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Research Policy Analysis  
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The Environmental Assessment of Plans and Programmes  
(Wales) Regulations 2004

East Wales ERDF Programme 2014-2020

Strategic Environmental Assessment  
Non-Technical Summary

May 2014

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**Ex-Ante Evaluation and Strategic Environmental Assessment for  
European Regional Development Fund Operational Programme  
2014-2020  
East Wales**

**STRATEGIC ENVIRONMENTAL ASSESSMENT  
NON-TECHNICAL SUMMARY  
MAY 2014**

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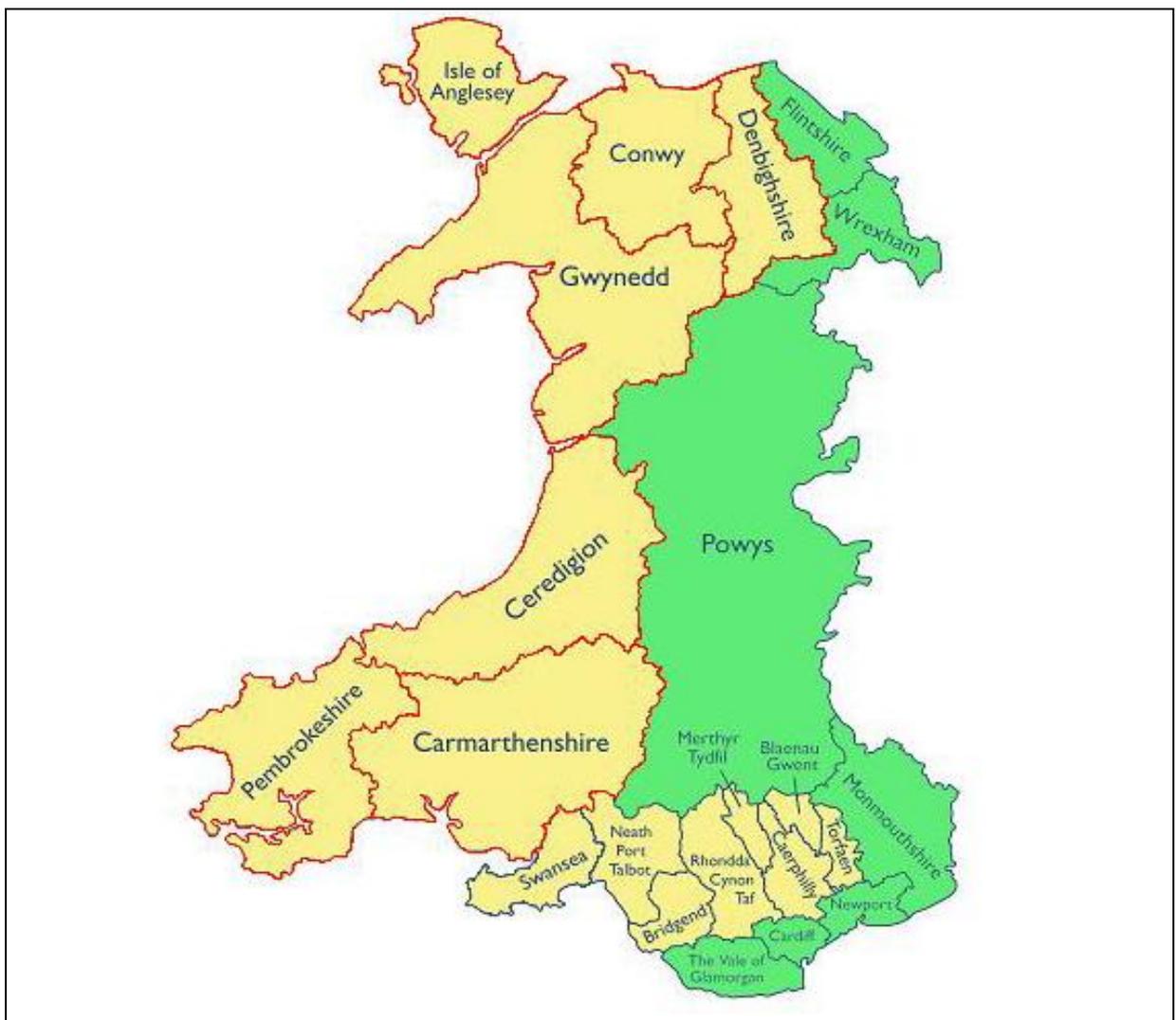
# 1 INTRODUCTION

