THE ENVIRONMENTAL ECONOMY OF THE SOUTH EAST

Prepared for a consortium of partners led by SEEDA

by

Land Use Consultants
SQW Limited
and
Cambridge Econometrics

August 2002

43 Chalton Street
London NW1 1JD
Tel: 020 7383 5784
Fax: 020 7383 4798
luc@london.landuse.co.uk

CONTENTS

THE ENVIRONMENTAL ECONOMY OF THE SOUTH EAST OF ENGLAND: EXECUTIVE SUMMARY

Introduction

The Environmental Economy of the South East of England comprises a wide variety of economic activities that have a common link in that they are all integrally related to the environment. It includes:

- Primary industries that depend upon environmental resources, such as agriculture, forestry, fishing and mineral extraction.
- Industries that are dependent upon a high quality environment for their success, such as tourism, recreation, and leisure.
- Activities that contribute to a high quality environment, such as the work of conservation organisations, government agencies, and local authorities, that can help to create a quality of life that attracts inward investment.
- Organisations and businesses involved in developing environmental technologies that deliver a cleaner environment.

A multi-disciplinary team of consultants comprising Land Use Consultants, SQW Limited and Cambridge Econometrics were commissioned to investigate the Environmental Economy of the South East of England by a consortium of regional partners led by SEEDA and including the Countryside Agency, English Nature and the Environment Agency. The principal aims and objectives of the study were to:

- Provide a baseline report on the size and breadth of the Environmental Economy of the South East of England in comparison with other recognised sectors.
- Identify relative strengths and weaknesses in the Environmental Economy of the South East, compared to other UK regions, its unique selling points, its contribution to sustaining business and quality of life, and where investment opportunities lie.
- Review a range of Environmental Economy sector development scenarios within the context of sustainable development objectives and Regional Planning Guidance, and to develop and quantify economic growth scenarios, and determine mechanisms required for delivery.
- Identify opportunities for and threats to the Environmental Economy sector, and public/private sector funding opportunities and benefits, compared to other investment strategies.

Key Findings

- In 2000, the Environmental Economy contributed over £7.8 billion Gross Value Added (GVA) to the South East Economy, which was equivalent to just over 6% of the total regional economy.
- The Environmental Economy employed approximately 230,000 people in 2000, representing 5.5% of the region's total workforce.

- The contribution of the Environmental Economy to the regional economy is similar in percentage terms to that of the West Midlands and the South West, but the total people employed and GVA are highest in the South East.
- The Environmental Economy employs more workers than many other sectors of the regional economy. It is far larger than the financial services industry (approximately 138,000 employed). The Environmental Economy contributed more to regional GVA than any other sector except financial services, and education and health.
- The Environmental Economy is not expected to grow as fast as the economy as a whole, largely because of poor prospects for agriculture and parts of the manufacturing sector. This probably masks the real growth potential of the Environmental Economy, since it is likely to be a main driver of growth within the wider economic sectors within which it lies (e.g. organic farming within agriculture; environmental technology within research and manufacturing).

Growth Prospects of the Environmental Economy

- Growth prospects in primary industries and resource management are relatively weak. Employment in mineral extraction, fisheries, agriculture and forestry are all expected to decline over the next decade. However, niche activities such as organic farming, and aggregates recycling are likely to be more buoyant.
- Growth prospects in resource management are mixed. There is likely to be growth in waste recovery and recycling, and an increase in the proportion of the region's energy generated from renewable sources, since much work is required if challenging national and regional policy targets are to be met. In both fields, the region lags well behind its European counterparts. In the case of renewable energy, the South East lags behind many other UK regions suggesting that there is considerable unrealised growth potential. The prospects for water resource management are less clear-cut, since a considerable amount of investment to increase efficiency and improve water quality has already taken place. However, rising consumption and the effects of climate change may mean substantial future investment is still required.
- Tourism is a major contributor to the regional economy and is predicted to continue to grow. The quality of the natural, built and historic environment helps to under-pin much of this activity.
- Another major growth area is environmental technologies, management and training. The Joint Environmental Markets Unit (JEMU) already lists 530 environmental technology firms from the South East on its database, and SEEDA believes this to be an underestimate of the true number. The new Environmental Technologies Enterprise Hub, based at Reading University, should assist with the continued growth of this sector.
- Local authorities and government agencies such as the Countryside Agency, English Nature, English Heritage, and the Environment Agency are significant employers in the field of environmental planning, regulation and management, although there is unlikely to be much growth in the numbers of people employed in this area of work.
- The voluntary sector and not-for-profit organisations, such as the National Trust, Groundwork Trusts, County Wildlife Trusts, RSPB and other environmental NGOs make a major contribution to the quality of the environment, and are significant employers in their own right. WWF, for example, has its headquarters in Godalming, Surrey, and employs 240 people in the region.

Sub-Regional Characteristics

The whole range of activity in the Environmental Economy is represented throughout the South East, with few marked differences between the various counties. However, the research found that some sub-regional specialisation is occurring, which may have direct implications for its future prospects:

- The strongest growth in the Environmental Economy is in the higher value added sectors such as environmental technology, and the provision of environmental advice. The counties to the west of London, such as Berkshire, Buckinghamshire, Oxfordshire, Surrey, and northern Hampshire are particularly strong in this respect. A number of major companies working in the field are located here, such as Thames Water, AEA Technology, Babtie and JacobsGibb. There is considerable research activity in this part of the region, such as the Centre for Ecology and Hydrology in Wallingford, Oxfordshire, which amongst other things carries out studies into the effects of climate change and extreme weather conditions.
- The focus of activity in the southern counties, embracing southern Hampshire and the Isle of Wight, Kent, East and West Sussex, is more on activities that capitalise on a high quality environment, such as tourism, and primary industries such as agriculture. Here the growth potential is not so much in the individual activities, but in how they combine to provide a rich asset to support the visitor economy, and attract inward investment.

The issues arising were examined in more detail through six case studies. These sought to explore the growth potential of environmental technologies (exploring in particular the experience of the counties to the west of London), and the case for environment-led economic development in a coastal context (East Kent; Portsmouth to Chichester), market towns (Battle; Petersfield), and in a rural area of high environmental quality (the Chilterns). These found that although the Environmental Economy continues to develop, regional partners do not think of it as a sector in its own right, and therefore do not provide the knowledge, support and promotion that it deserves. Instead, the focus is on its component parts, such as economic regeneration, local produce, or heritage-based tourism, without properly understanding or developing the links that bind them together within the Environmental Economy. This suggests that opportunities are being missed, both within the Environmental Economy, and in the 'greening' of the wider economy. The message, therefore, is one of a group of activities all with a common factor based on the environment, whose untapped potential has yet to be fully acknowledged and realised.

Conclusions and Recommendations

The research showed that the Environmental Economy in the South East of England comprises a collection of activities that ought to be taken seriously. It is a major contributor to the regional economy, and one of the prime reasons for the high quality of life that people in the region value so highly. It is part of the mainstream economy, and as such it should be a priority for the emerging local strategic partnerships and in the developing Area Investment Frameworks across the region.

The Environmental Economy is already contributing to many of the objectives of the Regional Framework for Sustainable Development, but it can do much more. The environment is a capital resource that underpins much economic activity in the region. Areas with a high environmental quality can help to attract business. Investment to improve poorer environments can create the conditions where economic activity has a better chance of success. There is no one blueprint that should be followed. The opportunities depend heavily on the character of specific places so that the solutions need to be appropriate to their own context and terms.

Environmental Economy Strategic Recommendations

Initiative	Recommendation	Key Players
Strategic recognition	Embrace the Environmental Economy within regional and local economic development strategies	SEEDA, local authorities, local economic partnerships
Branding and marketing	Promote the Environmental Economy as a strength of the South East Economy	SEEDA
Promote sustainable economic activity	Support a shift within both the Environmental Economy and the wider economy to those activities that are environmentally sustainable	SEEDA, SEERA, Govt Agencies, local authorities
Regional level intelligence	Improve knowledge about the Environmental Economy, its opportunities and needs, and disseminate good practice	SEEDA
Appraisal and monitoring	Monitor the development of the Environmental Economy, and ensure that objectives consistent with the Environmental Economy are integrated into appraisal systems	SEEDA, local authorities, local economic partnerships

Environmental Economy Sector Recommendations

Sector	Recommendation	Key Players
Sustainable Agriculture	Implement the recommendations of the Curry Report	DEFRA, SEEDA, agri-business, Countryside Agency, English Nature, local authorities, NFU, CLA
	Support farmers markets and local produce schemes and outlets	
	Promote sustainable agriculture flagship schemes (e.g. High Weald Land Management Initiative; Whole Farm Plans)	
	Ensure diversification proposals deliver sustainable development	
Sustainable Forestry	Promote sustainable forestry in a Regional Forestry Strategy	SEERA, SEEDA, Forestry Commission, Woodland Trust
	Promote the accreditation scheme for sustainable sources of timber and woodland products, and encourage key players to lead by example	
Sustainable Mineral Operations	Promote the use of secondary and recycled aggregates	SEERA, SEEDA, mineral operators, mineral planning authorities, construction industry
	Ensure RPG and mineral local plans promote sustainable restoration schemes providing habitat, landscape and community benefits	
Sustainable Water Management	Ensure RPG and development plans promote water efficiency, and assess water resource availability in determining type and location of development	SEERA, SE Water Resources Forum, water companies, Environment Agency, planning authorities
Sustainable Waste Management	Introduce 'waste audits' for business and retailers	SEEDA, local authorities, waste industry, Environment Agency
	Develop market opportunities for recycled waste products and provide an advisory service	
Sustainable Energy	Develop a regional strategy for renewable energy, and promote a 'Centre of Excellence'	SEERA, SEEDA, energy developers, local authorities, research institutions
	Ensure RPG and development plans promote energy conservation, and appropriate renewable energy projects	
	Increase significantly renewable energy production	
Sustainable Tourism	Introduce tourism 'pay-back' schemes to invest to maintain high quality environments and improve poor quality environments	DEFRA, SEERA, SEEDA, Regional Tourist Board, tourism operators, Countryside Agency, English Heritage, English Nature, farming and landowner interests (e.g.
	Encourage integration between tourism, farming and environmental interests to help ensure tourism enhances sustainable access, biodiversity, and landscape enhancements and landowners' income	
	Promote 'sustainable tourism' through RPG, development plans, and flagship schemes (e.g. East Kent Biosphere proposal)	

Sector	Recommendation	Key Players
	Introduce accreditation scheme to brand 'sustainable tourism' products and services	NFU, CLA)
Environmental Technology	Support the continuing development of a South East Environmental Technology Sector Group	SEERA, SEEDA, Reading University, key industry players, JEMU
	Develop the Enterprise Hub at Reading University as a Centre of Excellence, and encourage satellite centres at other regional education and research establishments	
	Investigate markets and business needs in UK and overseas, and promote SE strengths (water, environmental monitoring research, contaminated land and waste management, environmental consultancy)	
	Support development of other parts of the sector where less strong (air pollution control, noise and vibration control, energy management and renewable energy, cleaner technologies and processes)	
	Support commercialisation and manufacturing of environmental technologies to capitalise on strong research base	
Sustainable Transport	Use RPG, RTS and RES to 'break the link' between economic growth and traffic growth, and significantly boost investment in alternatives to roads to achieve a significant modal shift to public transport, cycling and walking	Dept of Transport, SEERA, SEEDA, transport providers, highways authorities
Conservation of the Natural, Historic and Built Environment	Recognise the role and economic value of the voluntary sector in maintaining a high quality environment, and provide support and include in economic development partnerships accordingly	SEERA, SEEDA, local authorities, NGOs
	Avoid development that erodes or destroys the natural, historic and built environment of the region	
	Support investment in damaged and degraded environments to improve their contribution to the economy and society	
	Recognise the environment as having economic value, and harness it as an essential ingredient of economic regeneration	
Greening Business Behaviour	Provide advice, education and training, to improve awareness of the benefits to business of good environmental housekeeping	SEEDA, BusinessLinks, local authorities, CBI, Chambers of Commerce
	Promote environmental accreditation schemes across all sectors	
	Research the role of environmental quality as a reason for inward investment	

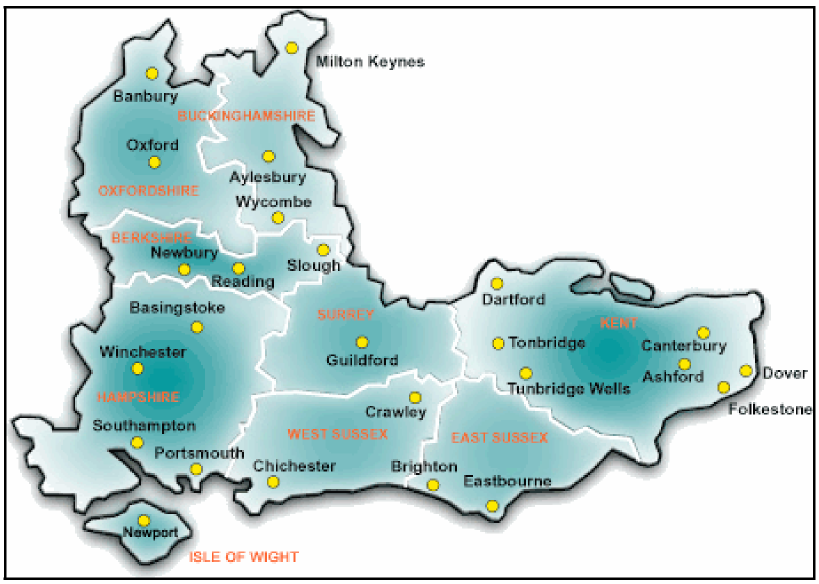
Land Use Consultants, SQW Limited, and Cambridge Econometrics
August 2002

1. INTRODUCTION

1.1. This report examines the importance of the environment in the South East economy. In particular it aims to explore the contribution of those sectors of the economy with strong links with the environment, and their potential for growth. In purely economic terms the region is highly productive, and if considered as a 'national' economy in its own right, would stand as the 22nd largest economy in the world. The region also boasts a wide range of attractive environmental assets, including the South Downs, North Downs, Chilterns and parts of the Cotswold AONBs and the New Forest, historic buildings and market towns, and internationally important wildlife habitats.

1.2. The South East region comprises the former county of Berkshire, Buckinghamshire, East Sussex, Hampshire, the Isle of Wight, Kent, Oxfordshire, Surrey and West Sussex. It is the largest of the English regions in population terms, housing over 8 million people, and accounts for over 15% of UK GDP.

Figure 1.1: The South East Region



Source: South East Regional Assembly

AIMS AND OBJECTIVES

1.3. The principal aims and objectives of the research were to:

(i) Provide a baseline report on the size and breadth of the Environmental Economy of the South East of England in comparison with other recognised sectors.

(ii) Identify relative strengths and weaknesses in the Environmental Economy of the South East, compared to other UK regions, its unique selling points, its contribution to sustaining business and quality of life, and where investment opportunities lie.

(iii) Review a range of Environmental Economy sector development scenarios within the context of sustainable development objectives and Regional Planning Guidance, and to develop and quantify economic growth scenarios, and determine mechanisms required for delivery.

(iv) Identify opportunities for and threats to the Environmental Economy sector, and public/private sector funding opportunities and benefits, compared to other investment strategies.

STUDY PARTNERS AND CONSULTANCY TEAM

1.4. The work for this study was undertaken by a multi-disciplinary team of consultants drawn from Land Use Consultants (LUC), SQW Limited and Cambridge Econometrics.

