potential sectors and increasing research skills available to business
- Increasing business expenditure on research and development through providing support for exploring the potential of new ideas
- Increasing the take up of research and development support from national and EU sources through working with companies and networks to build competitive capacity
- Research Centres (Marine Renewable Energy, Peninsula Medical School)
- Proof of concept funds

To what extent will the activities	Likely Impact	Mitigation issues / comment
proposed under the programme		
seek to reduce climate change	For all headings, environmental impacts will depend	Positive impacts are more likely where environmental support
emissions?	on the specific projects and businesses assisted,	and advice is provided and taken up at an early stage of
include actions to mitigate the existing	and the form of assistance given; support for the	product and process development – this will require the
and predicted effects of climate change?	Marine Renewable Energy sector is ultimately likely	integration of environmental expertise in appropriate peer
encourage greater efficiency in the use	to be positive.	group appraisal systems.
of materials, including re-use of waste?		
contribute towards improvements in	Likely significant, but uncertain impacts / ?? /	Likely impacts including mitigation measures ++
water quality and management?	++	
reduce emissions associated with	In the absence of other factors, economic	Some expansion of transport is almost certain. Mitigation
transport?	expansion is likely to be associated with a growth in	could include:
	transport.	 Local supply chain work
		 Use of ICT to reduce travel requirements
	Likely negative impact of uncertain scale - / ?	
		Likely impacts including mitigation measures ?/++
ensure developments enhance and fit	Impacts will depend on the demands of business in	Promotion of environmental quality as a factor in food & drink
within both natural and built landscapes,	terms of resource use, and will be most significant	business, or local / environmental sourcing in any sector, is
including historic townscapes?	in relation to the food & drink and extractive	likely to help deepen market demand for environmentally-

contribute towards improvements in biodiversity?	industries. There may also be impacts associated with the use of renewable energy in a marine context.	friendly farming and for higher environmental management standards in other sectors. Appropriate consideration should be given to the (non-energy) impacts of marine renewable energy, for example through training for developers.
	Possible secondary impacts depending on	
	business sectors supported - /? /+	Likely secondary impacts including mitigation
		measures ?/+
seek to develop sustainable	Partial direct aim through the marine renewables	Positive impacts are more likely where environmental support
technologies, both as a sector in their own	centre; wider impacts will depend on the extent to	and advice is provided and taken up at an early stage of
right, and as a tool for improving the wider	which products generate demand for sustainable	product and process development – this will generate local
environmental performance of the	technologies through environmental proofing.	demand for environmental technologies and expertise, and at
programme area?		the same time raise awareness of environmental issues.
improve understanding of environmental	Possible positive impact of uncertain	
issues and solutions among, and	scale ?/+/++	Likely impacts including mitigation measures ++
appropriate to, all organisations receiving		
support through the Programmes?		

5.4 Supporting Ideas, Innovation and Knowledge

The description of activities under this heading has changed following consultation, and the new text is given in the box below. However, the activities themselves have not altered materially in terms of their likely environmental impact.

Focus on linking companies to University and HEI expertise, with a particular emphasis on addressing a weakness in support provision, exacerbated by peripherality. It will include technology translation activities.

A major theme will be the management and use of knowledge within businesses; with a focus on management and exploitation of the full range of intellectual assets to generate business led innovations, product and process improvements (linked to innovation centres). It will encompass the full range of intellectual property rights and the proactive identification of external drivers which might provoke innovation e.g. competition, regulatory change; consumer pressure; technological change; and translation to business messages.

To what extent will the activities	Likely Impact	Mitigation issues / comment
proposed under the programme		
seek to reduce climate change emissions?	For all headings, environmental impacts will depend on	Positive impacts are more likely where environmental
include actions to mitigate the existing and	the specific projects and businesses assisted, and the	support and advice is provided and taken up at an early
predicted effects of climate change?	form of assistance given	stage of product and process development – this will
encourage greater efficiency in the use of		require the integration of environmental expertise in
materials, including re-use of waste?	Likely significant, but uncertain impacts / ?? / ++	appropriate IPR audits, peer group appraisal systems,
contribute towards improvements in water		workshop materials, scenario planning, and training.
quality and management?		
		Likely impacts including mitigation measures ++
reduce emissions associated with	In the absence of other factors, economic expansion is	Some expansion of transport is almost certain.
transport?	likely to be associated with a growth in transport.	Mitigation could include:
		 Local supply chain work
	Likely negative impact of uncertain scale - /?	 Use of ICT to reduce travel requirements
		Likely impacts including mitigation measures ?/++
ensure developments enhance and fit	Impacts will depend on the demands of business in	Promotion of environmental quality as a factor in food &
within both natural and built landscapes,	terms of resource use, and will be most significant in	drink business, or local / environmental sourcing in any
including historic townscapes?	relation to the food & drink and extractive industries.	sector, is likely to help deepen market demand for

contribute towards improvements in biodiversity?	There may also be impacts associated with the use of renewable energy in a marine context.	environmentally-friendly farming and for higher environmental management standards in other sectors. Appropriate consideration should be given to the (non-
	Possible secondary impacts depending on business sectors supported - /? /+	energy) impacts of marine renewable energy, for example through training for developers.
		Likely secondary impacts including mitigation measures ? / +
seek to develop sustainable technologies, both as a sector in their own right, and as a tool for improving the wider environmental performance of the programme area?	Partial direct aim through the marine renewables centre; wider impacts will depend on the extent to which products generate demand for sustainable technologies through environmental proofing.	Positive impacts are more likely where environmental support and advice is provided and taken up at an early stage of product and process development – this will generate local demand for environmental technologies
improve understanding of environmental issues and solutions among, and appropriate to, all organisations receiving support through the Programmes?	Possible positive impact of uncertain scale ?/+/++	and expertise, and at the same time raise awareness of environmental issues. Likely impacts including mitigation measures ++

5.5 Innovation and Incubation – changed from Specialist infrastructure for innovation and research and development

Although this heading title has changed, there remain common activities from the first draft, around the provision of business space to support innovation. In addition, there is now more detail on support for new areas of activity, and the relevant text is reproduced in the box below. The assessment matrix has been updated to reflect the new focus of these activities – in practice, the

Addressing the shortage of specialist support for companies and individuals to create and further develop ideas This will include existing businesses incubating new ideas, university staff and students, healthcare employees and other entrepreneurs looking at new start ups and new investment based around innovation and research.

Support will include the establishment and operation of a network of innovation centres, specialist research centres, innovation centres and incubation space, and the provision of small grants to staff and students in HE and FE initially. Support will also be provided for university spin-out companies.

To what extent will the activities	Likely Impact	Mitigation issues / comment
proposed under the programme		
seek to reduce climate change emissions?	The possible range of impacts from <i>capital projects</i> is	All of these aspects (excluding ICT) are considered as
include actions to mitigate the existing and	well understood. Impacts will depend on the extent to	part of the BREEAM assessment process. Commitment
predicted effects of climate change?	which individual developments consider and address:	to BREEAM excellent as the mandatory standard for all
encourage greater efficiency in the use of		new developments is the simplest way to deliver positive
materials, including re-use of waste?	Energy efficiency;	outcomes.
contribute towards improvements in water	Generation of power through on-site renewables	
quality and management?	Landscape and biodiversity impacts (through choice of	Likely impacts from capital development, including
reduce emissions associated with	materials, design and landscaping);	mitigation ++
transport?	Water efficiency and capture and use of greywater;	
ensure developments enhance and fit	Transport implications through site selection, provision	
within both natural and built landscapes,	of video conferencing facilities, and provision of	
including historic townscapes?	facilities for non-car users;	

contribute towards improvements in biodiversity?	The re-use of land, where appropriate. All of these aspects (excluding ICT) are considered as part of the BREEAM assessment process, and there is clear commitment in the Programme to take this approach. Likely significant, positive impacts ++ Impacts in relation to the products and services ultimately developed will, as with other headings under this Priority, depend on the extent to which support services consider and seek to improve environmental aspects of each product during its development process – uncertain, but potentially significant impacts likely -/0/+/++	Impacts including assessment and support to promote environmental management from design stage onwards are likely to be positive ++
seek to develop sustainable technologies, both as a sector in their own right, and as a tool for improving the wider environmental performance of the programme area?improve understanding of environmental issues and solutions among, and appropriate to, all organisations receiving support through the Programmes?	The extent to which this is delivered will depend on demand generated during construction processes. Likely positive impacts ++	The use of BREEAM standards (or their equivalent) will help develop the market for environmental technologies. In addition, the construction of all new buildings to BREEAM standards will act as an exemplar. Likely positive impacts ++ As above, the promotion of environmental integration in the product development process is likely to create positive impacts against both of these criteria +/++

5.6 Environmental Technologies and Renewable Energy

More detail is given under this heading, but the activities proposed have not changed significantly. The box below provides the new text.