## 1.1 Purpose

1.1.1 The Welsh Institute for Natural Resources, Bangor University in association with Old Bell 3 on behalf of the Welsh European Funding Office (WEFO) has carried out the Strategic Environmental Assessment (SEA) report of the East Wales European Regional Development Fund (ERDF) Programme ('the Programme'). Figure 1 shows the Programme area.

1.1.2 The assessment has been carried out in accordance with the requirements of the European SEA Directive (2001/42/EC) and the implementing regulations for Wales, the Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 (Welsh Instrument 2004 No. 1656 (W.170)).

**Figure 1: The East Wales area eligible for ERDF Convergence Programme funding (green area)**



## 1.2 Requirements of the SEA process

1.2.1 The SEA has been carried out in parallel with the development of the Programme and as part of its ex-ante evaluation. It sets out to ensure that the Programme contributes positively to the high level of environmental protection required by the European Union in its Structural Fund investments, as well as supporting the goal of the Welsh Government (WG) of adopting sustainable development as a central organising principle. It does this:

- by setting out the environmental parameters within which the Programme will operate;
- by identifying, describing and assessing likely significant effects on the environment arising from the Programme's implementation;
- by considering reasonable alternatives.

1.2.2 The information required for inclusion in the report, including the relevant section of the main document, is outlined in Table 1:

**Table 1: References to the SEA Regulations**

<b>Environmental Report - Information to be included</b>	
1. An outline of the contents, main objectives of the plan, and of its relationship with other relevant plans and programmes.	<b>Section 3 pages 28-31</b>
2. The environmental characteristics of areas likely to be significantly affected.	<b>Section 4 pages 32-65</b>
3. Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.	<b>As above; see in particular section 4.17 pages 62-63</b>
4. The environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation.	<b>Appendix 1</b>
5. The likely significant effects on the environment, including short, medium and long-term effects, permanent and temporary effects, positive and negative effects, and secondary, cumulative and synergistic effects, on issues such as: biodiversity; population; human health; fauna; flora; soil; water; air; climatic factors; material assets; cultural heritage including architectural and archaeological heritage; landscape; the	<b>Section 5 pages 66-84</b>

interrelationship between the above factors.	
6. The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan.	<b>As above; see section 5.2 pages 76-83</b>
7. An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken.	<b>Section 6 pages 85-88</b>
8. A description of measures envisaged concerning monitoring in accordance with Regulation 17.	<b>Section 8 pages 92-93</b>
9. A non-technical summary of the information provided under paragraphs 1 to 9.	<b>This document</b>

## 2 THE SEA PROCESS AND ASSESSMENT METHODOLOGY

### 2.1 An overview of the SEA tasks

2.1.1 The approach that has been adopted is based on a number of advisory documents, chiefly the guidelines of the former Office for the Deputy Prime Minister (ODPM) 2005, and the EC's guidance documents on implementing the SEA Directive and ex-ante evaluation (Annex 1) 2012. Note was also taken of guidance provided by the Environment Agency, the Countryside Council for Wales, RSPB, and the Scottish Executive. Relevant citations can be found in the footnotes of the Environmental Report.