1.5. The consultants were guided in their research by a Steering Group of regional partners led by SEEDA and including the Countryside Agency, English Nature and the Environment Agency.

TARGET AUDIENCE

1.6. The primary audience for the research are regional policy and decision-makers driving regional economic and environmental initiatives in the South East. The preliminary findings of the research have been fed into the review of the Regional Economic Strategy currently being undertaken by SEEDA, and it is anticipated that future actions relating to the Environmental Economy will be guided by this report.

STRUCTURE OF THE REPORT

1.7. The remainder of the report is divided into eight chapters.

- The first part of the report sets out how we have quantified the Environmental Economy of the South East, using 'top-down' and 'bottom-up' data analysis, with the process by which this was undertaken is presented in Chapter 2. The overall findings for the South East are set out in Chapter 3, with Chapters 4 to 6 provided more detailed breakdowns for the various activities that make up the Environmental Economy. Chapter 7 provides an analysis of the results.
- The second part of the report (Chapter 8) develops some of the themes that emerged from the data analysis by investigating in more detail the variable geography of the Environmental Economy at the sub-regional and local scale through a series of case studies. These examined the role of the environment as a generator of sustainable economic development.
- Chapter 9 brings together our conclusions and recommendations.

2. STUDY APPROACH

DEFINING THE ENVIRONMENTAL ECONOMY

2.1. Defining the Environmental Economy sector is inherently problematical, as it is not recognised in mainstream economic thinking as a discrete industry. Nonetheless, it is possible to identify the Environmental Economy as comprising various groups of activities with similar characteristics, in that they all have strong links to the environment in some form or other.

2.2. However, there is no necessary relationship between economic sectors that are premised on the environment and those that are environmentally sustainable. Within the broad definition of the Environmental Economy it is important to bring out this distinction. For the purpose of this report, therefore, the Environmental Economy has been defined as falling into three groups:

(i) Activities directly dependent upon the environment.

(ii) Activities dependent upon a high quality environment.

(iii) Activities contributing to a high quality environment.

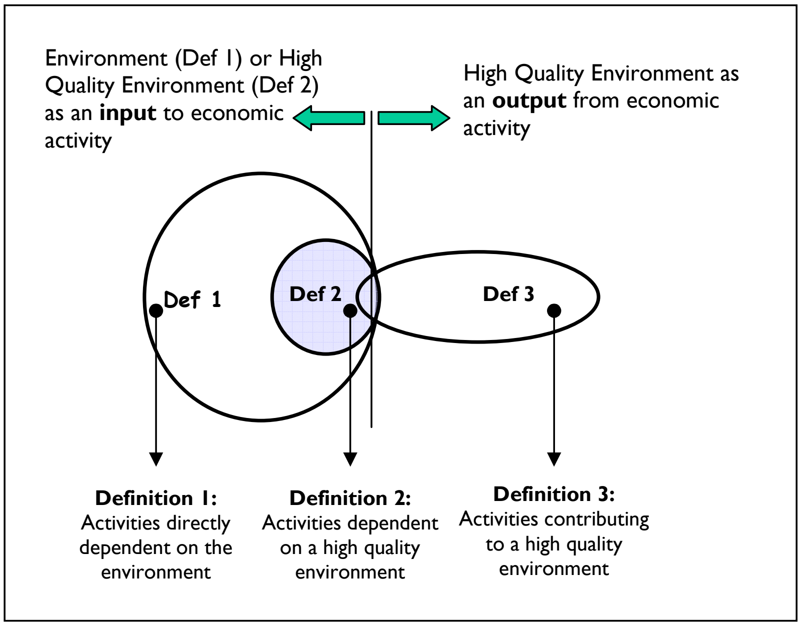
2.3. The first group relates to all activities linked to the land and environment, and includes activities which are considered sustainable and those which are not. The second group is a sub-set of the first group, but highlights those activities, such as tourism, which require a well-maintained and managed environment. The third group partially overlaps with the other two groups and aims to capture those (sustainable) activities whose main purpose is to conserve and improve the environment. In addition, this group also catches activities such as environmental technologies, which are not included in the first two definitions.

QUANTIFYING THE ENVIRONMENTAL ECONOMY

2.4. Figure 2.1 illustrates the relationship between the three definitions. The diagram shows that the definitions cannot simply be added together to give a ‘grand total’ figure for the Environmental Economy. The three definitions are measuring three different ‘cuts’ although there is a degree of overlap between them.

2.5. Inevitably there is an element of subjectivity in determining which components of the Environmental Economy fall into which of the three definitions. For example, there is no guarantee that the work of an environmental consultancy will always be beneficial to the environment. The purpose of using the three definition-split for the Environmental Economy is to demonstrate that there are different dimensions to it, and that this needs to be recognised. The numbers generated are therefore open to challenge, but their primary purpose is to provoke debate on the various components of the Environmental Economy, and how it can be taken forward in line with the principles of sustainable development.

Figure 2.1: Relationships between the Three Definitions of the Environmental Economy



2.6. Measuring the Environmental Economy sector is further complicated, as it is not recognised in standard economic sector classification terms. This causes some difficulty for quantifying the Environmental Economy sector for the following reasons:

- The Standard Industry Classification (SIC) codes do not distinguish between the 'sustainability credentials' of the different activities, and so weighting needs to be applied to take this into account.
- Some aspects are inherently difficult/impossible to quantify, such as 'Quality of Life Benefits', and the relative importance of a high quality environment for inward investment vis-à-vis other influencing factors.
- Some aspects of the Environmental Economy (e.g. local authority activities, such as land use planning and environmental health protection) are not specifically captured in SIC codes.

2.7. For these reasons, a two-pronged approach was adopted:

(i) Top-down analysis using SIC codes with notional weightings applied to reflect each economic activity's contribution to each of the three definitions of the Environmental Economy

(ii) Bottom-up analysis using secondary research studies and reports, plus primary research (e.g. questionnaire survey of all local authorities in the region) to test and provide further clarification of the extent and depth of the Environmental Economy.

2.8. Throughout the report case studies of good practice have been identified to illustrate what is already being achieved in the Environmental Economy sector.

Top-down analysis

2.9. The economic activities listed under SIC codes have been divided into 13 groups of activities sharing similar characteristics:

- Agriculture.
- Hunting.
- Forestry.
- Fishing.
- Mining of fuels.
- Mining of metals.
- Quarrying.
- Other Mining and Quarrying.
- Manufacturing of Environmental Technologies.
- Waste Processing.
- Energy.
- Capitalising on a High Quality Environment.
- Sustainable Transport.
- Environmental Advice.

2.10. The SIC codes do not capture all of the aspects of the Environmental Economy. For example aspects of recreation (e.g. liveries) and the role that environmental quality plays in attracting inward investment and film and media are excluded. Nonetheless, the list of economic activities provides a good starting point in calculating the size of the Environmental Economy. As described above, we provide an element of weighting to the Environmental Economy sector to reflect the strength of each activity's relationship to each of the three definitions. These vary depending on the economic activity concerned.

2.11. Table 2.1 shows the weightings applied to each of the SIC codes, for each of the three definitions of the Environmental Economy in order to generate figures for numbers of employed and Gross Value Added (GVA)[1].

Table 2.1: Weightings across the Environmental Economy

Activity	Defn 1 Activities directly dependent upon the environment	Defn 2 Activities dependent upon a high quality environment	Defn 3 Activities contributing to a high quality environment
Agriculture			
MAFF/DAFF	1.0		0.05
Growing Cereals	1.0		0.05
Growing vegetables	1.0		0.1
Growing fruit/nuts/beverages	1.0		0.1
Farming of cattle/dairy	1.0		0.1
Farming of sheep/goats/horses/asses	1.0		
Farming of swine	0.5		
Farming of poultry	0.5		
Other farming of animals	1.0		0.1
Growing of crops and farming of animals	1.0		0.1
Agric service activities	0.9		
Animal husbandry	0.95	0.05	
Hunting			
Hunting/trapping	1.0	0.5	0.5
Forestry			
Forestry and logging	1.0		0.5
Forestry and logging related activities	1.0		0.5
Fishing			
Fishing	1.0	0.2	0.2
Operation of fish hatcheries	0.9		
Mining of Fuels			
Mining/agglomeration of hard coal	1.0		
Mining/agglomeration of lignite	1.0		
Extraction/agglomeration of peat	1.0		
Extraction: crude petroleum/natural gas	1.0		
Service activities: oil and gas extraction	1.0		
Mining uranium and thorium ores	1.0		
Mining of Metals			
Mining iron ores	1.0		
Mining non-ferrous metals	1.0		
Quarrying			
Quarrying of stone for construction	1.0		
Quarrying of limestone	1.0		0.1
Quarrying of slate	1.0		0.1
Operation of gravel/sand pits	1.0		0.2
Mining of clays and kaolin	1.0		0.1
Other Mining and Quarrying			
Mining of chem. and fertilizer minerals	1.0		
Other mining/quarrying	1.0		0.025
Manufacturing of Environmental Technologies			
Manf of engines/turbines			0.025
Manf of pumps and compressors			0.025
Manf of taps and valves			0.025
Manf of ventilation equip			0.025
Manf elec motors/generators			0.025

[1] Gross Value Added (GVA) is the term that is now used to measure an industrial sector's contribution to the economy, since a change in the System of National Accounts in the late 1990s. Prior to this the term used was Gross Domestic Product (GDP). There are minor differences in the way the two terms are calculated.

Activity	Defn 1 Activities directly dependent upon the environment	Defn 2 Activities dependent upon a high quality environment	Defn 3 Activities contributing to a high quality environment
Manf accumulators			0.025
Manf elec equip for engines			0.025
Manf elec equip			0.025
Manf elec valves			0.025
Manf measuring instruments			0.1
Manf industrial process control equipment			0.1
Manf optical instruments			0.025
Manf of parts for motor vehicles			0.025
Waste Processing			
Recycling of metal waste and scrap			0.9
Recycling of non-metal waste and scrap			0.9
Collection/purification of water	1.0		0.3
Sewage and refuse disposal	1.0		0.3
Energy			
Production/distribution of electricity	0.95		0.05
Manf/distribution of gas	0.95		0.05
Steam and hot water supply	0.8		
Capitalising on a High Quality Environment			
Hotels and motels with restaurant	0.5	0.5	
Hotels and motels without restaurant	0.5	0.5	
Youth hostels and mountain refuge	0.8	0.8	
Camping sites incl. caravan sites	0.7	0.7	
Other provision of lodgings	0.4	0.4	
Restaurants	0.1	0.1	
Bars	0.1	0.1	
Taxi operation	0.1	0.1	
Other passenger land transport			0.1
Fair and amusement park activities	0.05	0.05	
Museum activities	0.2	0.2	
Botanical/zoological gardens	0.4	0.4	0.2
Other sporting activities	0.1	0.1	
Other recreational activities	0.3	0.3	0.15
Physical well-being activities	0.3	0.3	0.15
Sustainable Transport			
Transport via railways			0.6
Other scheduled passenger land transport			0.3
Inland water transport			0.5
Other supporting land transport activities			0.1
Building and repair of ships			0.1
Building/repairing of pleasure boats			0.1
Manf railway/tramway vehicles			0.1
Transport via pipelines			0.1
Sea and coastal water transport			0.1
Environmental Advice			
Research: natural sciences/engineering			0.2
Business/management consultancy			0.1
Architectural/engineering activities			0.3
Technical testing and analysis			0.1
General public service activities			0.2
Regulation: more efficient business			0.2
Technical/vocational secondary education			0.05
Higher education			0.1
Adult and other education			0.05
Other membership orgs			0.3

2.12. Data on the level of employment within each of more than 500 activities are available from the Annual Business Inquiry for each of the (former) counties within the South East. For each county, base projections of employment to 2010 are prepared under the following assumptions:

- Employment in each of the detailed (i.e. 500+) industries grows at the same rate as is projected for the broader industrial classification that it is within (i.e. employment in restaurants in Berkshire is assumed to grow at the same rate as employment in Hotels & Catering in Berkshire, as projected by Cambridge Econometrics).

- Output (value-added) in each detailed industry is calculated using the level of productivity projected from the broader industrial classification of which it is part.

- Employment and output are attributed to each of the 13 groups within the Environmental Economy according to particular weights (e.g. 100% of employment and output in 'Growing Cereals' is directly dependent upon the environment (Definition 1), but only 5% is considered to contribute to a high quality environment (Definition 3) (reflecting the intensity of arable farming in the South East). But none of this sector could be considered to be 'dependent upon a high quality environment' (Definition 2).

2.13. The decision on weightings clearly has a major influence on the final figures produced. The final decision on the weightings to be applied was inherently subjective but provides best estimates based on professional experience.

2.14. We have not included those sectors of the economy where primary inputs form a substantial input into the production process (e.g. cement manufacture) as this was considered to be 'one-step' removed from the main purpose of this study.

Bottom-up Analysis

2.15. In order to shed more light upon the top-down analysis a wide information gathering exercise was completed. A substantial amount of literature and data, specific to the South East region, was surveyed to ensure that the estimates of jobs and outputs are as close as possible to the actual situation, being careful to avoid double-counting. Information sources included the England Rural Development Programme, the Joint Environmental Marketing Unit (JEMU) database, regional Tourist Boards and government agencies.

2.16. A questionnaire survey was also conducted to gain information from local authorities in the South East. The questionnaire was sent to each of the local authorities in the South East region. A follow-up letter was also sent a few weeks afterwards, to ensure maximum response. The questionnaire requested the following information:

- A breakdown of the total number of people in the local authority employed within specific (environment linked) areas of council work.

- An account of the steps the authority had taken to 'green' behaviour within and outside the council.

- A description of links between the local economy and environment within the local authority area, and specifically:
    - Whether the Environmental Economy had been acknowledged within the local economic strategy (and whether any research had been conducted).
    - Who the largest players are the Environmental Economy in the area
    - How important the local authority considered the quality of the environment to be in terms of local economic performance.

2.17. From these questions, we were able to build up a picture of both the number of people involved in the public sector side of the Environmental Economy and the actions being taken at a local scale to strengthen the environment's stake in decision making for economic benefit.

2.18. In addition, respondents were asked to indicate possible case studies from their district (or county), for inclusion in this report to illustrate Environmental Economy with 'live' examples of good practice.

3. TOP-DOWN ANALYSIS RESULTS

TOTAL SIZE

3.1. Based on the weightings and calculations described in the previous chapter, a picture of the South East's Environmental Economy can begin to be quantified.

3.2. Table 3.1 shows the total level of employment in the South East for each of the three definitions of the Environmental Economy. This shows that more people are employed in activities that 'depend on the environment' (Definition 1) than are employed in either of the other two definitions of activity (a result of the nested definitions used). It is estimated that some:

- 155,000 people (just under 4% of all employment in the region) are employed in activities dependent on the environment.
- 49,000 people are employed in activities dependent on a high-quality environment.
- 87,000 people are employed in activities that could contribute to a high quality environment.

3.3. Because of the overlaps that exist between the three definitions of the Environmental Economy, it is not possible simply to add up the totals for each definition to generate a figure for the Environmental Economy as a whole. However, by eliminating double-counting we have calculated that in the order of **230,000 people** are employed in the Environmental Economy of the South East as a whole. This represents approximately 6% of total employment in the region.