The development of an Environmental Technologies and Renewable Energy Initiative which could develop a major new industry in Cornwall and the Isles of Scilly. This will focus on developing an industry leading on the design, development and production for local use and export of products responding to environmental and energy related opportunities; building on real increases in intellectual capital in HE and elsewhere, in particular catalysed by the construction of Wave Hub marine energy testing platform.

To what extent will the activities	Likely Impact	Mitigation issues / comment
proposed under the programmeseek to reduce climate change emissions?	The development of renewable energy will be positive	None necessary.
include actions to mitigate the existing and	in terms of climate change impact.	Trong neodosally.
predicted effects of climate change?	Strong, positive impact ++	
encourage greater efficiency in the use of	Impacts will depend on the types of renewable energy	Provision and uptake of environmental management
materials, including re-use of waste?	developed, materials used and supply chains. These	advice will help ensure impacts are minimised.
contribute towards improvements in water quality and management?	aspects of environmental management are as applicable to the renewables industry as to any other.	Impact including mitigation +
reduce emissions associated with	applicable to the renewables industry as to any other.	mpact melaumy imagation +
transport?	Significant but uncertain impact - / ? /+	
ensure developments enhance and fit within both natural and built landscapes, including historic townscapes?	Impacts will depend on the technologies developed and their eventual location. Renewable industries based on biomass have implications for feedstock	Since the Programme will support businesses, rather than individual projects, mitigation will best be accomplished by training developers in biodiversity aims
contribute towards improvements in biodiversity?	crops which should be considered.	and best practice, but impacts will still ultimately be beyond the scope of the programme.
	Significant but uncertain impact / ?? / ++	
		Impact including mitigation ? / ++
seek to develop sustainable technologies, both as a sector in their own right, and as a	This is the central aim of this heading.	None necessary
tool for improving the wider environmental performance of the programme area?	Strong, positive impact ++	
improve understanding of environmental	Projects under this heading have the potential to act as	Active promotion will help deliver this aim.
issues and solutions among, and appropriate to, all organisations receiving support	exemplars for other parts of the Programme.	Impact including mitigation ++
through the Programmes?	Positive impact of variable scale + / ++	mpaot morading magadon 11

Priority 2: Enterprise and Investment

5.7 Enterprise Culture

More detail is given on this heading, but there is no substantial change in the associated environmental impact.

Focus on young people. This will include extending and co-ordinating enterprise work in schools, and working with the now large student population (both Further and Higher Education). The objective of this strand is to raise the confidence and aspirations of young people, as well as stimulating new enterprise activity. Activities will encourage enterprise as a career option and encourage innovation and enterprise amongst FE and HE students.

To what extent will the activities	Likely Impact	Mitigation issues / comment
proposed under the programme		
seek to reduce climate change emissions?include actions to mitigate the existing and predicted effects of climate change?encourage greater efficiency in the use of materials, including re-use of waste?contribute towards improvements in water quality and management?reduce emissions associated with transport?ensure developments enhance and fit within both natural and built landscapes, including historic townscapes?contribute towards improvements in biodiversity?seek to develop sustainable technologies, both as a sector in their own right, and as a tool for improving the wider environmental performance of the programme area?improve understanding of environmental issues and solutions among, and appropriate to, all organisations receiving support through the Programmes?	The potential exists under this heading for very strong secondary impacts, depending on the eventual businesses developed by young people. These will depend on the extent to which a culture of sustainable development is embedded in the activities proposed. It is also important that students' surroundings reflects these aspirations, in terms of the behaviour and attitudes of the organisations delivering projects. Uncertain impacts, of potentially large scale ?/+/++	The overall aim is to ensure that future generations of businesses, and of business leaders, develop in ways which take account of the changing limits and opportunities set by the environment and wider responses to the challenges posed. A range of activities might usefully be undertaken in support of this aim, including placement opportunities within existing environmental enterprises, and the use of current enterprise leaders as mentors and role models. Likely impacts including mitigation ++

5.8 Previously New Starts now focused on High Growth Companies

Cornwall and the Isles of Scilly have a good start up rate and a high number of enterprises relative to the population. This reflects a considerable number of lifestyle and micro enterprises. There is a need and opportunity to establish a high growth programme which matches the best in Europe. This would focus on providing highly ambitious businesses with bespoke support which addressed the major constraints to rapid growth, including access to finance, internationalisation and mentoring. This intervention would focus on high quality new starts and existing businesses, supporting those with growth potential and in knowledge based sectors through tailored business support activities.

To what extent will the activities proposed under the programme	Likely Impact	Mitigation issues / comment
seek to reduce climate change emissions?include actions to mitigate the existing and predicted effects of climate change?encourage greater efficiency in the use of materials, including re-use of waste?contribute towards improvements in water quality and management?reduce emissions associated with transport?	Start-up businesses are unlikely to have significant environmental impacts given their scale initially, but will do so in the longer term depending on the extent to which they embed appropriate environmental approaches as they develop. Likely significant impact over time/?/++ Economic activity is likely to generate increased volumes of transport; impacts will vary depending on the supply chains and local links developed, and the use of ICT and video conferencing. Possible moderate impacts over time -/?/+	Including environmental advice appropriate to the level and sector of start-up businesses will help ensure their long term viability through reduced resource costs as well as lower environmental impacts. Advice should also incorporate discussion on local sourcing, consideration of environmental aspects appropriate to the sector and market, and the use of ICT. Impact including mitigation ++
ensure developments enhance and fit within both natural and built landscapes, including historic townscapes?contribute towards improvements in biodiversity?	Secondary impacts are likely, depending on the sector in which new businesses are operating. In particular, those in the food & drink and tourism sectors, or those depending on raw materials from other primary industries, have implications through the demand they create. Possible significant impacts over time -/??/++	
seek to develop sustainable technologies, both as a sector in their own right, and as a tool for improving the wider environmental performance of the programme area? improve understanding of environmental issues and solutions among, and appropriate to, all organisations receiving support through the Programmes?	The extent to which these activities will impact on this aim will depend on the demand generated by mainstream businesses. Possible, but uncertain, impacts?/+/++ Impacts will depend on the extent to which support incorporates environmental advice. Possible, but uncertain, impacts?/+/++	Take up of advice, as outlined above, will encourage the development of local markets for sustainable technologies, and will also promote awareness. Impact including mitigation ++

5.9 *Increasing ICT take and use* – now a sub heading under **Productive Businesses**

Increasing the take-up and exploitation of ICT and broadband, including intensive support for high growth enterprises involved in digital applications.

Likely Impact	Mitigation issues / comment
Impacts are likely to be positive, through reduced need	None necessary, beyond promotion of benefits.
Possible, but limited, positive impacts through use of	Possible secondary benefits from seeking to develop
	mechanisms for recycling old ICT equipment.
of products; potential generation of electrical waste as	
a secondary impact with associated cost.	Impact including mitigation +
Limited, variable impacts likely - / ? / +	
No direct impacts likely: 0	None necessary
Impacts are likely to be positive, through reduced need	None necessary
for travel.	
Likely positive impacts + / ++	
No direct impacts likely: 0	None necessary
No direct impacts likely: 0	None necessary
Positive impacts so far as Information Technologies	None necessary
are sustainable in use where they reduce the need to	
travel.	
Limited positive impacts likely +	
No direct impacts likely: 0	None necessary
•	, and the second
	Impacts are likely to be positive, through reduced need for travel. Likely positive impacts + / ++ Possible, but limited, positive impacts through use of computer modelling rather than physical development of products; potential generation of electrical waste as a secondary impact with associated cost. Limited, variable impacts likely - / ? / + No direct impacts likely: 0 Impacts are likely to be positive, through reduced need for travel. Likely positive impacts + / ++ No direct impacts likely: 0 Positive impacts likely: 0 Positive impacts so far as Information Technologies are sustainable in use where they reduce the need to travel. Limited positive impacts likely +

5.10 Increasing investment by the private sector - now a sub heading under **Productive Businesses**

Addressing market failure in the provision of certain types of capital, and assisting SMEs to develop investor ready proposals. Promoting and marketing the area as an inward investment location for high quality, value added business.

To what extent will the activities	Likely Impact	Mitigation issues / comment
seek to reduce climate change emissions?include actions to mitigate the existing and predicted effects of climate change?encourage greater efficiency in the use of materials, including re-use of waste?contribute towards improvements in water quality and management?reduce emissions associated with transport?ensure developments enhance and fit within both natural and built landscapes, including historic townscapes?contribute towards improvements in biodiversity?seek to develop sustainable technologies, both as a sector in their own right, and as a tool for improving the wider environmental performance of the programme area?improve understanding of environmental issues and solutions among, and appropriate to, all organisations receiving support through the Programmes?	Impacts will depend on the approaches to environmental management among the businesses supported, and the sectors in which they operate; in the case of inward investments, there may be significant secondary impacts through the development of new sites and associated environmental services demands over time. Likely significant direct and indirect impacts/??/++	Evaluation evidence suggests that incorporating environmental expertise in investment decision-making processes is wherever possible the best approach, as it is difficult to predict the full range of issues which may arise in investment decisions. Promotion of the environmental quality of the Programme area is already a strong feature of investment materials, and it may be possible to emphasise also the aims of the region in developing the environmental sector to ensure that inward investment projects enhance those aims. Nonetheless, there will still be impacts generated by the Programme but outwith its control. Impacts including mitigation -/?/+/++

5.11 Accessing national and international markets - now a sub heading under **Productive Businesses**

Focussed on reducing barriers which inhibit companies from trading nationally and internationally. Objective of significantly increasing exports particularly through international joint ventures and alliances. Support will include measures to address cultural and language barriers and may include grant and loan support for companies seeking to overcome initial barriers.