2.1.2 The following boxes summarise the SEA process and tasks undertaken.

#### **Stage 1: Screening**

- An **initial meeting** between the contractors and WEFO and Welsh Government officials was held on 10 December 2012 in Cardiff to determine the broad nature and scope of the Structural Fund (SF) programme and to establish a timetable for consultation
- Subsequently, a **Screening Report** was produced on 4 January 2013 for consultation with the statutory bodies (the Environment Agency, the Countryside Council for Wales and Cadw). The result of the screening report confirmed the need for a full SEA owing to the potentially significant effects that could arise from the Programme.
- A meeting was held with the Countryside Council for Wales to discuss our approach to the SEA in terms of biodiversity concerns.

### **STAGE 2: Scoping**

- A Scoping Report was issued on 14 January 2013. The subsequent Environmental Report is based on responses to the Scoping Report and to further consultations with statutory and non-statutory interests (A list of consultees can be found in Appendix 6 of the Environmental Report).
- WEFO organised a series of consultation events to engage stakeholders in the development of the 2014-2020 SF and RDP Programmes. As part of these events, stakeholders were given the opportunity to comment on the first draft Environmental Report. A second draft Environmental Report was produced in response to those consultations.

### **STAGE 3: Draft Environmental Report**

- A third draft was produced in order to reflect alterations to the proposed East Wales Operational Programme (7 October 2013).

### **STAGE 4: Final Environmental Report**

- A Final Report was produced in April 2014 in response to further adjustments to the East Wales Operational Programme.

2.1.3 The study was constrained by two key factors: a) the Programme is spatial only in the sense that it covers the whole of the East Wales (EW) region. It provides generic descriptions of activities likely to be supported under each priority or theme. b) the Programme itself is constrained by priority (regional economic activity) and timescale of operation. Identifying *reasonable* alternatives reflects these constraints.

## **3 THE ERDF PROGRAMME – EAST WALES**

3.1 The Programme based on the selection of six appropriate Thematic Objectives (TO's) from a suite of eleven such objectives defined by the European Commission in its Common Provisions Regulation<sup>1</sup>. The selected TO's are:

- Strengthening research, technological development and innovation (TO1)
- Enhancing access to and use and quality of ICT (TO2)
- Enhancing the competitiveness of SMEs (TO3)
- Supporting the shift to a low-Carbon economy in all sectors (TO4)

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<sup>1</sup> See Brussels, 14.3.2012; COM(2011) 615 final/2  
[http://ec.europa.eu/regional\\_policy/sources/docoffic/official/regulation/pdf/2014/proposals/regulation/general/general\\_proposal\\_en.pdf](http://ec.europa.eu/regional_policy/sources/docoffic/official/regulation/pdf/2014/proposals/regulation/general/general_proposal_en.pdf)

- Promoting sustainable transport and removing bottlenecks in key network infrastructures (TO7)
- Promoting social inclusion and combating poverty (TO9)

3.2 The Operational Programme is working to four Priority Axes that aim to address the above TO's (see table 2):

- Axis 1            Research and Innovation** (comprising elements related to TO1 and TO4)
- Axis 2            SME Competitiveness** (comprising elements related to TO1, TO3, TO2 and TO9)
- Axis 3            Renewable Energy and Energy Efficiency** (relating to TO4 only)
- Axis 4            Connectivity** (comprising elements related to TO2 and TO7)

**Table 2: Summary of the Operational Programme themes and objectives**

<b>Axis 1 Research and Innovation</b>	<ol style="list-style-type: none"> <li>1. To increase the success of Welsh research institutions in attracting competitive and private research funding.</li> <li>2. To increase the level of innovation undertaken across all sectors of the Welsh economy, in particular within Welsh SMEs, leading to a growth in productivity.</li> <li>3. To increase the successful translation of research and innovation processes into new and improved commercial products, processes and services, in particular through improved technology transfer from HEIs.</li> <li>4. To increase the success of Welsh research institutions in attracting competitive and private research funding (related to low carbon research and innovation).</li> <li>5. To increase the successful translation of low Carbon research and innovation processes into new and improved commercial products, processes and services, in particular through improved technology transfer from HEIs.</li> </ol>
<b>Axis 2 SME Competitiveness</b>	<ol style="list-style-type: none"> <li>1. To increase the amount of finance available to SMEs for both business start-up and for business expansion.</li> <li>2. To increase the number of SME start-ups through the provision of information, advice and guidance and support for entrepreneurship.</li> </ol>