Table 3.1: Employment in the Environmental Economy in the South East (000s)

	Actual			Projected	
Definition	**1995**	**1999**	**2000**	**2005**	**2010**
Defn 1 – Activities directly dependent upon the environment	153.7	155.9	155.5	144.4	141.7
Defn 2 – Activities dependent upon a high quality environment	46.3	47.6	49.2	49.3	50.1
Defn 3 – Activities contributing to a high quality environment	88.2	85.7	87.0	89.6	92.1
Total Environmental Economy	**234.3***	**233.6***	**234.2***	**226.4***	**226.4***
Total South East Economy	3,677.0	4,076.8	4,159.8	4,312.3	4,447.1
Total Environmental Economy as a % of Total South East Economy	6.3%	5.7%	5.6%	5.3%	5.1%

* Note: The total employment in the Environmental Economy is less than the sum of the individual totals given for each definition. This is because there are overlaps between the three definitions - the overall total for the Environmental Economy has been calculated to remove any double-counting.

3.4. Employment in the Environmental Economy is projected to decline slightly in the future, largely because of poor prospects for agriculture and parts of the manufacturing sector. However, this is probably not a true reflection of the potential of the

Environmental Economy, which is likely to be a main driver of growth within the wider economic sectors within which it lies (e.g. organic farming within agriculture; environmental technology within research and manufacturing).

3.5. Table 3.2 illustrates the Gross Value Added (GVA) or scale of output from these definitions. A total is also provided for the Environmental Economy as a whole (removing double counting), and its contribution to the total regional GVA.

Table 3.2: GVA in the Environmental Economy in the South East (£m)

	Actual			Projected	
Definition	**1995**	**1999**	**2000**	**2005**	**2010**
Defn 1 – Activities directly dependent upon the environment	4,145	4,352	4,383	4,483	4,583
Defn 2 – Activities dependent upon a high quality environment	602	610	608	665	723
Defn 3 – Activities contributing to a high quality environment	2,407	2,792	2,925	3,245	3,525
Total Environmental Economy	**6,350***	**7,492***	**7,877***	**9,618***	**11,548***
Total South East Economy	93,319	122,129	129,316	170,247	214,050
Total Environmental Economy as a % of Total South East Economy	**6.8%**	**6.1%**	**6.1%**	**5.6%**	**5.4%**

* Note: The total GVA in the Environmental Economy is less than the sum of the individual totals given for each definition. This is because there are overlaps between the three definitions - the overall total for the Environmental Economy has been calculated to remove any double-counting.

3.6. Table 3.2 shows that the Environmental Economy contributed approximately 6% towards the total regional economy in 2000. This is projected to decline in relative, but not absolute, terms in the future in line with employment although, as explained above, this may not reflect the true potential of the Environmental Economy within the wider industrial sectors that the various activities fall within.3.6.

3.7. In order to show the growth of the Environmental Economy in real terms, Table 3.3 shows the GVA of the regional economy re-based in 1995 prices. This shows that the Environmental Economy is projected to grow by c. 24% between 1995 and 2010, compared to c. 61% for the economy of the South East as a whole. For the reasons given above, this is likely to under-estimate the true growth potential of the Environmental Economy, although the growth in GVA of sectors such as financial services is likely to outpace that of the Environmental Economy.

Table 3.3: GVA in the Environmental Economy in the South East (£1995m)

	Actual			Projected	
Definition	**1995**	**1999**	**2000**	**2005**	**2010**
Defn 1 – Activities directly dependent upon the environment	4,145	4,353	4,383	4,483	4,583
Defn 2 – Activities dependent upon a high quality environment	602	610	608	665	723
Defn 3 – Activities contributing to a high quality environment	2,407	2,792	2,925	3,245	3,526
Total Environmental Economy	**6,350***	**6,925***	**7,084***	**7,501***	**7,876***
Total South East Economy	93,319	109,386	113,767	132,534	150,219
Total Environmental Economy as a % of Total South East Economy	**6.8%**	**6.3%**	**6.2%**	**5.7%**	**5.2%**

* Note: The total GVA in the Environmental Economy is less than the sum of the individual totals given for each definition. This is because there are overlaps between the three definitions - the overall total for the Environmental Economy has been calculated to remove any double-counting.

3.8. The following sections below provide more detailed analysis of the size and comparative importance of the Environmental Economy of the South East.

DEFINITION 1: ACTIVITIES DIRECTLY DEPENDENT ON THE ENVIRONMENT

3.9. Just under half of employment under this definition is within the primary sectors (e.g. agriculture and mining). The remainder is mainly in activities that capitalise on the high-quality environment (e.g. hotels & catering and leisure services). Waste processing and energy each employ around 12,000-15,000.

3.10. Overall employment in the region in this definition is larger than the number of people employed in the banking and insurance industries in the region combined, or about a third of all people employed in manufacturing. Table 3.4 shows the employment in this definition for each of the counties.

Table 3.4: Employment in Definition 1 of the Environmental Economy in the South East (000s)

		Actual		Projected	
County	**1995**	**1999**	**2000**	**2005**	**2010**
Berkshire	14.2	16.1	16.0	15.1	14.7
Buckinghamshire	9.6	9.0	9.0	8.6	8.6
East Sussex	15.2	13.3	12.7	11.9	11.7
Hampshire	23.3	29.4	29.3	27.4	27.1
Isle of Wight	3.1	5.2	5.2	4.9	4.9
Kent	32.4	31.0	31.1	27.7	27.0
Oxfordshire	12.4	14.5	14.6	13.5	13.3
Surrey	22.3	19.7	19.8	18.4	18.1
West Sussex	21.3	17.8	17.8	16.7	16.2
South East	**153.7**	**155.9**	**155.5**	**144.4**	**141.7**

3.11. Almost 40% of employment is shared between Kent and Hampshire. However, the activities are a more important source of employment in the Isle of Wight (where it accounts for more than 10% of total employment) and West Sussex (4.5%). In Buckinghamshire the activities account for only 2.5% of all employment.

3.12. Table 3.5 illustrates how the proportion of those employed in this section of the Environmental Economy equates to the total economy for each of the sub-regions, and more importantly, how they vary. The Isle of Wight, Kent and West Sussex have a higher representation in this definition than the other counties. In the Isle of Wight's case, this can be attributable to a high dependence on tourism (capitalising on a high quality environment).

Table 3.5: Employment in Definition 1 of the Environmental Economy in the South East (% of total employment)

	Actual			Projected	
County	**1995**	**1999**	**2000**	**2005**	**2010**
Berkshire	3.3	3.3	3.2	2.9	2.7
Buckinghamshire	2.8	2.4	2.4	2.2	2.0
East Sussex	5.3	4.3	4.1	3.7	3.6
Hampshire	3.2	3.6	3.5	3.2	3.1
Isle of Wight	6.6	10.7	10.8	10.1	10.0
Kent	4.9	4.4	4.4	3.8	3.6
Oxfordshire	3.9	4.1	4.0	3.6	3.4
Surrey	4.4	3.3	3.2	2.9	2.7
West Sussex	5.8	4.6	4.5	4.1	3.9
South East	**4.2**	**3.8**	**3.7**	**3.3**	**3.2**

3.13. Table 3.6 illustrates how the GVA gained from industries in this definition varies from county to county. Kent is currently the highest GVA earner, with Hampshire closely behind. However, this situation is projected to reverse by 2010, which hints at Kent's dependency on the (declining) agriculture sector within the Environmental Economy.

Table 3.6: GVA in Definition 1 of the Environmental Economy in the South East (£1995m)

	Actual			Projected	
County	**1995**	**1999**	**2000**	**2005**	**2010**
Berkshire	513	674	700	738	750
Buckinghamshire	249	223	239	254	265
East Sussex	374	378	370	387	399
Hampshire	681	831	828	859	876
Isle of Wight	50	88	87	90	95
Kent	841	874	868	845	858
Oxfordshire	293	354	352	354	365
Surrey	679	555	565	567	571
West Sussex	466	378	374	390	405
South East	**4,146**	**4,353**	**4,383**	**4,483**	**4,583**

3.14. Table 3.7 shows that the profile of output under this definition differs from that of employment. The highest share of output is from energy (reflecting its higher levels of productivity). Waste processing contributes more output than does the group 'capitalising on a high-quality environment'.

Table 3.7: GVA in Definition 1 of the Environmental Economy in the South East in 1999 as % of total Definition 1

Industry Type	Berks	Bucks	East Sussex	Hants	IoW	Kent	Oxon	Surrey	West Sussex	SE
Agric	8.9	14.2	14.8	22.9	41.0	29.9	32.5	23.7	40.1	**23.9**
Forestry	1.3	0.2	0.5	1.3	0.0	0.2	0.8	0.6	0.3	**0.6**
Fishing	0.1	0.0	0.3	0.3	0.5	0.1	0.1	0.1	0.3	**0.2**
Mining of Fuels	7.1	0.2	0.0	0.2	0.0	0.2	0.0	11.4	0.0	**2.7**
Mining of Metals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	**0.0**
Quarrying	4.1	3.0	1.1	2.4	1.9	5.8	5.2	3.2	2.6	**3.6**
Other Mining & Quarrying	0.0	0.6	0.0	0.1	0.0	0.0	0.1	0.0	0.5	**0.1**
Waste Processing	21.8	52.4	29.5	14.8	16.4	15.2	17.0	17.3	11.8	**19.4**
Energy	47.0	5.1	35.4	43.7	9.7	39.1	30.0	29.3	28.0	**35.6**
Capitalising on a high quality env	9.6	24.2	18.4	14.4	30.5	9.4	14.2	14.4	16.4	**14.0**
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

3.15. Compared to the South East as a whole Buckinghamshire, East Sussex and the Isle of Wight have an 'over-representation' of employment in capitalising on a high quality environment, while Kent, Oxfordshire and West Sussex are similarly placed with agriculture (as shown in Table 3.7). Buckinghamshire and East Sussex also have a comparatively high representation of employment in waste processing. Surrey and Hampshire have probably the most similar profile to the region as a whole.

DEFINITION 2: ACTIVITIES DEPENDENT ON A HIGH-QUALITY ENVIRONMENT

3.16. Employment within this grouping is almost entirely within hotels & catering and leisure services. In total some 4% of all employment in distribution, hotels & catering is identified as being 'dependent' on a high quality environment.

3.17. Table 3.8 shows that within the South East employment under this definition is highest within Kent, Hampshire, and Surrey, although there is less variation in the level of employment around the region than under the previous definition.

Table 3.8: Employment in Definition 2 of the Environmental Economy in the South East (000s)

	Actual			Projected	
County	1995	1999	2000	2005	2010
Berkshire	5.1	5.2	5.4	5.4	5.4
Buckinghamshire	3.2	4.1	4.3	4.3	4.4
East Sussex	5.7	5.7	5.8	5.7	5.8
Hampshire	8.2	9.3	9.7	9.7	9.8
Isle of Wight	2.3	2.2	2.2	2.2	2.2
Kent	7.3	6.4	6.5	6.5	6.6
Oxfordshire	3.6	3.9	4.0	4.0	4.1
Surrey	5.2	6.0	6.3	6.3	6.4
West Sussex	5.8	5.0	5.1	5.1	5.2
South East	**46.3**	**47.6**	**49.2**	**49.3**	**50.1**

3.18. However, the activities are a more important source of employment in the Isle of Wight (where it accounts for more than 4.5% of total employment) and East and West Sussex (1.8% and 1.3% respectively), as shown in Table 3.9.

Table 3.9: Employment in Definition 2 of the Environmental Economy in the South East (% of total employment)

	Actual			Projected	
County	1995	1999	2000	2005	2010
Berkshire	1.2	1.1	1.1	1.0	1.0
Buckinghamshire	0.9	1.1	1.1	1.1	1.1
East Sussex	2.0	1.8	1.8	1.8	1.8
Hampshire	1.1	1.1	1.2	1.1	1.1
Isle of Wight	5.0	4.5	4.6	4.5	4.5
Kent	1.1	0.9	0.9	0.9	0.9
Oxfordshire	1.1	1.1	1.1	1.1	1.1
Surrey	1.0	1.0	1.0	1.0	1.0
West Sussex	1.6	1.3	1.3	1.3	1.2
South East	**1.3**	**1.2**	**1.2**	**1.1**	**1.1**

3.19. As with the previous definition of the Environmental Economy, the activities are comparatively low value-added per worker, and so the importance of the definition in terms of its contribution to the regional and county economic output is less than its employment contribution (see Table 3.10).

Table 3.10: GVA in Definition 2 of the Environmental Economy in the South East (£1995m)

	Actual			Projected	
County	**1995**	**1999**	**2000**	**2005**	**2010**
Berkshire	68	65	65	71	77
Buckinghamshire	42	54	55	61	67
East Sussex	71	70	68	74	80
Hampshire	106	120	120	131	142
Isle of Wight	29	27	26	29	31
Kent	95	83	82	89	96
Oxfordshire	47	51	51	56	61
Surrey	72	80	81	89	96
West Sussex	73	62	61	67	73
South East	**602**	**610**	**608**	**665**	**723**

DEFINITION 3: ACTIVITIES CONTRIBUTING TO A HIGH-QUALITY ENVIRONMENT

3.20. The scope of this definition is the most varied of the three used in terms of the range of economic activities that it includes. Most employment is among providers of environmental advice and related activities (43,000). A further 10,000 are in sustainable transport. Around 3,900 are estimated to be employed in more sustainable forms of agriculture (i.e. less intensive forms of farming).

Table 3.11: Employment in Definition 3 of the Environmental Economy in the South East (000s)

	Actual			Projected	
County	**1995**	**1999**	**2000**	**2005**	**2010**
Berkshire	12.4	10.2	10.3	10.5	10.8
Buckinghamshire	7.0	7.5	7.7	8.1	8.5
East Sussex	7.6	6.4	6.4	6.5	6.5
Hampshire	16.8	16.8	16.8	17.2	17.6
Isle of Wight	0.9	1.1	1.1	1.1	1
Kent	15.8	14.3	14.5	14.5	14..4
Oxfordshire	8.0	9.4	9.6	10.2	10.9
Surrey	12.4	12.6	12.9	13.6	14.4
West Sussex	7.3	7.6	7.7	7.8	8.0
South East	**88.2**	**85.7**	**87**	**89.6**	**92.1**

3.21. Within the South East the largest representation is again within Kent, Hampshire and Surrey (44,200 people, representing over 50% of the total), although there is less variation in the level of employment around the region (see Table 3.11). The smaller representations are in the Isle of Wight (1,100), East Sussex (6,400) and West Sussex (7,700). The relative importance of this definition is very even across the region, with it accounting for 2-2.7% of all employment (see Table 3.12). The definition accounts for the greatest share of all employment in Isle of Wight and Oxfordshire (2.2% and 2.7% respectively).

Table 3.12: Employment in Definition 3 of the Environmental Economy in the South East (% of total employment)

		Actual		Projected	
County	1995	1999	2000	2005	2010
Berkshire	2.9	2.1	2.1	2.0	2.0
Buckinghamshire	2.1	2.0	2.0	2.0	2.0
East Sussex	2.7	2.1	2.0	2.0	2.0
Hampshire	2.3	2.0	2.0	2.0	2.0
Isle of Wight	2.0	2.2	2.2	2.1	2.1
Kent	2.4	2.0	2.0	2.0	1.9
Oxfordshire	2.5	2.7	2.7	2.7	2.8
Surrey	2.5	2.1	2.1	2.1	2.1
West Sussex	2.0	2.0	2.0	1.9	1.9
South East	**2.4**	**2.1**	**2.1**	**2.1**	**2.1**

3.22. Looking at the profile of activities within this definition, compared to the South East as a whole, Buckinghamshire, Hampshire, Berkshire and West Sussex all have a comparatively high proportion of employment within manufacturing activities associated with environmental technologies. Berkshire also has a comparatively high representation of 'environmental advice' as does Oxfordshire and Surrey.