To what extent will the activities proposed under the programme	Likely Impact	Mitigation issues / comment
seek to reduce climate change emissions?include actions to mitigate the existing and predicted effects of climate change?	International trade is likely to depend to a large extent on air transport, with associated CO2 emissions; the commitment to trade based on knowledge rather than bulk goods will reduce these impacts to some extent, but they will remain significant. Strong, negative impacts likely	Significant mitigation in relation to air transport is only possible through carbon offsetting. The Programme acknowledges that further discussion around this issue is necessary. Impacts including mitigation -/??/+
encourage greater efficiency in the use of materials, including re-use of waste?contribute towards improvements in water quality and management?reduce emissions associated with transport?ensure developments enhance and fit within both natural and built landscapes, including historic townscapes?contribute towards improvements in biodiversity?seek to develop sustainable technologies, both as a sector in their own right, and as a tool for improving the wider environmental performance of the programme area?improve understanding of environmental issues and solutions among, and appropriate to, all organisations receiving support through the Programmes?	Impacts will depend (as with energy use relating to products and services) on the enterprises supported and the extent to which they take up available services. The wider commitment to developing the environmental sector means that some businesses exporting will bring environmental benefits elsewhere. Uncertain, but potentially significant impacts ??/+	Provision of environmental management services as appropriate to all businesses will help reduce non-travel impacts. Impacts including mitigation ?/+

5.12 Business infrastructure for a modern economy - now a sub heading under **Productive Businesses**

In areas of market failure, ensuring appropriate accommodation is available for enterprises investing and re-investing in Cornwall and the Isles of Scilly. The emphasis is likely to be on office based accommodation targeted at knowledge-based businesses.

To what extent will the activities	Likely Impact	Mitigation issues / comment
seek to reduce climate change emissions?include actions to mitigate the existing and predicted effects of climate change?encourage greater efficiency in the use of materials, including re-use of waste?contribute towards improvements in water quality and management?reduce emissions associated with transport?ensure developments enhance and fit within both natural and built landscapes, including historic townscapes?contribute towards improvements in biodiversity?	The possible range of impacts from capital projects is well understood. Impacts will depend on the extent to which individual developments consider and address: Energy efficiency; Generation of power through on-site renewables Landscape and biodiversity impacts (through choice of materials, design and landscaping); Water efficiency and capture and use of greywater; Transport implications through site selection, provision of video conferencing facilities, and provision of facilities for non-car users; The re-use of land, where appropriate. All of these aspects (excluding ICT) are considered as part of the BREEAM assessment process, and there is clear commitment in the Programme to take this approach. Likely significant, positive impacts ++	Consultation feedback suggests that BREEAM should now be seen as a minimum standard, and that issues like design to complement existing landscapes and building forms, and the re-use of waste materials should also be included to improve impacts further.
seek to develop sustainable technologies, both as a sector in their own right, and as a tool for improving the wider environmental performance of the programme area?	The extent to which this is delivered will depend on demand generated during construction processes. Likely positive impacts ++	The use of BREEAM standards (or their equivalent) will help develop the market for environmental technologies. In addition, the construction of all new buildings to
improve understanding of environmental issues and solutions among, and appropriate to, all organisations receiving support through the Programmes?		BREEAM standards will act as an exemplar. Likely positive impacts ++

5.13 Accelerating Business Growth - now a sub heading under Productive Businesses

Support focused on working with businesses with growth potential, aimed at improving competitiveness. This strand will include a small number of targeted initiatives, likely to focus on accelerating the growth of high value added companies.

To what extent will the activities	Likely Impact	Mitigation issues / comment
proposed under the programme		
seek to reduce climate change emissions?include actions to mitigate the existing and predicted effects of climate change?encourage greater efficiency in the use of materials, including re-use of waste?contribute towards improvements in water quality and management?reduce emissions associated with transport?	Growing business may not have significant environmental impacts at the time of assistance, but may do so in the longer term depending on the extent to which they embed appropriate environmental approaches as they develop. Likely significant impact over time/??/++ Economic activity is likely to generate increased volumes of transport; impacts will vary depending on the supply chains and local links developed, and the use of ICT and video conferencing.	Including environmental advice appropriate to the level and sector of growing businesses will help ensure their long term viability through reduced resource costs as well as lower environmental impacts. Advice should also incorporate discussion on local sourcing, consideration of environmental aspects appropriate to the sector and market, and the use of ICT. Impact including mitigation ++
ensure developments enhance and fit within both natural and built landscapes, including historic townscapes?contribute towards improvements in biodiversity?	Possible moderate impacts over time -/?/+ Secondary impacts are likely, depending on the sector in which new businesses are operating. In particular, those in the food & drink and tourism sectors, or those depending on raw materials from other primary industries, have implications through the demand they create. Possible significant impacts over time -/??/++	
seek to develop sustainable technologies, both as a sector in their own right, and as a tool for improving the wider environmental performance of the programme area? improve understanding of environmental issues and solutions among, and appropriate to, all organisations receiving support through the Programmes?	The extent to which these activities will impact on this aim will depend on the demand generated by mainstream businesses. Possible, but uncertain, impacts ?/+/++ Impacts will depend on the extent to which support incorporates environmental advice. Possible, but uncertain, impacts ?/+/++	Take up of advice, as outlined above, will encourage the development of local markets for sustainable technologies, and will also promote awareness. Impact including mitigation ++

5.14 Environmental Performance in Business – new sub heading under Productive Businesses

This strand is a new addition to the Programme.

Improving business productivity through improving environmental performance and developing new business opportunities relating to changing environmental standards.

To what extent will the activities proposed under the programme	Likely Impact	Mitigation issues / comment
seek to reduce climate change emissions?include actions to mitigate the existing and predicted effects of climate change?encourage greater efficiency in the use of materials, including re-use of waste?contribute towards improvements in water quality and management?reduce emissions associated with	Reductions in emissions from energy efficiency work are likely Strong, positive impact ++ Improvements against all of these headings are likely Strong, positive impact ++	While the impacts of this strand are likely to be strongly positive at the level of individual businesses, they will vary depending on which businesses are targeted. Those creating larger environmental impacts at present are not necessarily those which would be identified by high growth programmes. In addition, there will be an increasing need to ensure
transport?ensure developments enhance and fit within both natural and built landscapes, including historic townscapes?contribute towards improvements in biodiversity?	Direct impacts on landscapes or biodiversity are unlikely; there is some potential for limited secondary impacts depending on the focus of the businesses involved. Limited, potentially positive impacts 0/+	that mainstream businesses services identify and signpost businesses towards this type of support; this may require training of existing business advisors to build capacity.
seek to develop sustainable technologies, both as a sector in their own right, and as a tool for improving the wider environmental performance of the programme area?	Partial aim of this heading Strong, positive impact likely ++	
improve understanding of environmental issues and solutions among, and appropriate to, all organisations receiving support through the Programmes?	Projects under this heading have the potential to act as exemplars for other parts of the Programme. Positive impact of variable scale + / ++	Active promotion will help deliver this aim. Impact including mitigation ++

5.15 Environmental Technologies and Renewable Energy

Contributing to the development of an Environmental Technologies and Renewable Energy Initiative which will support a major new industry in Cornwall and the Isles of Scilly. The emphasis will be on developing an industry based on the design development and production of products responding to environmental and energy related opportunities. This would include working with research centres, specialist organisations and manufacturing and service companies, and also stimulating demand within Cornwall and the Isles of Scilly. This strand will complement the equivalent strand under Priority 1, which will focus on innovation and research and development, by providing access to new markets and specialist business support as products and processes are marketed.