	<ol style="list-style-type: none"> <li>3. To increase SME productivity through the provision of advice and guidance, in particular through encouraging ICT exploitation.</li> <li>4. To increase the growth of those SMEs with growth potential, in particular through accessing new markets (both domestic and international).</li> <li>5. To address market failures in the availability of finance, in particular risk capital, for Welsh SMEs to undertake innovation and commercialise R&amp;D.</li> </ol>
<b>Axis 3 Renewable Energy and Energy Efficiency</b>	<ol style="list-style-type: none"> <li>1. To increase the number of small-scale renewable energy schemes established.</li> <li>2. Increase the energy efficiency of the existing Welsh housing stock, particularly in areas of fuel poverty.</li> </ol>
<b>Axis 4 Connectivity</b>	<ol style="list-style-type: none"> <li>1. Increasing urban mobility to and from key urban and employment centres to increase access to jobs.</li> <li>2. To increase the access of Welsh businesses to high speed ICT networks in peripheral areas and strategic sites to support increased levels of productivity and business growth.</li> </ol>

## 4 ALTERNATIVES

### 4.1 Selection and discussion of alternatives to the Programme

4.1.1 Several scenarios are possible such as an 'economic growth first' scenario as opposed to, say an 'environment first' or a 'food security first' scenario, as is common in many policy forecasting studies, but in this case are inappropriate, since the EU and the Welsh Government have both indicated that the scenario they seek is a 'sustainable development' scenario in which social, environmental and economic priorities are balanced. There is thus no definitive 'first', since it is not the intention to seek 'trade-offs'.

4.1.2 A number of constraints in terms of alternative programmes were identified, including time (six year timescale), funding (as yet to be finalised and allocated), deployment of funds (discussion of alternatives constrained by compulsory spending element of 80%) and policy (unreasonable to consider alternatives not consistent with Wales, UK, EU policies).

4.1.3 The Environmental Report therefore considers the likely effect on the SEA objectives of three options: 1) Do nothing, 2) Continue the previous programme 3) Implement the proposed programme

## 4.2 Conclusion on assessment of alternatives

4.2.1 There are significant opportunities associated with the proposed programme, but without funding and promotion, it is possible that it could be less effective than the previous programme whilst the ‘do nothing ‘ option would result in continued pressures. Much will depend on the selection of projects, many impacts are linked to social behaviour which could in itself be targeted appropriately. There are dangers of ‘silo’ accounting associated with the current Programme which are detrimental to delivery, promoting ‘box ticking’ rather than ‘benefits and outcomes’. The possibility of linking funding to the RDP and the West Wales and the Valleys ERDF Programme is raised.

## 5 ENVIRONMENTAL ISSUES AND BASELINE DATA

5.1 Because the Programme does not identify particular land allocations, the baseline is broad in scope. It would be premature to assume that certain environmental aspects will not be influenced, however slightly, by the Programme. Table 3 summarises the issues identified.

**Table 3: Summary of issues identified during analysis of the baseline data**

<b>Biodiversity</b>	Fewer SACs and protected areas in East Wales than in WWV. About <b>60% of SACs</b> , and a number of Biodiversity Action Plan species and habitats are in <b>unfavourable condition</b> , especially those on the coast. Pressures can come from visitor numbers, climate change, development, over/or undergrazing, pollution, nutrient enrichment /eutrophication, sediment deposits, invasive species, inappropriate planting, over abstraction and overfishing.
<b>Population and human health</b>	Significant variation in population densities across the area. Some areas lack easily accessible <b>open space</b> . Stress related illnesses from <b>poor living and working conditions</b> , as well as <b>unemployment</b> ; heat and <b>fuel poverty</b> ; poor diets leading to <b>obesity</b> ; illnesses and injuries at work; and poor social/private rented <b>housing standards</b> are contributory factors in health problems in Wales. In some areas, <b>poor air quality</b> may be a contributory factor.