Table 3.13: GVA in Definition 3 of the Environmental Economy in the South East (£1995m)

		Actual		Projected	
County	1995	1999	2000	2005	2010
Berkshire	353	335	352	389	417
Buckinghamshire	181	238	259	294	325
East Sussex	217	228	234	252	268
Hampshire	452	501	516	572	623
Isle of Wight	25	34	34	36	38
Kent	477	555	569	610	645
Oxfordshire	190	280	297	342	384
Surrey	318	384	410	469	521
West Sussex	195	243	254	281	305
South East	**2,407**	**2,792**	**2,925**	**3,245**	**3,526**

3.23. The GVA output under this definition is greatest in Kent, and lowest (apart from the Isle of Wight) in East Sussex (see Table 3.13). This reflects the relative size of the economies as much as any sectoral specialisation.

GROWTH PROSPECTS

Activities Directly Dependent upon the Environment

3.24. Prospects for employment growth among these activities are fairly weak. For the South East as a whole employment is projected to decline by 10-15,000 over 2000-2010. This is attributed to a projected decline in employment in agriculture and the utility sector.

3.25. Within the region the weakest prospects for employment growth are in Kent. They are more favourable in Buckinghamshire, where the relative importance of agriculture etc is less.

3.26. Output in this definition is projected to increase despite the fall in employment. However, with growth in the South East projected to average less than ½% pa over the decade the prospects are still weak. Within the definition the strongest growth is projected among the 'capitalising on a high-quality environment' group (see below).

3.27. The relative structure of the county economies means that the strongest overall growth is projected in Buckinghamshire and the Isle of Wight and to be weakest in Kent and Surrey.

Activities Dependent upon a High Quality Environment

3.28. Prospects for employment growth among these activities are fairly modest. Employment in those activities that capitalise on a high-quality environment are projected to see only a modest increase in employment. For the South East as a whole, employment is projected to increase by about 1,000 over 2000-2010 (0.2% pa). The strongest growth is projected in Buckinghamshire, Oxfordshire and Surrey. East Sussex in contrast is not projected to see any net growth over the decade. A similar spatial pattern is projected for relative output growth over the period, with growth averaging less than 2% pa.

Activities Contributing to a High Quality Environment

3.29. Output in this definition in the South East is projected to grow by just under 2% pa over 2000-2010, although there are marked differences in the prospects for particular groupings. Prospects are most favourable for environmental advice, which is projected to grow by more than 2.5% pa over the period. Manufacturers of environmental technologies and 'capitalising on a high quality environment' are both projected to grow by 1.5-2% pa. In contrast output in agriculture is projected to decline and many of the other groups will see little growth.

3.30. Within the region the fastest growth is projected in Oxfordshire, Buckinghamshire and Surrey (2.5% pa), reflecting in particular strong relative prospects in the area of environmental advice and capitalising on a high quality environment. The weakest prospects for growth are in the Isle of Wight, Kent and East Sussex.

3.31. Employment in the South East is projected to increase by 5,000 over the decade to 2010 (0.6% pa). Within this overall rise there is projected to be a fall in employment in agriculture, a slight fall in employment in manufacturing of environmental technologies and a rise of 7,000 in providing environmental advice. Within the region the relative prospects for employment growth are similar to those for output: Buckinghamshire, Oxfordshire and Surrey are projected to see the strongest employment growth (just under 1% pa), reflecting their strength in the area of environmental advice in particular, but also in activities 'capitalising on a high quality environment'. Employment within this definition is projected to remain little-changed in the Isle of Wight and Kent, while East Sussex is projected to experience only modest increases.

COMPARATIVE ANALYSIS

3.32. Table 3.14 shows how the number of people employed in each of the definitions of the Environmental Economy in the South East compares with other regions as well as other employment sectors. In order to ensure consistency, the comparative figures for each region have been calculated using the same method as that applied to the South East economy described in Chapter 2 of this report. The figures for the West Midlands and the South West therefore vary from those published in their own 'Environmental Economy' studies.

3.33. It is evident that, in absolute terms, the number employed in activities which contribute to a high quality environment (Definition 3) in the South East is almost double that of the West Midlands or South West regions, although in relative terms the proportion of total workforce employed in Definition 3 activities is only slightly higher in the South East. The Environmental Economy employs more workers than many other sectors of the regional economy. It is far larger than the financial services industry.

Table 3.14: Regional Comparison of Employment in the Environmental Economy with other Regions and Industrial Sectors

	Employment in 2000 (000s)			Growth, 2000-10 (% pa)		
	S.East	S.West	W.Mids	S.East	S.West	W.Mids
EE Definition 1	155.5	143.6	98.5	-0.9	-1.4	-0.9
EE Definition 2	49.2	42.9	27	0.2	-0.2	0
EE Definition 3	87.0	46.3	46.5	0.6	0.5	0.8
Total Environmental Economy	**234.2***	**182.7***	**140.6***	**-0.3**	**-0.9**	**-0.3**
Agriculture	78	78	48	-1.4	-2.3	-1.6
Food, drink & tobacco	35	45	39	-3.7	-1.2	-0.5
Chemicals & man-made fibres	40	11	13	0.5	0.0	0.7
Mechanical engineering	51	33	59	-2.2	-0.6	-2.2
Electronics, electrical and instrument engineering	95	51	56	-1.8	0.0	-1.1
Construction	269	158	159	1.2	-0.1	-1.6
Retailing	407	259	238	1.4	1.3	1.3
Hotels & catering	248	176	144	0.0	-0.5	-0.3
Financial services	138	72	66	0.1	0.5	0.0
Public administration & defence	213	161	108	-0.9	-0.6	-0.5
Education & health	687	425	448	1.0	0.9	1.1
Total Employment	**4,160**	**2,405**	**2,551**	**0.7**	**0.4**	**0.3**

* Note: The total numbers employed in the Environmental Economy for each region are less than the sum of the individual totals given for each definition. This is because there are overlaps between the three definitions - the overall total for the Environmental Economy has been calculated to remove any double-counting.

3.34. Table 3.15 provides an equivalent comparison with other regions and industry sectors, but in terms of GVA. This reveals a similar pattern to employment, with the Environmental Economy of the South East generating considerably higher total GVA than that of the South West and the West Midlands. The GVA of the Environmental Economy of the South East is 1.3 times higher than that of the South West, and is 1.6 times higher than that of the West Midlands. However, the comparison of the Environmental Economy with other industrial sectors varies from that of employment. The Environmental Economy contributed more to regional GVA than any other sector except financial services (which generates particularly high levels of GVA per person employed), and education and health.

Table 3.15: Regional Comparison of GVA in the Environmental Economy with other Regions and Industrial Sectors

	GVA in 2000 (£1995m)			Growth, 2000-10 (% pa)		
	S.East	S.West	W.Mids	S.East	S.West	W.Mids
EE Definition 1	4,383	4,114	3,383	0.4	0.7	1.2
EE Definition 2	608	432	269	1.7	1.7	2.0
EE Definition 3	2,925	1,385	1,390	1.9	2.0	2.0
Total Environmental Economy	**7,084***	**5,282***	**4,548***	**1.1**	**1.0**	**1.4**
Agriculture	1,109	1,700	1,111	-0.6	-0.1	-0.1
Food, drink & tobacco	1,498	1,456	1,363	0.0	0.6	0.4
Chemicals & man-made fibres	3,029	689	819	2.6	1.3	1.3
Mechanical engineering	1,407	917	1,931	0.9	2.5	1.5
Electronics, electrical and instrument engineering	4,924	2,132	1,841	5.4	6.5	4.8
Construction	5,657	2,895	3,004	2.1	1.7	1.4
Retailing	6,379	2,983	3,058	2.4	2.4	2.7
Hotels & catering	2,774	1,716	1,391	1.8	1.6	2.1
Financial services	8,808	3,135	2,846	2.6	2.4	2.1
Public administration & defence	6,236	4,604	2,460	1.1	1.3	1.5
Education & health	11,792	6,637	7,196	3.0	2.9	3.1
Total GVA	**113,767**	**53,968**	**58,892**	2.8	2.6	2.3

* Note: The total GVA in the Environmental Economy for each region is less than the sum of the individual totals given for each definition. This is because there are overlaps between the three definitions - the overall total for the Environmental Economy has been calculated to remove any double-counting.

Definition 1: Activities Directly Dependent upon the Environment

3.35. The grouping in the South East is larger in absolute numbers employed than it is in the South West or West Midlands, though it actually accounts for a smaller share of overall employment in the region than it does in the other two regions.

3.36. The main differences in the size of employment in the South East and the West Midland (which has the smallest sector) are in the size of agriculture and 'capitalising on a high-quality environment'. The number of people identified in capitalising on a high quality environment in the West Midlands is much lower than in the South East. Hotels & catering makes up the majority of this category and their relative importance to the South East and West Midlands economies explains most of the difference in the levels of people identified in 'capitalising of a high quality environment' (i.e. West Midlands hotels & catering sector is only 55% or so of the South East sector, and accounts for a similar percentage of total employment in both regions), rather than the sector having a different detailed profile in the West Midlands.

3.37. The structure of the definition is very similar in each region. The main variations are:

- The absolute and relative size of quarrying in the South West.
- The small relative importance of waste processing in the South West.
- The relative importance of the energy sector in the West Midlands.
- The small numbers employed in 'capitalising on a high-quality environment' (see earlier comments).

3.38. Growth prospects for each grouping differ across the regions, though overall the South East is projected to experience better prospects than the South West and similar prospects to the West Midlands.

3.39. The prospects for the grouping as a whole are very much determined by those of the two largest categories, agriculture and capitalising on a high-quality environment. Employment in agriculture is projected to decline in the South East, though not to the same extent as is projected in the South West. The South East is also projected to see faster growth in capitalising on a high-quality environment than the other two regions.

Definition 2: Activities Dependent upon a High Quality Environment

3.40. The assumptions made of this definition mean that is almost identical to the 'capitalising on a high-quality environment' category of Definition 1,and so the conclusions arising are broadly the same.

Definition 3: Activities Contributing to a High Quality Environment

3.41. The level of employment in the South East is almost twice that of the South West and West Midlands. However, the relative importance of the definition in overall employment is fairly similar in all three regions.

3.42. The reason for this is not just that of relative size of the overall economy (i.e. total employment in the West Midlands is only 60% of that in the South East) but one of the mix of activities in the various regions. The activities identified within this definition are primarily activities within professional services, public administration and education sectors. While public administration and education employment account for similar share of all employment in the three regions, the relative importance of professional services is greater in the South East. In addition, this definition of the Environmental Economy identifies a larger proportion of each of these three sectors in the South East than in either the South West or West Midlands.

3.43. Overall growth prospects for this definition are more favourable in the West Midlands than in the South East. The primary driver behind this is the relative performance of the 'environmental advice' category in the regions, driven by the more favourable prospects for other business services (which includes professional services) in the West Midlands.

CONCLUSIONS

3.44. In this chapter, we have sought to quantify the scale of the Environmental Economy using a 'top down' methodology. We have employed three different definitions of the Environmental Economy, each of which emphasises a different aspect of the relationship between environmental performance and economic activity. Figure 3.1 below summarises the key findings at a regional level. In short:

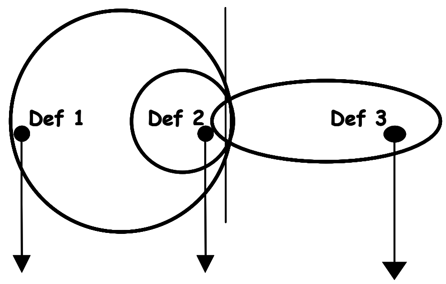
- 'Activities directly dependent on the environment' (Definition 1) account for 155,000 jobs and output to the value of £4.3bn. Of the three different definitions, this is the biggest contributor in terms of the economy as a whole, but activities within it may not be environmentally sustainable. Moreover projections relating to future performance are weak: employment is projected to decline while anticipated increases in output are modest.

- 'Activities dependent on a high quality environment' (Definition 2) account for 49,000 jobs and the GVA associated with them is £0.6bn. The inference therefore is that output per job is relatively low suggesting a preponderance of low value added activities. Modest growth in both employment and output is projected in the period to 2010.

- 'Activities contributing to a high quality environment' (Definition 3) account for 87,000 jobs and GVA is estimated to be £2.9bn. It is therefore within this "cut" at the Environmental Economy that we find the highest output per employee. Modest growth in both employment and output is projected in the period to 2010; in the case of the former, this reverses the decline that has occurred over the last five years.

- The Environmental Economy accounts for approximately 230,000 jobs in total in the South East, which is in the order of 5.5% of total employment in the region.

Figure 3.1: Total Size of Environmental Economy by Definition



	Definition 1: Activities directly dependent on the environment	**Definition 2:** Activities dependent on a high quality environment	**Definition 3:** Activities contributing to a high quality environment
South East Employment: 2000	155,000 jobs	49,000 jobs	87,000 jobs
Projected annual growth rate: 2000-10	-0.9% pa	0.2% pa	0.6% pa
South East GVA: 2000 (1995 prices)	£4.3bn	£0.6bn	£2.9bn
Projected annual growth rate: 2000-10	0.4% pa	1.7% pa	1.9% pa

3.45. At the regional level, some potentially important implications follow:

- Growth rates across all three facets of the Environmental Economy are projected to be weaker than the average for the regional economy as a whole. In terms of priorities for the Regional Economic Strategy – and in the context of SEEDA's growth ambitions – this may raise some difficult questions in terms of the strategic significance of the Environmental Economy in a strictly economic sense (although see the 'caveat' below).

- That said, insofar as the Environmental Economy helps to produce a high quality environment (Definition 3), its impact is likely to be far greater than the number of jobs and volume of output associated directly with it: the indirect employment and wealth generating effects may well be substantial.

- Moreover, regional-level conclusions about the Environmental Economy should not be divorced from an understanding of the geography of the South East. The region is extremely diverse in terms of economic buoyancy (compare, for example, Hastings with Bracknell) and environmental quality. The strategic significance of the Environmental Economy must therefore be understood in the particular sub-regional context within which activities are taking place.

3.46. However, with respect to projected growth rates, there is one major caveat that needs to be applied to the above conclusions. The projected growth rates are for the economic sector as a whole. They do not distinguish between the component of the economic sector that fall within our definitions of 'Environmental Economy' and the remainder of that sector. It may well be the case the growth of the Environmental Economy component is 'hidden' within this overall projection (e.g. if it is considered that 10% of business/management consultancy is currently within the Environmental Economy, then in 2010, 10% of the projected level of this activity will be in the

Environmental Economy (i.e. we have not allowed for the prospect of faster growth within the Environmental Economy part of the activity than within the rest of the activity). Indeed, in many instances (e.g. agriculture and the manufacture of environmental technologies) the Environmental Economy component may well be the main driver behind what growth there is. It is not possible to tell whether this is the case using the data available. However, we interrogate this further during the remainder of the research.

3.47. Our analysis in this chapter has also sought to investigate sub-regional differences in terms of the structure and significance of the Environmental Economy. The headline findings are summarised in Table 3.16 for each of the nine (former) counties.