To what extent will the activities proposed under the programme	Likely Impact	Mitigation issues / comment
seek to reduce climate change emissions?include actions to mitigate the existing and predicted effects of climate change?	The development of renewable energy will be positive in terms of climate change impact. Strong, positive impact ++	None necessary.
encourage greater efficiency in the use of materials, including re-use of waste?contribute towards improvements in water quality and management?	Impacts will depend on the types of renewable energy developed, materials used and supply chains. These aspects of environmental management are as applicable to the renewables industry as to any other.	Provision and uptake of environmental management advice will help ensure impacts are minimised. Impact including mitigation +
reduce emissions associated with transport?	Significant but uncertain impact - / ? /+	
ensure developments enhance and fit within both natural and built landscapes, including historic townscapes?contribute towards improvements in biodiversity?	Impacts will depend on the renewable technologies developed and their eventual location. Renewable industries based on biomass have implications for feedstock crops which should be considered. Significant but uncertain impact/??/++	Since the Programme will support businesses, rather than individual projects, mitigation will best be accomplished by training developers in biodiversity aims and best practice, but impacts will still ultimately be beyond the scope of the programme. Impact including mitigation ?/++
seek to develop sustainable technologies, both as a sector in their own right, and as a tool for improving the wider environmental performance of the programme area?	This is the central aim of this heading. Strong, positive impact ++	None necessary
improve understanding of environmental issues and solutions among, and appropriate to, all organisations receiving support through the Programmes?	Projects under this heading have the potential to act as exemplars for other parts of the Programme. Positive impact of variable scale + / ++	Active promotion will help deliver this aim. Impact including mitigation ++

Priority Axis 3: Transformational Infrastructure

5.16 Newquay Airport

The Airport is changing from military to civilian use, and the OP highlights the associated opportunity to establish a commercially viable regional airport. Activities supported under the Programme are likely to focus on the development of the terminal and associated infrastructure, and for associated development linked to business development. A considerable expansion of air travel is envisaged.

To what extent will the activities	Likely Impact	Mitigation issues / comment
proposed under the programme		
seek to reduce climate change emissions?	Impacts associated with expansion of the	Good design could reduce the negative impacts of associated
include actions to mitigate the existing and	airport are almost certain to include an	infrastructure, and local impacts (such as noise) could be
predicted effects of climate change?	increase in CO2 emissions.	managed through consideration of aircraft flight patterns.
encourage greater efficiency in the use of		Mitigation of the associated transport generated by the airport
materials, including re-use of waste?	Negative impacts on landscape from large-	could in part be delivered by improvements in connections to the
contribute towards improvements in water	scale associated development are also very	rail network.
quality and management?	likely (including noise during operation), and	
reduce emissions associated with	local impacts on biodiversity are possible.	However, mitigation of the increased emissions from airport
transport?		activity is only substantively possible, at present, through carbon
ensure developments enhance and fit	There is a commitment to develop the airport	offsetting (and possibly in future by the use of alternative fuels),
within both natural and built landscapes,	as an exemplar in terms of sustainable	but there remain concerns about both approaches which are
including historic townscapes?	development, including support for	discussed in chapter 6.
contribute towards improvements in	environmentally friendly operation, but no	
biodiversity?	detail on how this might be delivered.	In the absence of large-scale mitigation work, climate change
		impacts are almost certain to remain negative to some extent,
	Very significant, negative, impacts likely	with some more positive aspects possible at the margins / ??/
	overall / -	+
seek to develop sustainable technologies,	No direct impact likely: 0	
both as a sector in their own right, and as a		
tool for improving the wider environmental		
performance of the programme area?		
improve understanding of environmental	No impact likely: 0	
issues and solutions among, and appropriate		
to, all organisations receiving support		
through the Programmes?		

5.17 Digital Infrastructure

To what extent will the activities proposed under the programme	Likely Impact	Mitigation issues / comment
seek to reduce climate change emissions?include actions to mitigate the existing and predicted effects of climate change?	Impacts are likely to be positive, through reduced need for travel, but it is also important to ensure that ICT users are aware of associated energy consumption and management issues. Likely positive impacts ?/+/++	Awareness of energy management, and of the potential to use ICT to reduce travel, should be included in training and business support. Impact including mitigation ++
encourage greater efficiency in the use of materials, including re-use of waste?	No direct impacts likely: 0	None necessary
contribute towards improvements in water quality and management?	No direct impacts likely: 0	None necessary
reduce emissions associated with transport?	Impacts are likely to be positive, through reduced need for travel. Likely positive impacts + / ++	None necessary
ensure developments enhance and fit within both natural and built landscapes, including historic townscapes?	No direct impacts likely: 0	None necessary
contribute towards improvements in biodiversity?	No direct impacts likely: 0	None necessary
seek to develop sustainable technologies, both as a sector in their own right, and as a tool for improving the wider environmental performance of the programme area?	Positive in so far as Information Technologies are sustainable in use where they reduce the need to travel. Limited positive impacts likely +	None necessary
improve understanding of environmental issues and solutions among, and appropriate to, all organisations receiving support through the Programmes?	There is potential to use ICT to deliver advice and support on environmental management in a cost effective and low impact way. Possible positive impacts ? / + / ++	Awareness of energy management, and of the potential to use ICT to reduce travel, should be included in training and business support. Impact including mitigation ++

5.18 Knowledge Infrastructure

Support is likely to focus on the provision of new buildings and of access points across the county to provide remote opportunities for learning and communication. No outcomes related to training facilities are, as yet, included. It is assumed that any buildings constructed will, as with those under other Priorities, be subject to BREEAM assessment as a minimum.

To what extent will the activities	Likely Impact	Mitigation issues / comment
proposed under the programme		
seek to reduce climate change emissions?include actions to mitigate the existing and predicted effects of climate change?encourage greater efficiency in the use of materials, including re-use of waste?contribute towards improvements in water quality and management?reduce emissions associated with transport?ensure developments enhance and fit within both natural and built landscapes, including historic townscapes?contribute towards improvements in biodiversity?	The possible range of impacts from <i>capital projects</i> is well understood. Impacts will depend on the extent to which individual developments consider and address: Energy efficiency; Generation of power through on-site renewables; Landscape and biodiversity impacts (through choice of materials, design and landscaping); Water efficiency and capture and use of greywater; Transport implications through site selection, provision of video conferencing facilities, and provision of facilities for non-car users; The re-use of land and building materials where appropriate. All of these aspects (excluding ICT) are considered as part of the BREEAM assessment process, and it is assumed that this will be taken in this, as other Priorities. The use of ICT for remote training also reduce the impacts of travel.	All of these aspects (excluding ICT) are considered as part of the BREEAM assessment process. Commitment to BREEAM excellent as the mandatory standard for all new developments is the simplest way to deliver positive outcomes. However, consultation feedback also emphasised the need to consider wider aspects like the contribution to landscapes and settings of new buildings. Likely impacts from capital development, including mitigation ++
	Likely significant, positive impacts ++	
seek to develop sustainable technologies,	The extent to which this is delivered will depend on	The use of BREEAM standards (or their equivalent) will
both as a sector in their own right, and as a tool for improving the wider environmental	demand generated during construction processes.	help develop the market for environmental technologies. In addition, the construction of all new buildings to
performance of the programme area?	Likely positive impacts ++	BREEAM standards will act as an exemplar.
		Likely positive impacts ++

improve understanding of environmental issues and solutions among, and appropriate to, all organisations receiving support through the Programmes?	If the ethos of environmental management is to be integrated into learning and training activities, it is important that settings in which learning takes place embody this in practice and lead by example.	
	The use of BREEAM Standards or equivalent will reinforce learning outcomes – <i>Likely positive impacts</i> +	

Priority Axis 4: Place Based Regeneration

5.19: Integrated Place Regeneration

Locations subject to major regeneration changes and requiring long term and significant support to address specific economic challenges. Activity under this strand will draw on a wide range of interventions reflecting the severity of issues. This will include local transport infrastructure, improving accessibility and managing congestion; site assembly and preparation; gap funding for new development; investment in public realm linked to new development; investment in iconic projects linked to the development of a knowledge based economy.

A full review will be carried out to identify towns and hinterlands in need of integrated place regeneration, reflecting current and anticipated conditions, balancing need and opportunity. It is likely that Camborne–Pool-Redruth, and St. Austell and the Clay Country will require this approach.