<b>Soils and material assets</b>	Only one Green Belt in Wales, in this region, between Newport and Cardiff. Development, changes in agriculture (especially intensification) and climate change contribute to a <b>loss in soil carbon and structure</b> . There have been <b>changes in hydrology</b> and <b>erosion</b> due to changes in rainfall patterns and agriculture. The need to maintain best quality agricultural land in the face of development pressure may result in losses of less productive land which may be valuable for carbon sequestration. There may be <b>more brown field</b> sites for development <b>around the larger settlements</b>
<b>Minerals and aggregates</b>	Relatively limited range of terrestrial minerals and aggregates, sand and gravel is extracted from marine areas. About <b>50% of waste aggregate is currently recycled</b> .
<b>Timber</b>	About <b>43% of all woodland is coniferous plantation</b> , mainly owned by Welsh Government. Timber resource is under-exploited due to competitively priced imported timber. This may change as Europe faces a biomass shortage. There will be a <b>significant demand for imported biomass</b> fuel and also for good quality building timber.
<b>Air Quality</b>	Landscape and land cover, geology, density of settlements, quality of housing, employment patterns, traffic flow and density vary across the region and air quality will also vary. <b>Traffic emissions</b> pose the major threat to air quality in urban areas, <b>ozone</b> at ground level in rural areas. Parts of Eastern Powys are included in the <b>radon</b> affected areas.
<b>Water quality</b>	<b>Pollution from flooded mines</b> continues to present a challenge. <b>Diffuse pollution</b> from other sources including agriculture is exacerbated by changing weather patterns with sudden flooding. There is a <b>potential threat to coastal water quality</b> as a result of increases in storm events. Currently, <b>about 33% of coastal waters are not of 'good' ecological quality</b> , and the pattern for terrestrial water bodies is mixed.
<b>Water availability</b>	Wales wide <b>23.5% of water supply is lost to leakages</b> ; there has been a <b>significant increase in abstracted water</b> , mainly for electricity supply. About <b>38% of river waters are not reliable for new abstractions</b> . The proposed City Region approach (in Cardiff and Swansea) will increase pressure on water resources. There are <b>questions regarding Wales' ability to supply water to a growing population</b> if there is <b>climate change induced</b> unpredictable supply and increased demand from hot weather.