Table 3.16: Dimensions of the Environmental Economy by (Former) County

(Former) County	Key findings
Berkshire	Across all three definitions, the Environmental Economy accounts for a lower proportion of the former county's total employment than across the South East region as a whole. Projections are very similar to the regional average.
Buckinghamshire	Across all three definitions, the Environmental Economy accounts for a lower proportion of the former county's total employment than across the South East region as a whole. However growth is projected within Definition 3.
East Sussex	Definitions 1 and 2 account for a greater proportion of employment in East Sussex than across the South East region as a whole while for Definition 3 the incidence of employment is lower. There is a comparatively strong employment base in terms of "capitalising on a high quality environment" which relates to countryside (e.g. South Downs) and seaside-based tourism, but waste processing also seems to be an important activity, especially in terms of the contribution to GVA. Employment and GVA projections are similar to - or weaker than - the regional average for the Environmental Economy.
Hampshire	Hampshire is the biggest county in the South East in terms of employment. Partly because of this, the incidence of employment across all three definitions of the Environmental Economy is close to the regional average. Projections for output and employment growth within the Environmental Economy are similar to the regional average
Isle of Wight	Across all three definitions, the incidence of employment in the Environmental Economy in the Isle of Wight is higher than the regional average, but the picture is particularly accentuated with regard to Definitions 1 and 2. In part this reflects the strength of the area's tourism industry and indeed, "capitalising on a high quality environment" accounts for over 30% of GVA within Definition 1, a figure that is more than double the regional average. However the relative importance of the Environmental Economy also owes much to the weakness of the economic base across the Isle of Wight and employment projections are weak across all three definitions: the relationship between the growth of the Environmental Economy and the performance of the economy as a whole needs to be unpacked further.
Kent	Definition 1 accounts for a higher proportion of employment in Kent than

(Former) County	Key findings
	across the region as a whole while for Definition 2, the incidence of employment is lower. However employment within Definition 1 is projected to decline at a rate of 1.4% pa in the period to 2010 – a rate that is greater than in any other county. Employment in Definition 3 is also projected to decline albeit at a much lower level). Thus in Kent, prospects for the Environmental Economy seem quite poor.
Oxfordshire	Definitions 1 and 3 account for a higher proportion of employment in Oxfordshire than across the region as a whole while for Definition 2, the incidence of employment is lower. However future projections are either similar to – or better than – the regional average, and prospects for Definition 3 seem especially bullish.
Surrey	The incidence of employment within Surrey across Definitions 1 and 2 is lower than across the South East region. However projected growth is relatively strong across Definition 3.
West Sussex	Across Definitions 1 and 2, the Environmental Economy accounts for a higher proportion of the county's total employment than across the South East region as a whole. Employment projections are either similar to or weaker than the average, but the county is projected to perform more strongly in terms of GVA growth across Definition 1 of the Environmental Economy.

3.48. A number of important inferences and implications follow from this analysis:

- Definition 3 of the Environmental Economy embraces the highest value added activity. The strongest growth prospects can be found in Oxfordshire, Buckinghamshire and Surrey. It is this element of the Environmental Economy that is – arguably – investing in the future of the environment and it is noteworthy that projected growth is greatest in three of the counties with the strongest economies.

- The two counties with the weakest future prospects with activities relating to Definition 2 are East Sussex and the Isle of Wight. This finding is important for two different reasons. First, both areas have a high quality environment and therefore a substantial asset in terms of this segment of the Environmental Economy. But second, these are the weakest two counties within the South East in terms of current economic performance. Is good use being made of the environmental assets in terms of sustainable economic development? This issue is strategically important for the South East region and is explored in more detail later in this report.

3.49. One final point needs to be borne in mind when considering the value of the Environmental Economy. Quantifying its contribution to the regional economy is only one measure of its importance to the South East. Just as important is the non-quantifiable contribution it makes, most notably to the Quality of Life of those who live and work in the region. Many people in the South East work under considerable pressure, and they need a safety valve in a fast-moving world. The environment of the region may be under strain from development, traffic, resource use, and waste, yet it still contains many fine environmental assets that make it such an attractive place in which to live and work. These provide spiritual nourishment and inspiration, peace and tranquillity, and a sense of history and place. In doing so, they help to foster people's health and well-being, which are essential ingredients of a sustainable and flourishing economy. Much of the credit for this must go to the Environmental Economy, which plays such an important role in safeguarding and managing these assets for the region to enjoy.

4. ACTIVITIES DIRECTLY DEPENDENT UPON THE ENVIRONMENT

OVERVIEW

4.1. This first definition effectively encompasses all activities that depend in some way upon the environment, regardless of their effect on the environment's quality. Those activities which are also included in the second definition of the Environmental Economy are addressed in the Chapter 5.

4.2. Activities included under this heading are:

- Primary Mineral Extraction.
- Waste Management (Landfill).
- Fisheries.
- Agriculture.
- Forestry.
- Water Resource Management.

PRIMARY MINERAL EXTRACTION

Description of Activity

4.3. The main mineral extraction in the South East is the production of aggregates for the construction industry. The South East produces (and consumes) the greatest quantities of sand and gravel in the country. By definition, it is dependent upon a natural resource, and extraction can only take place where such resources are available. Frequently these are in sensitive locations, for example in floodplains.

4.4. Significant progress has been in recent years towards making the mineral extraction industry more sensitive to the environment in which takes place, both during extraction and once mineral reserves are exhausted. Virtually all proposals are now subject to Environmental Impact Assessment, and extraction usually cannot take place without an agreed restoration and management plan. In several cases, the restored pits now have environmental value in their own right, for example as water bodies supporting wildfowl and waders. Some have become designated as Sites of Special Scientific Interest for the biodiversity interest. Nonetheless, mineral extraction continues to have a significant effect on the landscapes and character of the South East.

4.5. Apart from primary extraction, increased emphasis is now being placed on the use of recycled and secondary aggregates, in order to reduce environmental impacts during extraction, and to conserve a finite resource.

Top-down Analysis

4.6. The top-down analysis calculates that 4,500 people are employed in mining and quarrying activities. Berkshire and Buckinghamshire have the highest incidence of employment in this sector. Total GVA from mineral extraction stands at £284.2 million for the region.

4.7. The anticipated decline in this industry over the next 10 years results in a projected loss of 900 jobs, to a 2010 total of 3,600. In line with this reduction, GVA is projected to decline from £284.2 million (adjusted to 1995 prices) to £257.3 million (also 1995 prices).

Bottom-up Analysis

4.8. The South East Regional Aggregates Working Party (SERAWP) carries out major surveys of the production, movement and consumption of aggregates. The most recent survey was carried out in 1996 and concluded that sales of sand and gravel from surface workings had fallen by 43.1% since 1989 to 21m tonnes. The output from mineral operations in the region has a value of up to £140m/annum. It is not known why this figure is so much lower than that generated by the top-down analysis. The number employed in mineral operations was calculated to be 20,000 at national level (regional figures were not available).

WASTE MANAGEMENT (ALL FORMS)

Description of Activity

4.9. Waste production is growing nationally at about 3% per annum. In 1998/99 the South East produced 4 million tonnes of municipal (household) waste, 9 million tonnes of industrial and commercial wastes, and over 13 million tonnes of construction and demolition wastes. Landfill remains the most popular waste management option. There is currently about seven years of landfill space left in the South East at current rates of filling for household and industrial/commercial wastes. The pressure on disposal is therefore significant.

Top-down Analysis

4.10. Unobtainable.

Bottom-up Analysis

4.11. The vast majority of the South East's waste (63%) is disposed of through landfill[2] (which rises to 85% for municipal solid waste). Landfill disposal is a notable source of employment, which needs to be seen against the environmental advantages of encouraging more sustainable waste management methods. However, as Chapter 6 highlights, research now shows job creation prospects in more sustainable waste management initiatives to be higher.

4.12. Recent changes in local authorities' practice, particularly with regard to the contracting out of previously public sector responsibilities, has had a profound effect

[2] Environment Agency (2000) *Strategic Waste Management Assessment: South East*

on the economic value of waste management. With private firms now carrying out both the collection and disposal of waste, although not normally part of same contract, the potential for profit has been triggered.

4.13. The South East experiences high levels of development throughout the region, which means huge amount of construction and demolition waste is produced annually, considerably higher than any other region, and representing around 18% of the total for England and Wales. Around half of this is re-used or recycled.

4.14. Landfills in the South East received 13.5 million tonnes of waste in 1998/99 accounting for 17% of the waste landfilled in England and Wales. There are currently 104 active landfill sites in the South East, and 12 more proposed[3]. The estimated number of jobs[4] directly created by a landfill site is seven, and therefore the estimated number of people employed directly through landfill management is currently 728, rising to a possible 812. There are six incinerators in the region, each of which requires on average an estimated 17 people to operate and manage it, suggesting a direct employment number of 102.

4.15. The region's relationship with London has a significant impact on waste management within the South East. Low levels of land availability, particularly caused by large areas of protected Green Belt, do not help the pressures on the region to deal with both its indigenous waste and that from elsewhere.

FISHERIES

Description of Activity

4.16. The South East's accessibility to the English Channel via its extensive coastline, contributes to the region's high level of fishing activity. There are also a number of significant on-shore fisheries in the region, including fish farms on key rivers. Recreational fishing is not included in this analysis.

Top-down Analysis

4.17. The top-down analysis indicates 600 people are employed in the region in the fishing industry. A GVA of £7.5 million (1995 prices) was accrued in 2000. This is projected to decline to £7.0m in 2005, and rise slightly to £7.1m in 2010. Employment will accordingly reduce by 100 by 2005, and stay static at 500 up to 2010.

Bottom-up analysis

4.18. Sea fishing operates from a number of small scale fishing ports along the coast from Queensborough, on the Isle of Sheppey, Kent, round the south coast to Southampton Water and the Isle of Wight. The quantity of fish landed, 10,490 tonnes, and the value of the catch, £14.1m (almost double that calculated by the top-down analysis), exceeds other English regions[5].

---

[3] SERTAB (2001) *Survey of Waste Planning Authorities*
[4] Based on *WISARD* model
[5] MAFF (2000) *England Rural Development Programme 2000 – 2006, Appendix A7 – South East Region*, page 67

4.19. The main salmon fisheries within the region are on the rivers Test, Itchen and Thames. The Thames salmon population has been subject to a rehabilitation scheme run by the Environment Agency in partnership with the Thames Salmon Trust, since 1979. Prior to 1974, salmon has been extinct in the river since 1833. Conversely, the salmon stocks of the Test and Itchen declined dramatically in the latter part of the 20th Century, although the Environment Agency and its partners are addressing the causes. Trout populations fluctuate significantly, and both trout and salmon stocks are under pressure from climate change exacerbated by water abstraction (e.g. low flows in rivers), development, agricultural practices, effluent, and habitat loss[6].

AGRICULTURE (ALL FORMS)

Description of Activity

4.20. Agriculture is by far the most significant use of land in the South East, and plays a major role in defining the landscape character of the region. Changes in agricultural practice can therefore lead to changes in the landscape, with associated effects on biodiversity. Although there is an increasing awareness of the importance of 'environmentally-friendly' forms of farming, and financial support for it, the intensive nature of much of agricultural production continues to predominate, and in many instances cannot be considered to be sustainable in the long-term.

4.21. This section includes all agriculture that is directly dependent on the environment. Separate figures are also given for agricultural supply side industries, and agricultural marketing.

Top-down Analysis

4.22. The Annual Business Inquiry indicates that 74,400 people are currently employed in agricultural activities that are directly dependent upon the environment. This has risen from an estimated figure of 69,100 in 1995. Changes in the industry and recent problems such as foot and mouth disease, mean employment is projected to drop to a 2010 level of 64,200.

4.23. The GVA output foretells this decline, as it has dropped from £1,033.4m to £1,013.1m between 1995 and 2000. This fall is projected to continue, putting GVA at £954.2m in 2010.

Bottom-up Analysis

4.24. The bottom-up analysis uses data provided by MAFF in the England Rural Development Programme 2000. This estimates that there were 59,599 people employed in the agricultural industry[7] (which is less than that calculated in the top-down analysis). A further 32,000 people were employed in the food and drink sectors of manufacturing, although this component of the economy has not been included in our 'top-down' analysis[8]. There are also related jobs in agriculture supply side

[6] Environment Agency (2000) *State of the Environment Report. The Environment Agency's Contribution to a Better Environment in the South East.*
[7] MAFF (2000) *England Rural Development Programme 2000 – 2006, Appendix A7 – South East Region*, page 48
[8] MAFF Census (1998)

industries and agricultural marketing. The information below gives an indication of the number of businesses in these industries, however the number of jobs is not known:

- Agriculture supply side industries: There are relatively few agrochemical manufacturing companies based in the South East and no significant fertiliser manufacturing capacity. It is probable that the supplies come from continental Europe but that there are small rural businesses that serve local farmers and growers.

- Agricultural marketing: There are now just four livestock auction markets in the South East (Ashford, Hailsham, Maidstone and Thame). With the exception of Hailsham, these markets are used largely by South East farmers. There are only 10 slaughterhouses in the region, of which four are low throughput (i.e. less than 20 cattle or 100 sheep per week).

4.25. The most numerically significant farm types in the South East are cattle and sheep farms, followed by cropping including cereals. Horticulture is a major farm activity but dairying pigs and poultry production are of relatively minor significance. Of the total 18,181 registered agricultural holdings in the South East 5,113 (28%) are over 50 ha. in size and of these, 2,965 (16%) are over 100 ha. in size[9].

4.26. Farm incomes have declined from an average £269.8/ha in 1995 to £32.2/ha in 1997 and have fallen further since. The total gross output of agriculture and horticulture in the South East in 1998 was about £1.3bn. This compares to the total gross output of agriculture in England and Wales of £13bn. (South East being 10% of the total) and £16.4bn. for the UK (South East being 8% of the total). The agricultural area of the South East is equivalent to 10.9% of England and Wales and 6.9% of the UK. Output per hectare, therefore, is marginally less than the England and Wales average but significantly greater than that of the UK as a whole[10].

4.27. Agriculture in the South East contributed about £600m to the GDP of the region, less than 0.6% of the total in 1998. The contribution of agriculture to the economy of the region is, therefore, relatively limited. However, this financial assessment takes no account of the non-market outputs, such as maintenance of the landscape[11].

4.28. The last ten years has seen a decline in total agricultural work force of more than 15,000 jobs (74,650 people were employed in agriculture in 1990). The England Rural Development Programme provides an occupational break down of the job losses/increases. The number of full-time farmers in the region has fallen by 2,581 over the last 10 years, to 10,770. Meanwhile the number of part-time farmers has increased by nearly 8% to 8,555 as many more farms are now supported by outside earnings. The biggest fall in agricultural employment in the region has been in respect of managers and full-time farm workers. There have also been reductions in the part-time seasonal and casual workforce. There has been a decrease of 6.7% in the number of registered agricultural holdings in the last 5 years[12] and eight livestock

[9] MAFF (2000) *England Rural Development Programme 2000 – 2006, Appendix A7 – South East Region*, page 47
[10] MAFF (2000) *England Rural Development Programme 2000 – 2006, Appendix A7 – South East Region*, page 54
[11] MAFF (2000) *England Rural Development Programme 2000 – 2006, Appendix A7 – South East Region*, page 54
[12] MAFF (2000) *England Rural Development Programme 2000 – 2006, Appendix A7 – South East Region*, page 47

markets have been lost in the South East in the last 10 years (leaving a total of 10 livestock markets).