To what extent will the activities proposed under the programme	Likely Impact	Mitigation issues / comment
seek to reduce climate change emissions?include actions to mitigate the existing and predicted effects of climate change?encourage greater efficiency in the use of materials, including re-use of waste?	The possible range of impacts from <i>capital projects</i> is well understood. Impacts will depend on the extent to which individual developments and regeneration schemes consider and address:	A consistent approach to the redevelopment of the proposed areas has the potential for significant, positive impacts, where it takes account of existing distinctive patterns of building and, depending on the areas concerned, biodiversity.
contribute towards improvements in water quality and management?reduce emissions associated with transport?	Energy efficiency; Generation of power through on-site renewables; Landscape and biodiversity impacts (through choice of materials, design and landscaping);	While the environmental quality of individual buildings can be addressed by a commitment to BREEAM, wider landscape impacts will require consideration which goes
ensure developments enhance and fit within both natural and built landscapes, including historic townscapes?	Water efficiency and capture and use of greywater; Transport implications through site selection, provision of video conferencing facilities, and provision of	beyond that. The involvement of environmental agencies, especially

contribute towards improvements in	facilities for non-car users;	English Heritage, at the design stage of area-based
biodiversity?	The re-use of land and building materials where	renewal would be beneficial.
	appropriate.	Likely imposts from capital devalopment including
	All of these aspects (excluding ICT) are considered as	Likely impacts from capital development, including mitigation ++
	part of the BREEAM assessment process, and it is	mugaton ++
	assumed that BREEAM will be used, as other Priorities	
	for specific buildings.	
	More widely however, there is notential for impacts at	
	More widely, however, there is potential for impacts at the landscape scale, especially through the re-use of	
	historic buildings and soft landscaping.	
	Likely significant, positive impacts + / ++	
seek to develop sustainable technologies,	The extent to which this is delivered will depend on	The use of BREEAM standards (or their equivalent) will
both as a sector in their own right, and as a	demand generated during construction processes.	help develop the market for environmental technologies.
tool for improving the wider environmental performance of the programme area?	More widely, the extent of environmental benefit in	A strong element of community involvement in
	regeneration activities will both be influenced by, and	consultation – and ideally of NGO involvement in
improve understanding of environmental issues and solutions among, and appropriate	may influence, community involvement.	delivery, where possible – will improve impacts against
to, all organisations receiving support	,	this heading.
through the Programmes?	Likely positive impacts ++	Ŭ
		Likely positive impacts ++

5.20 Realising Place Potential

Locations which require more limited and specific interventions to unlock significant opportunities. Actions will be focussed on managing economic growth in a planned and sustainable manner.

Activities will include developing sites and premises, supporting new space, local transport investment, and investment linked to other ERDF investment funded by Priorities 1, 2 and 3. Where appropriate support will include sustainable development packages, with actions measures designed to work collectively, aimed at strategically identified growth areas, to encourage public transport, manage the demand for access and provide the optimum infrastructure to accommodate further growth and accommodation. These packages comprise of; key functional corridor improvements, bus priority measures, rail link improvements, park and ride schemes, and road construction and junction improvements to open up areas for development. These packages are developed in conjunction with industrial and residential development allocations and proposals.

The initial focus of this strand will be the areas of Truro, Falmouth/Penryn, Newquay, Bodmin and Penzance/Isles of Scilly.

To what extent will the activities proposed under the programme	Likely Impact	Mitigation issues / comment
seek to reduce climate change emissions?include actions to mitigate the existing and predicted effects of climate change?encourage greater efficiency in the use of materials, including re-use of waste?	The possible range of impacts from <i>capital projects</i> is well understood, and as detailed under the above heading, all are considered as part of the BREEAM assessment process.	hile the environmental quality of individual buildings can be addressed by a commitment to BREEAM, wider landscape impacts will require consideration which goes beyond that.
contribute towards improvements in water quality and management?reduce emissions associated with transport?ensure developments enhance and fit within both natural and built landscapes,	There is also, under this heading, likely to be significant investment in transport infrastructure. The emphasis on the range of transport solutions, including bus, rail and park and ride, is positive and welcome. Likely significant, positive impacts + / ++	Depending on the scale of development, the involvement of environmental agencies, especially English Heritage, at the design stage of area-based renewal would be beneficial. Likely impacts from capital development, including
including historic townscapes?contribute towards improvements in biodiversity?		mitigation ++
seek to develop sustainable technologies, both as a sector in their own right, and as a tool for improving the wider environmental	The extent to which this is delivered will depend on demand generated during construction processes.	The use of BREEAM standards (or their equivalent) will help develop the market for environmental technologies.
performance of the programme area?	More widely, the extent of environmental benefit in	A strong element of community involvement in

improve understanding of environmental	regeneration activities will both be influenced by, and	consultation – and ideally of NGO involvement in
issues and solutions among, and appropriate	may influence, community involvement.	delivery, where possible – will improve impacts against
to, all organisations receiving support		this heading.
through the Programmes?	Likely positive impacts ++	-
		Likely positive impacts ++

5.21 Place Based Regeneration Fund

Investments under this heading are likely to be limited to single sites and premises. In these cases, the use of BREEAM, together with appropriate consideration of wider aspects like landscape impact, is likely to generate positive outcomes.

5.22 Summary and Strategic Assessments

As discussed in section 5.2, the overall strategic approach to the Programme was found to be strongly positive. The aim of this section is to test the consistency of those strategic aims against the detailed findings from the individual assessments.

The use of the higher level questions provides an opportunity to summarise the above assessments and draw out key messages, taking into account the range, as well as the detail, of activities proposed. It is important to recognise that the NSRF provides the menu of options effectively open to the programme – it would not be appropriate to suggest the inclusion of activities which are environmentally beneficial but which fall outside that range.

To what extent do the Priorities and Programme overall....

- Promote a sustainable approach to the use of environmental resources?
- Manage risks associated with future environmental change, especially in relation to climate change?
- Protect and enhance the natural environment?

As discussed in section 5.1, the summary of impacts in the chapter is a relative, rather than absolute exercise.

Innovation and Research & Development

The focus on the development and commercialisation of new technologies clearly recognises the opportunities associated with environmental change. It is also important, and was suggested by the Environmental Report which accompanied the initial OP draft, that an approach should be introduced to ensure that new products and services are future-proofed against environmental criteria. This has now been adopted, and is welcomed.

The assessments clearly show that impacts including mitigation will be strongly positive, but also that the achievement of those impacts will depend upon the extent to which the structures employed embrace environmental issues and provide appropriate support for the businesses and academic institutions concerned.

There are likely to be only quite limited, secondary opportunities to enhance the natural environment under this heading.

Enterprise and Investment

There is a strong focus on both the development of the environmental sector, and, subsequent to its being raised in the SEA, corresponding mention of the need to improve resource use and energy efficiency as issues for all mainstream businesses. The key point here – as acknowledged in the strategic material - is to ensure that a strong emphasis is placed on business efficiency services which are:

 Targeted at those sectors which will benefit to the greatest extent, such as those with higher energy requirements, or which depend on

large volumes of water, for example those in the food and drink sector; and, in a related point,

 Integrated within mainstream services, so that all business advisors are aware off both issues and solutions, and, in line with the above, able to recommend their use as appropriate.

The outcomes of these actions will include both more efficient mainstream business, but also an expanding market for the environmental technology sector. There may also be possibilities of supporting green procurement activities more widely, to further develop the market.

Some elements of this Priority also provide seek to encourage the development of new businesses, or to promote faster growth among those with the potential for rapid expansion. Advice on environmental impacts is often most effective at these stage; it is generally easier to incorporate recommendations while other changes are happening in any case, than to seek to address issues once they are embedded.

Transformational Infrastructure

The development of Newquay Airport is likely to have significant, negative impacts on climate change emissions. Local energy and resourceuse, landscape and biodiversity impacts will depend on the quality of design of specific projects.

Within the discussion at the start of this Priority Axis, there is a commitment to developing all transport infrastructure within a sustainable context. If this is to be delivered in practice, it will be necessary, particularly considering the scale of these activities, to present more clearly the implications in terms of the associated generation of carbon dioxide, and to link these activities to the approaches to carbon management discussed elsewhere in the Programme.

The impacts of digital infrastructure, conversely, are likely to be positive in the longer term as they will potentially provide a means of reducing the need to travel.

Infrastructure in support of learning will have positive impacts assuming, as is the case with other parts of the Programme, that BREEAM standards are adopted as a minimum, and that landscape and other impacts are taken into account. It is critical that learning infrastructure is of the highest environmental quality so as to reinforce messages about environmental management among students.

Place Based Regeneration

The activities under this heading are likely to provide positive impacts, assuming that, as under Priorities 1 and 2, BREEAM standards form the starting point for consideration of environmental activities. In particular, areawide regeneration provides opportunities to re-use and improve existing, distinctive built heritage. There are also opportunities to involve local communities in the design and delivery of regeneration activities which are not recognised at present.

5.23 Comment on the Overall Coverage of the Programme

The strategic approach to the environment within the Programme is strongly positive, particularly in relation to carbon management. In this respect, discussions in the context of the Programme build on previous work, and predate publication of, for example, the Stern Report.

The integration of the detailed environmental aims within the Priority Axes was initially less consistent, but has to a large extent been strengthened following the consultation process.

However, there remains very little discussion on the development of the social economy, both as a sustainable sector in its own right, and also as a source of training, volunteering and transitional employment opportunities for those dependent on Incapacity Benefit. This was the only significant area of weakness identified in the current South West Programmes in a recent (environmental) evaluation.

In addition, there remains very little recognition of the contribution made to economic development made by environment-related tourism or by regeneration based on re-use of the built heritage, both of which were seen as strengths under the 2000-06 Objective One Programme.

Finally, it is worth emphasising that evaluation material shows consistently, and across all regions, that eventual environmental impacts are determined at the level of individual projects, whether in terms of designing a new product, delivering training, or building new infrastructure. The differences in the assessments above between the possible impacts and the predicted impacts including mitigation illustrate this point very clearly.