<b>Flood risk</b>	East Wales has limited coastal area (12 % of the total) <b>28% of the Welsh coastline has sea defence infrastructure</b> ; about <b>1 in 6 properties is at risk from flooding</b> - this will be significantly higher locally - the <b>economic cost of flooding</b> is estimated at more than <b>£200 million per annum</b> . Some densely populated areas in the region are at flood risk – the Dee estuary in Flintshire in particular, with particular risk to the transport network (especially the railway)
<b>Climate</b>	A number of changes in weather patterns are predicted, including <b>summer water shortages</b> ; <b>increases in amounts and intensity of winter rainfall</b> , with <b>milder winters</b> ; <b>hotter, drier summers</b> ; <b>increases in sudden storms</b> . These will result in rapid <b>build up of river and drainage systems</b> ; increases in storm induced <b>coastal erosion and subsidence</b> ; ecosystem changes with some <b>species and habitat losses and gains</b> .
<b>Energy consumption</b>	<b>Gas</b> accounts for <b>60% of public sector energy use</b> . About <b>33% of domestic energy use is for heating</b> and about <b>33% for lighting/installations</b> . A target has been set by Welsh Government to reduce average per person carbon emissions by 33% by 2020.
<b>Waste</b>	The amount of <b>municipal waste recycled, reused or composted has increased from 18% in 2003/4 to 48% in 2011/12</b> . Having peaked in 2005/6, the <b>total amount of waste generated has decreased since 2000 by about 95,000 tonnes per annum</b> .
<b>Transport</b>	On the east-west corridor <b>buses account for 85% of public transport</b> . <b>Out-commuting</b> accounts for many journeys on the east-west network in the north-east. <b>81% of the population travels to work by motor vehicle</b> , and 12% by walking or cycling. There has been a <b>fall of about 5 million bus passengers</b> (2010/11) since 2009/10, and an <b>increase of about 2 million rail passengers</b> in the same period. There are conflicting statistics on transport related emissions.
<b>Culture, architecture and archaeology</b>	<b>Over 25% of Wales' listed buildings are either 'at risk' or 'vulnerable'</b> . Whilst nearly all of Wales' ancient monuments are stable or improving, climate change and changes in agricultural us may create new challenges. <b>Historic buildings and their settings, and the wider landscape, are under pressure from development</b> . The number of people who can speak Welsh has <b>decreased slightly</b> since 2001, but the number who can understand but not speak Welsh has increased slightly. The local authorities with <b>the lowest percentage of Welsh speakers</b> were in South East Wales. In Cardiff there was a slight rise, from 11% to 11.1%, and Monmouthshire reported a slightly larger increase in at 9.9%, up from 9.3%. Blaenau Gwent reported the lowest percentage of people who could speak Welsh at 7.8%

<b>Ecological Footprint</b>	Wales' ecological footprint <b>had risen at a rate of about 1.3% between 1990 and 2003</b> , in line with a growth in Gross Added Value (GVA). The most recent calculation (2006) is that <b>Wales' ecological footprint is about 4.4 gha, which is a significant reduction from the 2003 average figure of 5.16 gha</b> . The current footprint is under review, but in the light of the economic downturn, this may have been reversed since 2008. The link between poor economic performance and a low footprint is not a good one – the footprint needs to be reduced for positive reasons.
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## 6 SUMMARY ASSESSMENT OF THE PROGRAMME

- 6.1 A detailed analysis of each proposed intervention was conducted and set against the SEA objectives and indicators as a matrix test (Table 4).

**Table 4: Summary Programme Assessment**

SEA Objectives	Programme Objectives													
	Axis 1					Axis 2					Axis 3		Axis 4	
Protect places, landscapes and buildings of historic, cultural and archaeological value	0	✓x	?	?	?	0	0	x?	?	0	0	✓?	0	0
Protect and enhance land and seascapes, townscapes and the countryside	0?	✓x	x?	?	?	0?	0	0	x?	0	x?	✓?	✓?	0
Protect and enhance biodiversity	0	✓x	x?	✓?	✓?	0	0	0	x?	0	0?	0?	0	0
Protect and improve the region's water quality	0	0	0	✓?	✓?	0	0	0	0	0	0	0?	0	0
Protect the water resource and ensure its sustainable use	0	0	0	0	0	0	0	0	0	0	✓	0	0	0
Guard against land contamination, encourage reuse of existing buildings and of previously developed land of low ecological quality	0?	✓?	✓?	0	0	0?	0	0	✓?	0	✓	0	✓?	0
Minimise the requirement for energy generation use, promote efficient energy use and increase the use of energy from renewable resources	0	✓	✓x	✓	✓	✓?	0	0?	✓x	0	✓✓	✓✓	✓	0
Minimise waste, increase re-use, recycling and recovery rates	0	✓?	?	✓?	✓?	✓?	✓?	✓?	?	✓?	✓	0	0	0

Minimise the need to travel; provide alternatives to car use	✓?	x?	x?	✓?	✓?	x?	○	✓?	x?	○	○	○	✓x	✓✓
Limit and adapt to climate change	✓?	✓	✓?	✓	✓✓	✓?	✓?	✓?	✓?	✓?	✓✓	✓✓	✓x	✓✓
Protect and improve air quality	✓?	✓	✓?	✓	✓✓	✓?	✓?	✓?	?	✓?	✓✓	✓✓	✓	✓
Improve physical and mental health and reduce health inequalities	✓?	○	○	✓?	✓	✓?	✓?	✓?	✓?	✓?	✓	✓	✓	✓✓
Improve public access to land	○	○	○	○	○	○	○	○	○	○	○	○	○	✓?