4.29. There has been a decline in full-time and growth in part-time farmers in the region. Surplus buildings and other resources can be utilised by non-agricultural businesses, subject to their securing planning permission.

4.30. Associated with the decline in the total agricultural workforce there has been a decline in the agricultural supply side industries and agricultural marketing:

- Agriculture supply side industries: The ordering of suppliers on the Internet and the effects of the CAP reforms will have an impact on the local dealers. An RDC commissioned assessment of the effects of the CAP reform calculated that for every job lost in farming there would be 1.2 jobs lost in the upstream agricultural supply side business and that the loss would be concentrated in the East and South East of England.

- Agricultural marketing: The closure of slaughterhouses has been put down to a combination of reasons/ Some claim that this has been due to the cost of funding animal welfare, environmental and human health measures, which has meant that numerous small scale facilities cannot be sustained (although this 'centralisation' may have encouraged the spread of the 2001 outbreak of Foot & Mouth Disease). Others have argued that the major supermarkets prefer to deal with the bigger units, resulting in the smaller slaughterhouses finding it difficult to compete. The RDC report on job losses in farming from the 1992 CAP reforms calculated that for every job lost on farm there would be 2.6 jobs lost in the downstream ancillary industries and that this would be concentrated in the South East and the East Midlands.

FORESTRY

Description of Activity

4.31. Forestry is wide-ranging activity, which covers a variety of forest forms from commercial plantation woodlands, to the management of ancient and semi-natural woodlands, to hedgerows, orchards, copses, and the creation of Community Forests. The England Forestry Strategy recognises that forests and woodlands have an important role to play in economic regeneration, recreation, access and tourism, biodiversity and landscape.

Top-down Analysis

4.32. A total of 2,200 are employed in forestry, as estimated through the top-down analysis. By 2010, this is projected to fall to 1,900. The GVA will similarly decline from a current £29.7 million to £28.9 million (both 1995 prices).

Bottom-up Analysis

4.33. It is estimated that the value of timber production in the region is in the order of £20m/annum, which is a poor economic return on the area planted[13]. The Forestry Commission estimate that 19 people are employed in the region through Forestry Commission duties. Eighty are employed within the Forest Enterprise initiative and 183 people are employed in research[14].

4.34. Survey research by the Forestry Commission found that there is the equivalent of 2,360 full time jobs in forestry and primary wood processing in the South East[15]. This accounts for 16% of all those employed in Great Britain in this sector, whilst the South East has 30% of the national woodland area. An additional survey by the Forestry Commission found that, as a national average, 38% of employment in this sector was in processing, 20% was in establishment and maintenance and 20% was in harvesting and haulage[16].

WATER RESOURCE MANAGEMENT

Description of Activity

4.35. The South East has good coastal and river water quality, with 90% of rivers classed as 'good' or 'fair'[17]. The management of water resources is primarily the concern of the Environment Agency and private water companies.

Top-down Analysis

4.36. Unobtainable.

Bottom-up Analysis

4.37. There are a number of areas within the South East which are experiencing significant pressure on water resources, a product of the region having the highest per capita water consumption rate[18].

4.38. Water UK states that employment in the water industry in England and Wales in 1999 stood at 44,224, with an annual turnover of £6,748 million. Figures at a regional level are not available. The Environment Agency estimates that within the South East region they have 1,726 employees, although only a proportion of these deal specifically with water issues.

4.39. The Environment Agency strategies[19] for each of their regions in the South East indicate that without action to manage water resources, demand cannot be met. Indeed, in some areas of the southern region parts of the public supply network cannot

---

[13] MAFF (2000) *England Rural Development Programme 2000 – 2006, Appendix A7 – South East Region*, page 60
[14] Personal communication with John Mullett at Forestry Commission (2002)
[15] Forestry Commission (2001) *Regional Employment in Forestry and Primary Wood Processing*
[16] Forestry Commission (2001) *Forest Employment Survey 1998/9*
[17] SEEDA (2001) *The Regional Sustainable Development Framework: A Better Quality of Life in the South East*
[18] SEEDA (2001) *The Regional Sustainable Development Framework: A Better Quality of Life in the South East*
[19] Environment Agency (2001) *Water resources for the future – Summary of the strategies for the Southern and Thames regions*

meet reliability standards. The major issues to be tackled are leakage and integrating the supply structure.

5. ACTIVITIES DEPENDENT UPON A HIGH QUALITY ENVIRONMENT

OVERVIEW

5.1. This definition incorporates all those sectors that capitalise on a high quality environment.

5.2. Activities included under this heading are:

- Tourism.
- Inward Investment.
- Recreation.

TOURISM AND RECREATION

Description of Activity

5.3. There are two tourist boards covering the South East region – the South East England Tourist Board and the Southern England Tourist Board. Both Tourist Boards market their areas with particular attention to their 'high quality environments', citing the number of AONBs or length of coastline for example.

Top-down Analysis

5.4. The top-down analysis estimates 49,100 people are employed directly by the tourism industry (2000 figures), this has risen by 6.28% from the 1995 total of 46,200. This is predicted to rise to 49,900 by 2010. In terms of monetary value, tourism is currently estimated to contribute a GVA of around £600 million to the region's economy.

5.5. The top-down analysis indicates that recreation dependent upon a high quality environment directly supports 8,180 jobs.

Bottom-up Analysis

5.6. English Tourism Council figures for the whole of the region (covering the two boards) indicate a total of 29.19 million visitors (in 2000). Their associated spending amounted to £4,726 million[20]. The 'Southern' area accounted for just over 60% of visitors and expenditure. The South East Region as a whole attracts 18% of all tourists in England (domestic and overseas), and 15% of expenditure.

5.7. Complementary work on the South East Creative and Cultural Industries (David Powell Associates, 2002), currently in draft form, suggests that visitors to the countryside in the South East spend a total of £2.1 billion, and that tourism in the countryside directly employs around 65,000 people, and 8,000 indirectly.

---

[20] The draft report on the South East Creative and Cultural Industries (David Powell Associates, 2002) has obtained more up-to-date figures, which suggest that total tourism spend in the South East, including day trippers, was £9,324m in 2000, which is considerably in excess of the 1997 published figure.

Table 5.1: Tourism Related Employment in the Two Tourist Board Areas in the South East (from English Tourism Council Data, 1997)

Industry Sector	South East Tourist Board Region – No. employed (000s)	Southern Tourist Board Region – No. employed (000s)	Total No. Employed (000s)
Hotels/Other Accommodation	18.8	27.8	46.6
Restaurants/cafes	24.8	25.6	50.4
Bars/Public Houses/Night Clubs	27.0	37.5	64.5
Libraries/Museums/Other Cultural Attractions	6.0	6.7	12.7
Sports/Other Recreation Activities	19.7	29.0	48.7
Total	**96.4**	**126.6**	**223.0**

5.8. Table 5.1 shows the number of people employed directly in the South East tourism industry. A total of 223,000 are believed to be employed across the region. Evidently, this figure is considerably more than estimated in the top-down analysis. This is almost certainly a result of the weightings used in the top-down analysis, which try to tease out that component of the tourist industry that is genuinely premised on a high quality environment, rather than all tourism activity. It is also questionable whether the SIC codes capture all elements of the tourist industry (e.g. visitor retail spend is not included). The tourist boards themselves employ around 290 people (FTE) directly.

5.9. The England Rural Development Programme states that it is estimated that the villages and countryside of the region offer around 200 major attractions (such as historic houses, gardens and steam railways), catering for 11.5m visitors a year. The UK Day Visits Survey (1998) recorded over 1 billion leisure visits in the region, of which 31% were to the countryside, 5% to the seaside/coast, 7% to woodland and 5% to inland water. The average countryside day trip spend was £5.10 – contributing £2.5bn. to the rural economy of the region. Local surveys provide more information on day visits, including 52m to the Chilterns AONB and 32m to the Sussex Down AONB; average tourist spending along the four National trails (from £2.20 to £9.03/day by over half a million visitors) and approximately £18m economic value of leisure on the River Thames.

INWARD INVESTMENT

Description of Activity

5.10. The environment and the quality of life in the South East are potentially important factors in attracting inward investment into the region but they are not sufficient on their own in terms of inward investment decisions.

Top-down Analysis

5.11. Due to the diverse nature of inward investment, it is not possible to calculate employment figures or GVA through the top-down analysis approach.

Bottom-up Analysis

5.12. In 2000, a total of 191 investments were recorded. This created a total of 18,000 new jobs and safeguarded 4,500 jobs. SEEDA negotiated 26 investment successes in 2001/2 compared to 41 for the previous financial year. The reduction is likely to be due to the effects of the global slowdown. Also half of the investment successes are normally from North America and in 2001/2 only 9 of the successful investments came from this source, which is likely to be a result of the effects of September 11. SEEDA forecast that the global slow down will continue and that they will achieve 25 investment successes in 2002/3[21]. The key reasons that companies gave in 2000/2001 for the locations they chose were (see also Appendix 2):

- The skills base – concentration of similar companies providing a large workforce to recruit from.
- Good communications – road, rail, air links and the Channel Tunnel.
- Proximity to suppliers, customers and competitors.
- Research and development links – total of 24 university sites, research/innovation centres and science parks located in the South East.
- Proximity to London.
- Availability of Government Grants (available in some areas of East Kent and the Isle of Wight).

5.13. 'Quality of Life' or 'Quality of the Environment' were not specifically mentioned, although this may be because much of the South East's environment is of at least reasonable quality, thereby it being taken for granted in the decision-making process. Indeed, it could be the case that the issue of environmental quality is more of an issue in those pockets of the South East where it is poor, in which case it may deter potential investment (see Appendix 3 for funding mechanisms offering the potential for integrated regeneration of both urban and rural areas). This issue is not addressed by the available data, albeit that the following paragraphs show that most investment took place in those parts of the region free from significant environmental degradation (although often congested).

5.14. Out of the 41 investment successes last year there was a concentration of ICT companies choosing to locate in either the Thames Valley or North Hampshire. The Thames Valley was a desired location due to the concentration of ICT companies in the area and hence a large workforce from which to recruit from and the proximity of suppliers. There is also good communications provided by the M4 and nearby

[21] SEEDA uses an open-ended question to monitor reasons for investment in the South East, rather than asking companies to choose from a pre-determined list of potential influencing factors. The quality of the environment therefore has as much chance as any other reason of being mentioned.

Heathrow airport. North Hampshire was also popular due to the availability of cheaper properties than those in the Thames Valley while also having a concentration of ICT companies, skills base and good communications.

5.15. A number of companies in the pharmaceutical and biotechnology sectors were attracted to Oxfordshire, Buckinghamshire and Surrey due to the cluster of similar companies in the region. A company in the finance/business sector was attracted to Guildford in Surrey, due to the proximity to their clients in London while being able to occupy cheaper business premises.

5.16. The number of jobs created in the region through inward investment is likely to see an immediate decline. In the first two thirds of 2001 SEEDA has only negotiated a total of 13 investment successes compared to a total of 41 successes for last year. Around half of the investment successes into the South East are normally from North American companies. These have now seen a downturn for a number of months, due to a global slowdown and the aftermath of September 11th.

5.17. The quality of the environment is potentially an influencing factor for those who choose self-employment in the more remote areas of the region. In these areas self-employment accounted for nearly 20% of the economically active population, compared to 12% for England as a whole. Self-employment in East Sussex is, at 26% of economically active residents, the second highest rate in England. The England Rural Development Programme analyses the probable reasons for relatively high amounts of self-employment in parts of the region. In some areas self-employment is seen as a measure of the entrepreneurial skills of the workforce and opportunities resulting from a buoyant local economy. In other areas, however, self-employment results from a decline in the economy, forcing workers to accept less secure forms of employment and erratic incomes. In the former case the environment and quality of life opportunities provided in rural areas are also likely to be significant factors.

6. ECONOMIC ACTIVITIES CONTRIBUTING TO A HIGH QUALITY ENVIRONMENT

OVERVIEW

6.1. The third and last definition comprises all those industries that specifically make a positive contribution to the quality of the environment. It is the most wide-ranging of the all the definitions, and includes a number of (more environmentally friendly) sub-sectors of the Environmental Economy activities described elsewhere in this report.

6.2. Activities included under this heading are:

- Environmental Technologies, Management and Training.
- Renewable Energy.
- Local Authorities.
- Sustainable Waste Management.
- Sustainable Transport.
- Conservation and Management of the Natural, Historic and Built Environment.
- Sustainable Agriculture.
- Sustainable Forestry.
- Sustainable Mineral Restoration.
- Sustainable Water Resource Management.
- Sustainable Tourism.

ENVIRONMENTAL TECHNOLOGIES, MANAGEMENT AND TRAINING

Description of Activity

6.3. This sector of the Environmental Economy comprises:

- Companies specialising in the supply of environmental technologies that are exploiting market opportunities arising from the move towards more sustainable processes in industry.
- Environmental management and consultancy ranging from strategic advice (e.g. policy formulation) to detailed scientific environmental research (e.g. investigations of contaminated land).
- Architectural and engineering activities involved in securing environmental improvements.

- The relatively new industry of environmental training.

Top-down Analysis

6.4. The top-down analysis shows employment in this sector to be 39,100. This equates to c.17% of all employment within the Environmental Economy as a whole. In 2000, GVA was some £1.2b (1995 prices), up some 37% since 1995. The SIC codes are unlikely to capture the full extent of this sector, as it is so dispersed amongst a number of industries, and in many cases is likely to form a smaller 'hidden' component of companies operating in other manufacturing sectors. The 'top-down' figures are therefore probably an underestimate of the true situation.

Bottom-up Analysis

Environmental Technology

6.5. The JEMU[22] database of companies involved in Environmental Technology currently comprises 530 organisations, although this includes environmental consultancies. Environment Business Directory 2002 lists a total of 93 Environmental Technology companies in the South East region (see Table 6.1), the highest number of which are effluent treatment or control companies.

Table 6.1: Companies in Environmental Technology as listed in Environment Business Directory

Environmental Technology Activity	Berks	Bucks	East Sussex	Hants	Kent	Oxon	Surrey	West Sussex	Total
Air Monitoring	0	2	0	2	1	3	4	0	**12**
Air Treatment/ Control	1	0	0	2	5	0	2	0	**10**
Contaminated Land Treatment	1	0	0	0	2	0	1	0	**4**
Effluent Monitoring	2	1	0	2	2	0	3	0	**10**
Effluent Treatment/ Control	3	2	1	2	2	4	4	0	**18**
Energy Equipment	0	0	0	2	0	0	1	1	**4**
Noise & Vibration	0	1	0	2	0	0	0	0	**3**
Recycling Equipment	1	0	0	1	1	1	1	0	**5**
Software	4	2	0	3	3	2	2	0	**16**
Solid Waste Treatment	2	0	0	1	1	0	1	0	**5**
Other Equipment	1	1	0	0	2	1	1	0	**6**
Total	**15**	**9**	**1**	**17**	**19**	**11**	**20**	**1**	**93**

Source: Environment Business Directory 2002

6.6. As Table 6.2 shows, these companies employ between an absolute 'minimum' of 8,026 and a 'maximum' of 13,149 (the employment numbers provided in Environment Business Directory are in the form of ranges, rather than absolute figures). The research currently being undertaken by SEEDA is likely to reveal far more people employed in the Environmental Technologies sector than is currently listed either in sources such as the Environment Business Directory, or the JEMU database (see Appendix 4).