At the strategic level, the issues which emerge are clear, and can be summarised as:

- Encouraging and supporting energy and resource efficiency in business development;
- Ensuring that new products and services are better, in environmental terms, than those they replace;
- Promoting awareness of environmental issues and solutions in training and skills, particularly in sectors with a close relationship to the environment;
- Ensuring take-up of environmental good practice in all aspects of construction, from site selection to building quality and soft landscaping; and,
- Exploiting environmental opportunities to deliver social and economic gains, including those in the social economy as well as in mainstream business and technology.

It is important to emphasise that these issues are, generally, determined at the level of individual projects, and, as such, there is a need for a system which provides relevant advice to project holders at that time. This issue was highlighted in the Environmental Report which accompanied the draft OP, and also in consultation feedback, and there is now commitment to implement such systems. This should help ensure positive impacts are delivered.

5.24 Evolution of the Environment in the Absence of the Programme

Climate Change and Resource Use

Although the relationship is weakening, there is still a close correlation between economic development, consumption and the use of energy and transport at global scale. The aim of the UK Government is to continue to develop the economy, but to do this in ways which increasingly have less environmental impacts.

Assuming this is successful, there is an implication that the absence of the plan, there would be likely to be lower economic activity, and also lower environmental impacts as a result. Emissions would also be affected positively if the aspects of the Plan associated with the expansion of air travel were not to go ahead; conversely, emissions would be affected negatively in the absence of work to promote the uptake of broadband and ICT.

However, reductions in emissions (and also in resource use) associated with business efficiency programmes would also not take place, resulting in higher emissions, and it is very likely that the development of renewable energy technology in would also be slower.

In the absence of clearer data on the respective scale of activities it is impossible to predict the overall impact with certainty, but it seems likely that, overall, net emissions may be higher as a result of the implementation of the Plan than would otherwise be the case. However, the commitment in the Programme to examine this issue in more detail is clearly very positive.

Land Use, Landscape and Biodiversity

In relation to land use, development would be controlled through the planning system. It is likely that there would be less interest among developers in construction on brownfield sites, since green field sites are generally less expensive to develop, and have fewer associated risks. Activities supported through the Programme will help bridge the gap in costs, and will very clearly promote the take up of best available environmental techniques.

Overall, it is likely that land use impacts would be negative in the absence of the Plan.

Environmental Awareness and Education

There is a lack of available data on the extent to which environmental awareness is included within training and education at present. However, it seems most likely (and in line with evaluation findings) that such integration is at present quite limited, with most effort being concentrated on the development of environmental skills as a sector, rather than as a crosscutting issue. It is likely that the Programme will improve this position, and so the evolution of this field would proceed more slowly in its absence.

Consultation Questions

- Do you have any comments on individual assessments, on the likely range of impacts identified, and on the description of possible associated mitigation activities?
- Do you have any comments on the conclusions drawn on individual priorities, and on the Programme as a whole?

6. Implementation of the SEA

This chapter discusses the implications of the conclusions above, in relation to:

- Consideration of alternatives
- Mitigation; and
- Monitoring.

6.1 Consideration of Alternatives

The SEA process requires consideration of alternatives as an integral component. The aim is to ensure that different ways of meeting agreed aims are discussed, and the decision is taken on the option to be selected with full understanding of the environmental implications.

It is easiest to illustrate this process in the context of a proposal for the expansion of a transport network. Alternatives might include any, or a mix of, new road construction, improvements to public transport, or the re-location of services to reduce the need to travel. These have very different environmental implications, which can be modelled and discussed. This approach is relevant to the selection of activities under Priority Axis 4; however, it is important to note that those activities, plus alternatives, have already been considered in the context of Transport Plans locally,

Accordingly, there is less agreement about how this process might be translated into Structural Fund (or other economic development) Programmes. UK Government guidance, in line with the EC Directive, emphasises that the alternatives considered must be reasonable, and not simply constructed as an academic exercise. In practice, this does not always take place; for example, the alternatives considered during the SEA of the SW RES looked at the likely environmental impacts associated with different levels of economic growth, rather than different ways of delivering growth.

A different approach, in the context of this Programme, could focus on the balance of financial allocation between priorities, or on the broad selection of project-level activities under priorities. These approaches are realistic, but are still limited in scope, since the NSRF closely define the range of activities which can be included. The required minimum allocations towards activities focused on the Lisbon agenda also reduce the potential for variation between options.

Accordingly, an approach is proposed which, on the basis of the assessment process, comments on the range of activities, but which concentrates discussion on the basis of the depth with which environmental integration is delivered.

This, approach is in line with past evaluation work which shows that a great deal of the environmental impact of the programme, particularly in the longer term, relates to how individual projects are developed and delivered. For example, the quality of materials and energy efficiency incorporated into a building at the time of construction has considerable influence over its environmental impact over its lifetime. Structural Funds Programmes were

found to be very effective in improving environmental quality of mainstream projects in such cases.

This issue is particularly important to the broad aspirations, clearly highlighted in both Programmes, of moving towards sustainable economic development, in which the use of energy and material resources are addressed more clearly by all projects. The environmental context material prepared for the SEAs also highlights environment-economy factors, including rising costs of water, waste disposal and energy, which further enhance the business case for such actions.

In addition, there is a clear link between this approach and the section on mitigation. The assessment process shows clearly that mitigation in the case of most of the activities supported by the Programme relates to the depth with which environmental issues are embedded.

Proposed Options

Three approaches have been identified, and are set out below.

The first takes a hands-off approach to environmental integration, relying only the implementation of existing regulations, with any further activity confined to existing market demands.

The second take a more proactive approach to environmental integration within individual projects, effectively seeking the wider replication of existing good practice wherever possible. This corresponds most closely to the approach taken under the 2000-06 Programmes in the SW Objective 2 Programme, highlighted in national evaluation as best practice across England.

The third approach outlines what would be necessary to move beyond this in the new Programme, based on the agreed aim of seeking to make the new Programmes carbon neutral.

Table 6.1: Alternative Approaches to Environmental Integration

	Outline of Approach	Delivery implications	Comment
1.	Environmental activity is limited to: that required by prevailing legal standards, i.e. planning permission, emissions control Except where the market demands otherwise (e.g. energy saving services)	No staff resource or additional administration required. Application questions would seek only confirmation of legal compliance.	Although possible in theory, this option would be out of step with Commission and UK Government guidance, as well as the stated aims of the SW RES. This is effectively the position which existed in EU Programmes in 1994-99 and earlier.
•	Higher levels of environmental added value are sought on a project by project basis, where these represent the mainstreaming of existing good practice, such as: BREEAM standards in building projects; Integration of environmental advice into business development projects, where possible Projects with a strong environmental theme are supported only where they, individually, generate social and economic outcomes.	A similar staff resource would be required to that under the current Objective 1 and 2 Programmes ¹³ . As now, application processes would include consideration of environmental issues as part of the decision-making process, and environmental expertise would be integrated into (and developed within) those processes.	This is essentially the current model. Evaluations 14 show that it has been extremely effective in the SW and in other GB regions and nations, and that the staff resource is critical to delivery; programmes which relied only on administrative mechanisms were much less successful in embedding environmental sustainability in projects. The continuation of this approach in the new Programmes would represent consolidation, and possibly a limited progression compared to existing practice, especially if best practice lessons from elsewhere in the UK are replicated in the SW. It is worth noting that current Programmes which relied only on administrative mechanisms and which did not employ staff to work with partners, were considerably less successful in delivering environmental additionality.
Pro an wa	The environmental impacts of the ogramme as a whole are assessed d addressed; the most appropriate ay to do this, given the focus of the oposed activities, would be to adopt	In addition to the above, it is likely that some form of mechanism would have to be created to oversee projects which compensate for the carbon emissions of mainstream activity. More detail on	This approach would represent a considerable step forward for the Programme, and would be in line with the aspirations of the RES to develop economically within environmental limits. It is clear that emissions of CO2 are already higher than is sustainable; the opportunity exists to seek to develop the

As a rough guide, the staff resource at present equates to 1 Full Time Equivalent per £100m funding available.

14 The Effectiveness of EU Structural Funds in Delivering UK Government Environmental Aims, Fraser Associates & the Rural Development Company for Defra; executive summary at http://www.objectiveone.com/O1htm/01-cross-cutting/ES intro.htm

the aim, if possible, of making the	what this might mean is provided below.	Programmes in ways which meet the UK Government's aim of	
Programmes carbon neutral. In addition		decoupling economic growth from environmental impact.	
to the above activities, this would imply			l
support for projects which explicitly			l
deliver carbon positive activities.			l

6.2 Mitigation

Mitigation can, similarly, be discussed at two levels.

In the current programme, mitigation takes place at the level of individual projects, which are encouraged and supported to explore the range of environmental effects associated with their work, and to seek both to minimise negative effects and enhance positive impacts. This relates most closely to the second of the alternatives explored above, and the South West Objective 1 and 2 Programmes are recognised as market leaders in delivering this approach.