<b>KEY</b>	<b>Positive/strong positive</b>	✓ ✓✓	<b>Possible/slight negative</b>	x?
	<b>Possible/slight positive</b>	✓?	<b>Negative/strong negative</b>	x xx
	<b>Neutral</b>	○	<b>Positive and negative aspects</b>	✓x

- 6.2 Of the 78 elements compared, 30 are thought to be likely to have a positive effect, 37 are likely to be neutral, without taking into account any environmental cross cutting measures. Eleven of the elements are thought to have a potentially negative effect without appropriate measures, which in most cases will be statutory.
- 6.3 Regulations on standards for waste and recycling, water, emissions and air quality, as well as on buildings, will apply, as will regulations linked to avoidance, mitigation, compensation and enhancement for biodiversity effects. National and local planning policy, together with appropriate assessment and environmental impact assessment will also apply at project level.
- 6.4 The result of the analysis in detail can be seen in Appendix 5 of the EW Environmental Report.

## **7 SUMMARY OF CONCLUSIONS**

- 7.1 The purpose of the Programme is to promote sustainable economic development, by which is meant economic development that does not compromise environmental or social priorities. In trying to ensure an appropriate balance, it is inevitable that some tensions will arise, and the Programme will need to carefully target its priorities to optimise economic opportunities and at the same time to optimise environmental and social benefits.
- 7.2 The alternatives considered are based on a number of unknowns and assumptions, but the conclusion is that the proposed programme provides an opportunity to deliver significant environmental benefits, provided that funding is carefully considered and goes for maximum benefit not just to the economy but seeks environmental and social positive outcomes as well.
- 7.3 It should be noted that economic growth can lead to an increase in energy and material use, and potentially waste. The issue is therefore a management one rather than one of principle. However, if the envisaged interventions were not to occur at all, there would be greater uncertainty about the environmental outcomes. The Programme aims to address two of the three key indicators of Wales' ecological footprint, namely household energy demand and travel.
- 7.4 There are some potential risks, and some of the effects, both positive and negative, may not become immediately apparent. Some effects may be immediate, direct and positive, such as supporting projects that will ameliorate air pollution or minimise the demand for energy. Others may be less immediate, indirect and negative, and may include the transportation of

marine-borne organisms on the hulls of vessels into new sites as a result of port development, or the impacts of demand for expansion of successful operations on sensitive sites.

- 7.5 There is considerable convergence between the themes promoted by the Programme and those promoted by the Welsh Government's own programmes, based as they are on furthering sustainable development. Without the Programme it is arguable that significant and urgent interventions would not take place, and some of these aim to address the Welsh Government's targets to reduce carbon emissions, to improve air quality and to reduce Wales' ecological footprint.
- 7.6 In conclusion, the Programme offers an opportunity to promote positive effects on the environment, particularly on energy conservation, carbon reduction, waste management, re-use of redundant land and local health and well-being issues.
- 7.7 The environmental sustainability Cross-Cutting Themes reflect the environmental objectives of the 2007-13 Operational Programme. Since the objectives and the interventions of the proposed Programme are different in certain aspects, the scope of the guidance on CCTs may need to be revisited and revised, as will the criteria and indicators for monitoring the environmental effects of the Programme, which will be monitored in parallel with the social and economic effects, based on the range of indicators which are currently measured by the statutory authorities and the Welsh Government. Further detail on monitoring is given in the Environmental Report