[22] JEMU (Joint Environmental Markets Unit) is a UK Government unit with responsibility for promoting and supporting the UK environmental industry.

Table 6.2: Employment in Environmental Technology as listed in Environment Business Directory

Environmental Technology Activity		Berks	Bucks	East Sussex	Hants	Kent	Oxon	Surrey	West Sussex	Total
Air Monitoring	Min	0	107	0	17	1001+	133	564	0	**1822+**
	Max	0	265	0	45	1001+	330	1155	0	**2796+**
Air Treatment/Control	Min	6	0	0	117	279	0	22	0	**424**
	Max	15	0	0	290	570	0	55	0	**930**
Contaminated Land	Min	6	0	0	0	22	0	1001+	0	**1029+**
	Max	15	0	0	0	55	0	1001+	0	**1071+**
Effluent Monitoring	Min	42	16	0	57	32	0	58	0	**205**
	Max	105	40	0	140	80	0	145	0	**510**
Effluent Treatment	Min	73	117	1	117	47	164	1514+	0	**2033+**
	Max	180	290	5	290	115	405	2031+	0	**3316+**
Energy Equipment	Min	0	0	0	142	0	0	16	101	**259**
	Max	0	0	0	350	0	0	40	250	**640**
Noise and Vibration	Min	0	1	0	2	0	0	0	0	**3**
	Max	0	5	0	10	0	0	0	0	**15**
Recycling Equipment	Min	6	0	0	16	41	1	16	0	**80**
	Max	15	0	0	40	100	5	40	0	**200**
Software	Min	1159+	17	0	133	3	12	257	0	**1581+**
	Max	1391+	45	0	330	15	30	515	0	**2326+**
Solid Waste	Min	6	0	0	6	101	0	251	0	**364**
	Max	15	0	0	15	250	0	500	0	**780**
Other Equipment	Min	101	6	0	0	2	16	101	0	**226**
	Max	250	15	0	0	10	40	250	0	**565**
Total	**Min**	**1399**	**264**	**1**	**607**	**1528**	**326**	**3800**	**101**	**8026**
	Max	**1986**	**660**	**5**	**1510**	**2196**	**810**	**5732**	**250**	**13149**

Source: Environment Business Directory 2002

6.7. Environmental technology has been a major growth area in the chemicals industry over the past few years, as environmental legislation affecting the industry has become increasingly demanding. The Responsible Care Initiative set up by the Chemical Industries Association surveyed companies who indicated that 11% of the sector's spending went on the environment[23].

6.8. The Reading Enterprise Hub was established in 2002, based at the University of Reading in which the initial focus is environmental technologies. This hub should further support the industry's development.

[23] JEMU (1997) *Environmental Technology and Services from the UK: Case Studies and Features*

VARIAN MEDICAL SYSTEMS UK LTD[24]	Crawley, West Sussex

Case Study Description: Varian Medical Systems UK Ltd applied cleaner design techniques to minimise the environmental impacts of its products. Initially, the techniques were applied to a self-contained element of the company's activities that had the potential to respond well to cleaner design. The techniques were then applied more universally.

Key Outputs: The initiative resulted in excellent cost savings with a payback of under two months. In the first year Varian saved $259,000.

Demonstration of Good Practice: The most effective method of waste management is to reduce the quantity of waste generated from a process or activity. This is most effectively achieved during the design phase. This example shows the benefits that can be achieved by looking at a product's full life cycle and then applying the findings to the design stage.

Environmental Management and Consultancy

6.9. Table 6.3 below shows the latest number of consultancies by county as listed in the ENDS Environmental Consultancy Directory 2002. Hampshire, Berkshire, Oxfordshire and Surrey stand out as housing the majority of environmental consultancies. East Sussex (apart from the Isle of Wight) has the lowest number.

Table 6.3: No. Environmental Consultancies by County (ENDS Environmental Consultancy Directory 2002)

County	No. consultancies
Berkshire	22
Buckinghamshire	7
East Sussex	5
Hampshire	23
Isle of Wight	1
Kent	15
Oxfordshire	20
Surrey	19
West Sussex	16
Total	**128**

6.10. The 2001 version of the ENDS Market Analysis is currently not available, therefore comparison of figures between Tables 6.3 and 6.4 cannot easily be made. The current 2000 version indicates Surrey, Oxfordshire and Hampshire as being in the top 10 counties for number of consultancies, as shown below.

[24] JEMU (2000) *Cleaner Environmental Solutions from the UK: Leading Case Studies*

Table 6.4: Distribution of Environmental Consultancies across the South East (from ENDS Market Analysis 2000)

County	No. head offices	No. branches	Total no. offices	Rank (out of 64 counties listed by ENDS)
Berkshire	9	19	28	15
Buckinghamshire	11	3	14	29
East Sussex	5	5	10	43
Hampshire	22	13	35	9
Kent	18	12	30	13
Oxfordshire	23	19	42	7
Surrey	44	21	65	2
West Sussex	9	6	15	28
Total	**141**	**98**	**239**	-

6.11. Table 6.4 shows that, with the exception of East Sussex, every county in the South East is in the top 50% of all counties in the UK for the number of environmental consultancy offices present. Half of the counties (i.e. Surrey, Oxfordshire, Hampshire, and Berkshire) are in the top 25% of all counties. This demonstrates that the South East is particularly strong in this component of the Environmental Economy.

Environmental Practice in Industry

6.12. Awareness of the need for environmentally sustainable practices in industry is increasing. ISO 14001 is an accreditation system for companies that vouches that their improved procedures and processes meet certain environmental standards.

6.13. There are 220 businesses in the South East with ISO 14001 accreditation[25]. With regard to their geographical spread Hampshire shows the highest count of 42 companies, whilst Surrey has least (only ten). Table 6.5 divides the accredited companies by industry type.

Table 6.5: Number of Organisations with ISO 14001 Accreditation by Industry Type

Industry Type	No. companies with ISO 14001 accreditation
Brick Manufacture	2
Chemicals	18
Construction/Engineering	18
Consultancy	1
Councils/NHS	4
Design/Manufacture of office equipment	6
Design/Manufacture of technical equipment	8
Electrical/optical equipment	30
Electricity Production	7

[25] EMAS Website: www.emas.org.uk/Iso14001/mainframe.htm

Industry Type	No. companies with ISO 14001 accreditation
Food/drink/tobacco	7
Forestry	1
Information Services	6
Leather products	1
Machinery/equipment	9
Mining/Quarrying	14
Motor Vehicle Production	3
Office Supplies	6
Public Services	8
Publishing/Printing	15
Real Estate	1
Rubber/plastics	3
Steel/Metal Manufacture	7
Transport Equipment	19
Transport/storage/distribution	11
Waste Management	15
Total	**220**

6.14. Table 6.5 shows that a wide range of activities have achieved ISO 14001 accreditation, ranging from public services to food/drink/tobacco. There is a strong representation from electrical and optical manufacturers, and transport related industries also score highly.

BRENT EUROPE LTD **Milton Keynes**

Case Study Description: Implementation of an environmental management system (EMS), at Brent Europe Ltd, has provided a framework from which to develop a systematic approach to reducing both production and non-production waste.

Key Outputs: Since starting the EMS Brent has implemented 26 environmental initiatives, which have enabled the Company to achieve a 50% reduction in solid waste generated per tonne of production and make cumulative cost savings of over £100,000.

Demonstration of Good Practice: Brent's EMS, which places considerable emphasis on staff training and awareness, has provided the Company with a structured approach in the UK to achieve certification to ISO 14001.

BETRE	**West Sussex**
Case Study Description: BETRE (Business Efficiency Through Resource Efficiency) aims to 'reduce waste, save energy, save water, save money'. The organisation offers free support and advice to small and medium businesses in West Sussex to cut costs through more efficient resource management. **Key Outputs:** The service successfully identified savings of £183,000 for 23 businesses in the first phase of the programme. **Demonstration of Good Practice:** The service is funded through the Landfill Tax Credit Scheme, and successfully disseminates information through a helpline, a website and newsletters. A County Green Business Award has been established to encourage businesses' involvement.	

BEACON PRESS	**East Sussex**
Case Study Description: Beacon Press have been leading the way in environmentally-friendly printing, through reducing the use of raw materials and almost entirely eliminating the use of alcohol. The implementation of an Environmental Management System (EMS) allowed the company to identify objectives and targets, and therefore instigate a number of projects to reduce their environmental impact. Beacon Press aims to be a carbon neutral company. **Key Outputs:** The use of solvents has been reduced by 55%, with electricity consumption reduced by 10% and water by 32%. The company has already planted 650 trees to offset its CO_2 emissions. **Demonstration of Good Practice:** Through the extensive application of EMS, the company has gained ISO 14001. In addition, senior management have made a commitment to the environment, safeguarding further developments.	

6.15. JEMU include on their website a database of organisations offering technology services and expertise across all sectors of the environmental industry[26].

6.16. There are a total of 11 trade associations and professional bodies operating UK-wide but located in the South East that aim to facilitate access to environmental technology and solutions. They can all be found in the four counties in the west of the region (Hampshire, Surrey, Milton Keynes and Oxfordshire) with a concentration at Haslemere in Surrey. The organisations are involved in promoting energy conservation and renewable energy technologies.

[26] The JEMU Directory concentrates on services to the environmental technologies sector. In addition, there is a wider spread of training providers in other forms of environmental management, such as agriculture and conservation. For example, Kent is home to a number of colleges and training courses that focus on management of the natural environment, such as Wye College near Ashford, Hadlow Colleges near Tonbridge, and the Durrell Institute of Conservation & Ecology at the University of Kent.

6.17. In addition, there are a total of 14 environmental training providers located in the South East, divided into three main categories of providers:

- Independent Consultancies: five organisations providing independent consultancy services to improve environmental performance and auditing as well as technical solutions in a range of industrial sectors.
- Centres affiliated to university departments: seven centres who have links with University departments, providing services and training courses in environmental management, auditing/general awareness and in specific environmental technologies.
- Other Councils/Charities: the Council for Environmental Education and Earthwatch both run environmental courses.

6.18. The environmental training providers are also mainly located in the west of the region (Oxfordshire, Buckinghamshire, Berkshire and Hampshire) with only one provider located in East Sussex, one located in West Sussex and none in Kent.

6.19. There are a total of 20 research and development centres located in the South East, also divided into three main categories of providers:

- Independent Companies offering Research and Development: three companies, who offer Research and Development in environmental science and eco-reviews for businesses (AEA Technology was also included in the list above under environmental trainers).
- Centres Affiliated to University Departments: eight centres affiliated to Universities who provide Research and Development in environmental sciences including: agriculture, atmospheric modelling, freshwater ecology, renewable energy and environmental education. The Centre for Environmental Research, University of Reading and Chichester Institute Environmental Science Group also provide training courses and are included in table 2 above.
- National Councils and Other Centres and Institutes for Environmental Research: nine Councils and Institutes who provide Research and Development in environmental sciences including: climate, building design, pollution and renewable energy. The Solar Trade Association is also included under trade associations in table 1 above.

6.20. The Research and Development centres tend to be located in the north west of the region (eight in Berkshire, six in Oxfordshire, three in Buckinghamshire and one in Milton Keynes). There is only one centre in Surrey, one in West Sussex and none in the two counties in the east of the region (East Sussex and Kent).

RENEWABLE ENERGY

Description of Activity

6.21. Renewable energies are likely to become an increasingly important energy source during and so the growth of the associated industry is therefore inevitable. The current government targets are to meet 10% of UK electricity needs through renewable energy sources by 2010.

Top-down Analysis

6.22. The top-down analysis indicates that 600 people are employed in the renewable energy sector in the South East. The industry contributes £82.8 million GVA (1995 prices). Growth in the energy sector is anticipated and therefore projected GVA (1995 prices) is projected to reach £87.2 million by 2010 if the renewable energy sector expands at the same rate as the sector as a whole. However, the effect of the government targets will almost certainly mean a greater level of growth in the renewable energy sector of the energy industry, both in GVA terms and employment.

Bottom-up Analysis

6.23. The 'Development of a Renewable Energy Assessment and Targets for the South East' Report for GOSE outlines both the existing capacity and potential for renewable energy production in the South East region[27]. At the time of publication (2000), the South East was producing 11,296MW of electricity; only 73MW of this was from renewable sources (0.65% of total generation). By far the highest renewable energy source currently exploited in the region is landfill gas (54MW). This is largely a product of the large amount of waste the region has to dispose of (both indigenous and originating in London).

6.24. In considering renewable energy, there is a great deal of debate amongst commentators whether landfill gas and in particular energy from waste should be considered as sources of 'renewable energy'. In order to ensure compatibility with the GOSE report, the figures have been included in this analysis of renewable energy as a contributor to the Environmental Economy.

6.25. Electricity consumption is currently growing by approximately 3% a year. With this in mind, the South East region will need to be producing between 4675MW and 5240MW of electricity from renewables by 2010 to meet the national targets. The South East Regional Assembly is due to produce a draft Renewable Energy Strategy in the Autumn of 2000, which will set targets for the next 20 to 30 years. The Assembly states that it is quite feasible for the region to produce 20% of its needs from renewable sources, although the speed with which this could be achieved will prove a considerable challenge.

[27] ETSU/AEA Technology plc and Terence O'Rourke plc (for GOSE) (2000) *Development of a Renewable Energy Assessment and Targets for the South East*

Table 6.6: Existing Installed Capacity from Renewable Energy Schemes in the South East

Renewable Technology Type	Existing Installed Capacity	
	Number of Schemes	MW_{DNC}[5]
Onshore Wind	3	0.56
Municipal and Industrial Waste	2	14.2
Landfill Gas	26	54
Sewage Gas	7	4.4
Photovoltaic Installations	4	0.005
Total	**40**	**73**

Source: GOSE

6.26. The employment generation from renewable energy production varies between technology type. Biomass and Municipal and Industrial Waste create a high number of jobs per MW produced. Based on the figures in Table 6.6, the following table (Table 6.7) estimates the number employed within each technology type in the region (excluding suppliers).

Table 6.7: Employment Generation from Renewables in the South East

Renewable Technology Type	Jobs (FTE) per MW	No. jobs (FTE) in South East
Onshore Wind	0.30	0.13
Municipal and Industrial Waste	3.00	42.60
Landfill Gas	1.50	81.00
Sewage Gas	1.50[28]	6.6
Photovoltaic Installations	0.60	0.003
Total	**2.1**	**130.333**

Source: Based on figures in: New Millennium: Benefiting from Tomorrow's Renewable Energy Markets, A Report for Greenpeace by Forum for the Future.

6.27. The figure of 130 FTEs is much lower than the 600 calculated in the top-down analysis. The true figure probably lies somewhere in between the two.

6.28. However, if landfill gas and energy from waste were to be stripped out of the renewable energy equation, leaving only those sources where there is general agreement about their sustainability credentials, the contribution of renewable energy production to the Environmental Economy would be extremely small, demonstrating the amount of progress yet to be made.

[28] LUC estimate

OXFORD SOLAR HOUSE **Oxford**

Case Study Description: The Oxford Solar House is a low energy domestic house generating its own energy from solar water heating and solar photovoltaic (PV) electricity generation. In a south-facing city location it is designed to require the minimum of energy for heating, cooking and lighting. In addition, 4kW PV and 5m2 of solar water heating panels are integrated into the roof structure. Year started: The house was built in 1994.