However, it is important to recognise that even this approach has limits in separating economic development from environmental impact. As an example, it is possible to consider mitigation at strategic level in relation to land take. It is accepted practice to set ambitious targets (perhaps 70-80% in urban areas) for the re-use of brownfield land in development, and there has been an increase in this proportion, following Government policy, in the SW in response. However, this still means that there is an ongoing loss of greenfield sites, and it is also clear that many existing brownfield sites are unlikely to be re-developed for economic end use.

Mitigation at strategic level might therefore seek to balance the loss of greenfield land by supporting the by environmental upgrading of an equivalent area of brownfield land, especially where that upgrading maximises social as well as environmental benefit, as is the case with the creation of community woodland and urban greenspace.

It is possible to extent this discussion to consider the carbon footprint of the programme.

6.3 Carbon Management

As noted above, the approach to carbon management in the Programme has changed following discussion, research and consultation feedback. This section of the Environmental Report outlines the context issues in the initial position; the box below summarises changes made subsequently, which reflect the views of the SEA Steering Group.

Implications of Carbon Neutral Economic Development

Climate change is arguably the most important single environmental issue for the Programme for two reasons. Energy use, and therefore generation of CO2 emissions, the main greenhouse gas, is common to all projects to some extent. More widely, the scale of the changes required, given the current trends, are of considerable significance at global scale, with cuts of up to 90% of existing emissions required in the longer term. By implication, a step change in the nature of the economy is necessary.

There is increasing political and media attention on reduction of emissions – during the period in which this SEA has been undertaken, all three main UK Political Parties have discussed the role of new technologies and eco-taxation as central aspects of their 2006 conferences, and the publication of the Stern

report has also highlighted the future - very large - costs of inaction, when compared to the sizeable but much smaller costs of action at the present time.

Against this background, it is clear that the incremental approach to energy efficiency and exploitation of green technologies which took place under the 2000-06 Programme represents a sound basis on which to build, but will not be adequate in the longer term. For example, Devon County Council quote savings of some 15,000 tonnes pa from energy efficiency work with 250 businesses; meeting Government targets imply annual reductions in the county of nearly two orders of magnitude higher, albeit from a much wider range of sources.

The opportunity therefore exists to use the programme to pilot work on what would be required to make economic development carbon neutral – or, eventually even positive - in the South West.

There is not yet clear understanding about what that commitment might mean in practice. The discussion below explores some of the issues and possibilities. However, it is important to recognise that a greater focus on carbon is in line with many of the aims of the existing Programmes and RES. For example:

- Business efficiency work and the development of renewable energy technologies both address carbon emissions.
- Waste minimisation and the re-use of waste reduce emissions.
- The use of BREEAM standards reduces emissions during the life of buildings.
- The re-use of historic buildings has benefits in terms of embodied carbon.
- The use of local materials reduces emissions from transport, as well as maintaining distinctive built landscapes.

Moves towards Carbon Neutral should therefore be seen as a significant step forward, rather than a complete change of direction.

Defining Carbon Neutral

The majority of work under the carbon neutral heading has to date been focused on individual companies, government departments or discrete, high profile events (including, for example, BT, Defra, and the most recent Winter Olympics). In all cases, it is possible to describe clearly the boundaries of activity, and therefore quantify and address the associated emissions.

The process essentially follows three stages. For the organisation or event in question, the first step to assess the levels of CO2 currently produced. Typically, sources of CO2 are direct energy use (heating, lighting, operation of equipment, transport) and indirect sources, such as emissions associated with waste.

The second step is that these emissions should be reduced as far as possible. This is in line with the existing approaches to business efficiency already undertaken in the South West. The literature is clear that **carbon**

offsetting should be seen as a complement to energy efficiency work, not an alternative to it.

However, it is clear that, even after efficiency gains, significant levels of CO2 emissions will remain, as almost all economic activity is dependent on fossil fuel to some extent. Therefore, carbon neutral implies that other, carbon positive, activities must be undertaken, in order at least to balance the programme or event as a whole.

At present, offsetting activities take one of three forms:

- Development of new renewable energy generating facilities.
- Projects, usually in developing countries, which introduce technologies to reduce emissions (for example, upgrading street lighting) – these have wider social and economic benefits in the countries concerned. This is the largest group of projects.
- Projects which fix carbon by planting trees; such projects also have the potential to contribute to biodiversity aims, or to the creation of community woodlands.

At least two commercial organisations¹⁵ offer carbon offsetting services in the UK, along the model described above, and it is clear that such organisations will continue to provide a solution for individual companies of small scale, or for those for which direct mitigation work would be beyond their area of expertise.

There are also advantages in terms of global sustainable development from delivering projects in developing countries; often, the technologies employed in those countries are significantly less energy efficient than those commercially available, so the efficiency gains (and associated benefits) are correspondingly larger than they would be in the UK for equivalent cost. Correspondingly, there are disadvantages from using tree planting as a method of carbon fixing, largely because the approach does not address the cause of the emissions in the first place, but also because the areas of land involved are much larger than are likely to be available

However, a clear disadvantage from scaling up this approach to Programme level is that the fees paid are not retained within the South West, and would not bring any significant benefits to the region. The following approach is therefore suggested as basis for consideration in relation to the Programme.

Setting the Target for the Programmes

Current approaches, outlined above, determine the baseline by effectively including or excluding specific activities associated with an organisation's work. Activities are assessed on the extent to which they can be influenced by the organisation directly.

On this basis, it is clear that the establishment of a baseline for the Programme would be extremely complicated. However it was computed, it would involve numerous assumptions about the number of organisations involved, and the likely impact of each individual project on those

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¹⁵ See http://www.climatecare.org/index.cfm

organisations' emissions. To take an example, a single business support project might easily work with 50 SMEs, in different sectors, albeit to a limited extent with each one. A Structural Funds Programme might easily support 100 such individual projects. Assessing the carbon impacts of 5000 interventions would be extremely complex.

An alternative approach might be to take existing data on CO2 emissions for the SW and apportion an element of those emissions to economic activity, including a proportion of business-related transport, but excluding domestic emissions.

Since the headline aims of the Programmes are to increase economic activity, the extent to which they do so, based on past evaluations, could then be used as a guide as to the likely additional CO2 emissions. For example, if a region generated 1,000,000 tonnes of carbon associated with economic activity, and the programme aimed to increase that economic activity by 2% above projected estimates, the programme would have to demonstrate carbon savings from all projects of 20,000 tonnes.

This approach would have the advantage that lack of detailed baseline information would not be a barrier towards actions, outlined below, which are in most cases already well understood. However, it is recognised that this is an arbitrary approach, and that a more scientific version would be strong desirable. It will also be important to develop an agreed mechanism for allocating funding, associated with individual projects, towards the carbon reduction goal.

Whichever method is chosen, it will be important to have a set target for carbon reduction associated with the Programme if this is to be a meaningful aspiration.

Supporting Projects to Reduce Emissions in Practice

It is arguable that the discussion about the Programme-wide approach makes relatively little difference to the aims of individual projects (although the range and cumulative impact of projects remains important). The critical aim, at project level, is to ensure a widespread consideration of energy efficiency, in the short, medium and longer terms.

Some projects supported through the 2000-06 Objective One Programme, and under EU programmes in other regions, already deliver carbon reductions, in addition to social and economic benefits. These activities should be emphasised and expanded as a first step towards a low carbon economy. Existing examples include:

- Training & employment creation schemes (supported by ESF) which deliver energy efficiency work to improve standards in social housing
- Training, for all sectors, which includes energy management as an issue appropriate to the sector in question
- Support for R&D and innovative products, techniques and services targeted at renewable energy
- Sustainable transport initiatives, and green transport plans
- Business efficiency projects

- Re-use of historic buildings (which have benefits in terms of embodied energy, although sometimes greater implications in ongoing energy demand)
- Local regeneration projects which promote recycling and more sustainable waste management approaches.

Wider approaches which could be considered include:

- Loan or grant schemes which bridge the gap for private sector developers, to ensure that (in line with the RSS) new developments are carbon neutral
- Support for research to support the take up, in both public and private sector, of such techniques
- Improvement management of natural environments to reduce carbon (an issue in the Rural Development Plan for England, using EAFRD)

The Approach To Carbon Management in the Programme – Update (This issue is also discussed in detail in the SEA Statement)

The proposals in the draft OP to which the material above related, were for the Programme as a whole to be made carbon neutral. In practice, consultation responses suggested that this approach would be difficult to deliver robustly without considerable emphasis on monitoring, and that there were also unresolved issues around the boundaries to be used.

For example, a single business development project might work with 40 companies, each of which would develop a new product or service. Carbon neutrality would imply knowledge of the workings of those companies, and of their products, and a decision would need to be taken on what to include or exclude when defining impacts – are impacts limited to materials used, or is company travel also relevant?

There is also an issue in terms of timescale – many new renewable energy developments will deliver benefits over the medium to long term, outwith the life of the Programme, but may use significant energy amounts of energy when in development and pilot stage.

The questions of the ability of the Programme to purchase offsetting credits, and the ethics of doing so were also concerns for many environmental partners.

For these reasons and others, there was much greater interest across all sectors in changing the Programme to reflect the aim of **moving towards a low carbon economy**, and this has now been adopted as the Programme approach.

One specific example of how this might work in practice is in relation to innovation – screening new products and services with a view to supporting improvements in their energy demand will help reduce the need for energy, while at the same time enhancing product competitiveness.

At the same time, the ongoing need for better understanding and research relevant to individual projects was also highlighted.

6.3 Consideration of Alternatives & Mitigation: Conclusions

The assessment process and discussion above show that the main, realistic, options which can be considered by the Programme relate closely to mitigation aims. More advanced options, in environmental terms, are associated with more emphasis on mitigation at both project and strategic level.

It was therefore suggested a process which sought to complement the existing, strong, approach to project level mitigation with a strategic aim of reducing the carbon footprint of economic development supported through the Programme, would have the greatest environmental benefits. Such an approach formed the core of recommendations, taking into account consultation feedback, in the SEA Statement.

The Scoping Report, and the assessments above, both highlighted the importance of examining implementation arrangements as part of the SEA process. Suggestions for the functions of that process and its governance are also included in the SEA Statement (annex II), and the majority of recommendations adopted.

6.4 Monitoring the effects of implementing the OP

Ideally, it would be possible to use high-level indicators, such as climate change emissions from industry, to monitor the environmental outcomes from the Programme. There are two clear difficulties in taking this approach:

- Context indicators are affected by a much wider range of activities than the OP alone. It would be very difficult to collect data on the emissions associated with projects – individual projects are only one influence among many on individual businesses. Further, even if those data were available, they would be difficult to interpret unless comparators were developed.
- There are significant lead times in establishing trends in the broad context indicators, together with requirements for large scale, primary research. This means that, in practical terms, it would not be possible to monitor the impact of the Programme until after its completion. This would make it impossible for Programme managers to implement recommendations which might emerge from the delivery of the SEA process.

These issues have been discussed in some depth in the context of the current Structural Fund Programmes, and a list of proven indicators developed which, for the most part, reflect environmental activities, rather than outcomes. On the basis of the activities described in the Programme, it is suggested that the following indicators might be appropriate.

It is important to note that it is not possible to construct indicators to monitor all of the proposed environmental activities; there is a continuing role for thematic monitoring and evaluation.

Priority Axis 1: Innovation and Research & Development

- Number of new products and services in the environmental sector (and, if practical, split by numbers in the renewable energy sector)
- Area of brownfield land developed, and its proportion of the total
- Area of buildings constructed or refurbished to BREEAM standards

The wider aim under this priority is to ensure that all new products and services incorporate appropriate environmental advice. No robust indicators have been identified to capture this activity, but there is clear commitment (see the SEA Statement) to implement mechanisms to screen, and ideally improve, the environmental impacts of all new products and processes.

Priority Axis 2: Enterprise and Investment

- Number of Businesses in the environmental sector supported.
- Number of (mainstream) Businesses undertaking environmental management, and results, in both environmental and economic terms.
- Number of businesses achieving recognised environmental standards.
- Number of mainstream businesses diversifying into environmental activity.

A wider indicator, to give an idea of the extent of greening of the Programme as a whole, would be the proportion of all businesses assisted which undertake environmental management work.

Priority Axis 3: Transformational Infrastructure

- Land developed, with proportions by brownfield / greenfield.
- Area of buildings constructed or refurbished to BREEAM standards, or equivalent.
- Area of historic buildings refurbished.
- Number of organisations with access to ICT / Video Conferencing facilities which reduce the need to travel, and associated measures of those reductions.
- Area of green space improved, accessible to local organisations.

Priority Axis 4: Place Based Regeneration

- Land developed, with proportions by brownfield / greenfield land.
- Area of buildings constructed or refurbished to BREEAM standards, or equivalent.
- Area of historic buildings refurbished.
- Number of organisations with access to ICT / Video Conferencing facilities which reduce the need to travel, and associated measures of those reductions.
- Area of green space improved, accessible to local organisations.

If appropriate:

- Number of environmental social economy businesses assisted
- Training & volunteering placements created with an environmental theme

A wider aim is to ensure that all locally-based regeneration partnerships take account of environmental issues during strategy development, and have appropriate environmental representation on steering groups.

These, or very similar, indicators and approaches have been successfully used in the context of 2000-06 EU Structural Funds programmes.

In addition, it is important to emphasise that thematic, one-off evaluation work is likely, in some cases, to be more effective that collection of data alone. This is particularly the case in relation to the newer aspects of the Programme, concentrating on the move towards a low carbon economy.

Monitoring Carbon Emissions

The UK Government published the White Paper *Our Energy Future – Creating a Low Carbon Economy* in February 2003. It has, subsequently, produced annual updates on the implementation of the policy objectives set out, under the guidance of the Sustainable Energy Policy Network (SEPN), which brings together a range of Government Departments and agencies.

There is a great deal of overlap between the activities which are likely to be supported under the Programme, and those set out in the White Paper. These include the promotion of energy efficiency in both businesses and buildings, recognised as the most efficient way to reduce carbon emissions, as well as the development of a range of renewable energy sources. Some activities (most notably the UK focus on energy efficiency in housing) are not eligible for direct support.

As discussed above, there are at present great difficulties in monitoring carbon emissions at the level of individual projects and the Programme. Discussion throughout the consultation process tended to raise more issues, rather than address existing ones, and that was part of the reason for changing the approach from the initial aim of Carbon Neutrality, as outlined above.

Accordingly, a recommendation was made in the SEA Statement that further, continuing research on the costs and benefits of carbon management at the level of individual projects should be undertaken. The aim would be to provide, in the medium term, a series of benchmarks, based on specific case studies, to allow estimates to be made of the carbon emissions associated with different sectors and different types of economic development project.

The ultimate aim of this policy, in line with the UK's wider commitment, is to reduce both the carbon intensity of economic activity (including communications), and also the absolute emissions of carbon from the Programme area. Clearly, these aims are beyond the scope of the Programme, and will require a much wider, concerted approach. It would be appropriate for longer term study to produce and test indicators to measure progress at project level; however, the following are suggested as indicators against which information could be gathered in the short term while that process takes place. Most of these indicators are subsets of, or complementary to, the wider environmental indicators proposed above:

 Number of organisations supported in the renewable / clean energy sector (Note that it is largely the organisations which will be supported,

rather than specific developments under the programme, so that indicators based on kW hours generated would understate the Programme impacts).

- Number of new products or services which improve energy efficiency by comparison with their competitors.
- Increase in turnover and employment associated with the above.
- Number of buildings constructed which incorporate energy efficiency and on site renewable energy generation.
- Number of initiatives, including those under Technical Assistance, which seek specifically to improve the capacity of Cornwall and the Isles of Scilly to deliver a low carbon economy.

Although not formally part of this Programme, it will also be important that the content of training and education is considered, so that beneficiaries are encouraged and supported to understand the opportunities and benefits of moves towards a low carbon economy, in connection with the specific sectors in which they work.

6.5 Conclusions

This is the first time that Structural Funds Programmes have been subject to a formal SEA process, and to some extent it has been necessary to adapt the SEA process to ensure it is commensurate with the wider Programme development process. However, it is important to emphasise that a great deal of work has already been undertaken in response to the introduction of environmental sustainability as a horizontal theme in the 2000-06 Programming period. The South West programmes, including the 2000-06 Objective One Programme, have been externally evaluated as leaders in delivery of such integration.

It is also clear that the importance of the environment as an economic driver has increased considerably over the life of the current Programmes. In particular, the issue of climate change, and the consequent need to move towards a lower carbon economy, has moved much further up the agenda. Looking ahead, the new Programme will deliver projects which will continue to have impacts well past the formal end of the Programme itself, and that there will be a far greater emphasis on carbon reduction during that period.

Accordingly, this Environmental Report has sought to widen the discussion about what can be done in respect of mitigation. While the existing approach has been very positive by comparison with those taken elsewhere, it is suggested that, in order to maintain the SW's competitive advantage in respect of the environmental sector, a step change will be required in relation to energy and resource use.

Following consultation, a number of recommendations for improvements in the Programme and its governance were made, and are detailed in the SEA Statement (annex II). Discussions and engagement with those involved in the development of the Programme have been positive, and the results are reflected in the content and approaches set out in the OP itself.

Consultation Questions

- Do you have any comments on the approach taken to consideration of alternatives and to mitigation?
- Do you have any views on which of the alternatives should be adopted, or on the detail of the discussion around carbon neutrality?
- Do you have any comments on the proposed monitoring framework?