Key Outputs: The Oxford Solar House is privately owned. For the photovoltaic roof, which cost £25k in total to install, the DTI made a contribution of £10.75k subject to a monitoring exercise being carried out.

Demonstration of Good Practice: The Oxford Solar House is an example of both low energy housing design and renewable energy generation in a domestic building context. It contributes towards sustainable development by both significantly reducing the need for conventional energy generation compared to a typical house, and by acting as a demonstration and educational facility to young building designers at Oxford Brookes University and beyond.

LOCAL AUTHORITIES

Description of Activity

6.29. Local Authorities provide a large number of services and activities, many of which aim to contribute to a high quality environment, ranging from environmental health, to land use planning, and conservation.

Top-down Analysis

6.30. There are 12,270 people employed in local authority activities in the region that contribute to a high quality environment. This is projected to decline to a 2010 level of 11,190, most probably due to increased efficiency and 'Best Value' initiatives in Councils. In addition, a further 1,000 or so people are employed in business regulation.

Bottom-up Analysis

6.31. Each of the local authorities in the South East region were sent a questionnaire inquiring as to the number of employees in environmentally related employment (see Appendix 1). 32 out of a possible 74 authorities replied. From this information we have extrapolated that just over 9,468 people are employed by local authorities in jobs that contribute to a high quality environment[29]. Table 6.8 also shows the breakdown of in which departments these employees work. The highest counts overall are in Development Control and Environmental Health.

[29] Three separate extrapolations were carried out: one for counties, one for districts, and one for unitary authorities.

Table 6.8: Employment in Local Authorities in South East (from questionnaire data)

Local Authority Activity	Total No. (FTE) employed in 32 responding LAs	Total No. (FTE) employed – extrapolated figure to cover all LAs
Built Envt/ Conservation/ Archaeology	161	383
Countryside/ Nature Conservation	167	410
Environmental Health	748	1,744
Development Control	728	1,697
Forward Planning	245	573
Grounds Maintenance/ Landscaping Services	496	1,189
Tourism	232	581
Envtl education/ Interpretation	82	197
Waste Management/ Recycling	217	519
Building Control	324	765
LA21/ Community Planning/ Sustainability	84	189
Public Transport/ Cycling/ Walking/ Access	326	852
Other	147	369
Total Number of LPA employees in above activities	**3,989**	**9,468**

6.32. The questionnaire also asked authorities to highlight the ways in which they ensured sustainable practices within and outside the council. The most common responses for activities within the council were through strategic policies and Green Travel Plans. Outside the council the most popular responses were encouraging recycling and energy efficiency.

6.33. In addition respondents were asked to identify the major players in the Environmental Economy in their district. These answers were wide ranging, although many cited government agencies, in particular the Environment Agency.

6.34. Respondents were questioned in reference to their Economic Strategy, particularly to reveal whether or not the Environmental Economy was addressed. Over 40% stated that they had addressed the Environmental Economy in some form or other, and an additional 14% mention the environment briefly.

SUSTAINABLE WASTE MANAGEMENT

Description of Activity

6.35. It is now widely recognised that the way in which we manage and dispose of our waste needs to be more sustainable. A philosophy of 'reduce, re-use and recover' is being encouraged through changes in government legislation and society's thinking.

Top-down Analysis

6.36. The top-down analysis estimates that 4,900 people are employed in sustainable waste processing activities such as recycling and composting. This has declined from 5,700 in 1995, which is likely to be due to reductions in the numbers of people employed in the waste industry in general rather than a loss of jobs in more sustainable forms of waste management. This is confirmed by the bottom-up. However, the GVA produced from these activities has increased from £238.5 million in 1995 to £265.8 million (£1995 adjustment) in 2000.

Bottom-up Analysis

6.37. The vast majority of the South East's waste (63%) is disposed of through landfill. Most of the counties deal with around 90% of their municipal waste. Berkshire is the least self-contained, sending 35% of its waste to Surrey, and 17% outside the region[30]. In addition, the South East has to dispose of large quantities of waste generated by London.

6.38. The main characteristic of the South East's waste problems is the added pressure of construction waste due to high levels of building development. Construction and demolition waste is a waste stream that has been significantly changed by new regulations, although the introduction of Landfill Tax is also likely to have played a role. Previously, the majority of this waste would have been disposed of through landfill. Now, an increasing proportion is diverted through recycling and screening. The South East produces 13,123,000 tonnes of construction and demolition waste each year. 4,390,000 tonnes of this is recycled. However, 3,287,000 tonnes is land filled as waste. The remainder is either re-used on landfills or are inert materials recovered on exempt sites.

6.39. On average, recycling now accounts for 12% of municipal waste disposal in the South East. Government targets aim to ensure 25% of household waste is recycled or composted by 2005. Provision of recycling facilities and services in the South East are growing, for example 70% of Hampshire homes now have kerbside recycling facilities.

6.40. The growth of sustainable waste management clearly has potential to create job opportunities, although they tend to be lower paid. A Waste Watch report *'Jobs from Waste',* indicates that nationally 17,700 people are currently employed in the collection, sorting and reprocessing of household recycling materials. The 1999 Landfill Directive, along with the national waste strategy, has opened up the recycling sector to greater growth potential. Waste Watch calculate that 45,000 jobs will be created across the country if a target of recycling 30% of household waste is reached by 2010. In the South East, the challenge is likely to be finding the sites and employees to carry out these activities, due to land values and the relatively low pay that these jobs attract, particularly at a time when the average house price in the region is already very high and continuing to grow.

[30] Environment Agency (2001) Strategic Waste Management Assessment: South East

PROJECT INTERGRA **Hampshire**

Case Study Description: Project Integra was the result of county wide public consultation by Hampshire County Council and the 13 District Councils. It is an integrated waste management strategy, with waste minimisation, composting and recycling aims. Waste minimisation is encouraged through public education and partnerships.

Key Outputs: To date Project Integra has achieved a collective recycling rate of over 25% (2000/2001), with over 90% of Hampshire's households having access to a kerbside collection of recyclables. A total of 26 Household Waste Recycling Centres are operational, which feed two Materials Recovery Facilities and three Centralised Composting Facilities.

Demonstration of good practice: Project Integra has achieved a high level of community participation and enthusiasm through involving the local public from an early stage. In addition, a joint promotional campaign focussing on waste minimisation and recycling runs concurrent to the project to educate the general public.

MATERIALS RECYCLING FACILITY **Milton Keynes**

Case Study Description: The Materials Recycling facility is jointly owned by Milton Keynes Council and Shanks and McEwan Waste Services Ltd. It has been recently refurbished with plastic sorting systems (Plastic Autosort) to increase production. It receives recyclable goods from a door-to-door collection service, recycling banks, schools, restaurants and other local businesses. Material is sorted at the facility and then sent to different centres elsewhere for reprocessing.

Key Outputs: This is the first installation of this technology type in the UK.

Demonstration of good practice: This new process, greatly improves the efficiency with which plastics recycling can be carried out.

SUSTAINABLE TRANSPORT

Description of Activity

6.41. 'Sustainable transport' covers three main modes of travel: walking, cycling, and public transport. In addition, it embraces the transfer of freight movements from road to rail or water. The aim of sustainable transport is to reduce the length and number of private vehicle journeys made.

Top-down Analysis

6.42. The top-down analysis indicates that the sustainable transport industry currently employs 10,500 people, a figure that is predicted to fluctuate only slightly between now and 2010. However, the GVA is projected to rise from a current £578.8 million to £622.7 million (both £1995 adjusted) by 2010.

Bottom-up Analysis

6.43. The South East suffers from a congested road and rail infrastructure. Outside London, the South East has the highest daily traffic flow in the UK[31]. In addition, more miles are travelled on average per person than in any other region (8,000 pa), with a higher percentage of travel conducted by car than any other region.

6.44. National Statistics indicate that the majority of growth in UK passenger transport (between 1980 and 1999) is attributable to car travel, which now accounts for 85% of the total[32]. Of the other transport modes, rail has seen the sharpest increase from under 50 billion passenger kilometres to over 60 billion.

6.45. With respect to freight, water and rail transportation have not changed significantly over the past 20 years, but road transport has risen considerably over this period. Employment in water and rail transport is unlikely to have grown as a result of this.

PFIZER GREEN TRAVEL PLAN	**Kent**
Case Study Description: Pfizer has a green travel plan at its Sandwich site in Kent where there will be 8,000 employees by 2005. From June 2001 those employees not bringing their car to work receive £2 a day direct to their salary. The system is administered by way of security swipe cards. Other measures include cycle storage and changing rooms on site, a car-share system and public transport improvements.	
Key Outputs: The innovative approach developed at Pfizer has been driven by the regulation of the planning condition. The plan shows that 'sticks' such as parking charges can be converted into 'carrots' (i.e. a daily allowance for not parking). One reason why Pfizer was prepared to do this is that the company has calculated that it costs £400/year to provide a parking space.	
Demonstration of Good Practice: If successful, the travel plan will lead to a reduction in emissions and vehicle trips at the site and in the surrounding area - or at least lessen the growth in emissions and vehicle trips than might otherwise have been anticipated from the site expansion.	

CONSERVATION AND MANAGEMENT OF THE NATURAL, HISTORIC AND BUILT ENVIRONMENT

Description of Activity

6.46. This sector covers all the organisations and businesses that are involved in the protection and enhancement of the natural, built and historic environment. However, it primarily covers Government Agencies with a specific remit in this field of activity, plus Non-Governmental Organisations (NGOs). Local authorities and the private sector are covered elsewhere in this chapter.

Top-down Analysis

6.47. The top-down analysis calculated the number of people employed by membership organisations who contribute to a high quality environment as being 7,650. Although

[31] SEEDA (2001) *The Regional Sustainable Development Framework: A Better Quality of Life in the South East*
[32] National Statistics Information on DTLR website – Integrated Transport

the category is broad ranging and the classification between statutory agencies and NGOs not clearly distinguished, the overall figure for numbers employed is probably close to the true situation.

Bottom-up Analysis

6.48. A wide range of organisations are involved in conservation and management activities, including government agencies (such as the Countryside Agency, English Heritage, English Nature and the Environment Agency) and non-governmental organisations such as the National Trust, RSPB, Wildlife Trusts and BTCV.

6.49. The most recent employment figures for a selection of these organisations are detailed in Table 6.9.

Table 6.9: Employment in Selected Organisations Specialising in Conservation and Management of the Natural Environment in South East

Organisation	Number Employed	Number employed (excluding admin)
English Nature	89	71
Environment Agency	1,726	Split unavailable
Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust	35	30
Hampshire and Isle of Wight Wildlife Trust	50	42
Kent Wildlife Trust	37	34
Surrey Wildlife Trust	26	22.5
Sussex Wildlife Trust	40	33
RSPB	66	62
WWF[33]	240	180
Earth Watch	40	40
Farming and Wildlife Advisory Group (FWAG)	21	14
Groundwork ThamesValley	28	25.5
Groundwork Kent Thames-side	25	20
Groundwork Medway Swale	22	18
Groundwork Solent	11	8.5
English Heritage	151	N/A
Countryside Agency*	49	36

Source: Personal Communication with relevant agencies/organisations
**Note: The Countryside Agency figures include staff who work jointly for South East and London regional teams.*

[33] Estimated figures

6.50. The geographical spread of this employment is reasonably uniform throughout the South East region although there are concentrations at the organisations main offices. The Environment Agency employs around 1,700 people in the South East region. Their geographical spread is reasonably uniform with around 100-200 people employed in each county. The agency has two regional offices: a Thames office in Reading, Berkshire and a Southern office in Worthing, West Sussex.

6.51. The geographical location of the Wildlife Trusts employees is concentrated at the four locations in the South East at which there are Trusts. The Berkshire, Buckinghamshire and Oxfordshire Trust employ 35 people in their offices at Oxford, Berkshire and their education centre in Buckinghamshire. Most of the Surrey Wildlife Trusts employees at employed at Purbright with four at Nowerwood in Headley. The Hampshire and Isle of Wight Wildlife Trust employ 50 staff at their main office in Eastleigh and at nature reserves throughout the area. The Kent Wildlife Trust employ 37 people at their main office in Sandling and on education sites and nature reserves throughout Kent.

6.52. The RSPB employ 22 people in their main office in Brighton and a further 43 people on reserves throughout the South East region. WWF employs approximately 240 people in the South East region. Their main office is at Godalming in Surrey. Earthwatch employ 40 people in their Oxford office. All staff carry out their own administration and hence there is no dedicated administration support.

6.53. The geographical spread of Groundwork employees is concentrated at the four locations in which there are Groundwork Trusts. Groundwork ThamesValley employs 28 people at their main office, two satellite offices and study centre. Groundwork Kent Thames-side employs 25 people in their office at Dartford. Groundwork Medway-Swale employ 22 people in their office in Gillingham. Groundwork Solent employs 11 people at their office in Gosport.

CHANTRY SCHOOL OUTSIDE SCIENCE PARK[34] **Dartford, Kent**

Case Study Description: Groundwork Kent Thames-side has worked with Chantry Primary School to enhance the school grounds' environment. Pupils have helped design an environmental science garden that includes a waterwheel and canals, a wind turbine and solar-powered pump.

Key Outputs: The proximity of Chantry School to the Denton SRB area helped Groundwork raise £11,850 to initiate work at the school with Gravesham Borough Council. Additional funding was then secured from English Partnerships and Kent Country Council, with private sector contributors also providing support.

Demonstration of Good Practice: Involving children in designing and implementing an environmental science garden offers a range of benefits. The school now has a new recreational and educational resource, children have a more stimulating learning environment and the morale and educational standards at the school have improved. The school grounds have also acted as the focus for improvements in the social fabric of the local community.

[34] Forum Directory of Sustainability in Practice – www.forumdirectory.org

6.54. In addition to the organisations mentioned above, there are a significant number of people employed by both agencies and local authorities on a range of projects concerned with managing the natural environment. For example, there are several countryside management projects active throughout the region, such as the Surrey Heathlands, Kentish Stour, Lower Mole, Portsdown Hill Countryside Management Projects. Each has their own dedicated staff, usually funded by a range of partner bodies. Some of the smaller countryside projects may be funded by one body, such as the Rye Bay Countryside Office funded by East Sussex County Council, which employs two full time staff and four trainee rangers. Further employment is created by bodies such as the AONB Conservation Boards. Each individual project usually employs only a small number of permanent staff, but the large number of such projects means their cumulative contribution to regional employment is significant. In addition, local authorities also directly employ officers who make a considerable contribution to the quality of the natural environment, such as conservation officers, reserve wardens and park rangers.

6.55. Apart from paid employees, the contribution of people giving their time voluntarily to the management of the natural environment should not be underestimated. The Wildlife Trusts alone, for example, have well over 4,000 active volunteers.

Table 6.10: Membership and Volunteering in South East Wildlife Trusts

Wildlife Trust	No. members	No. active volunteers
Berks, Bucks and Oxon	11,000	1,500
Hants and IoW	14,205	1,800
Kent	14,000	300
Surrey	9,703	590
Sussex	12,444	N/A
Total	**61,352**	**4,190 (+)**

Source: Personal Communication with relevant agencies/organisations

6.56. The British Trust for Conservation Volunteers (BTCV) has a total of 490 members and 311 supporters in the South East region.

6.57. The National Trust is Europe's largest voluntary organisation founded to promote the preservation of places of historic interest or natural beauty. Its membership in the South East region stands at over 800,500. There are 60 paid entry holdings (covering 1,590 hectares) and an additional 25,275 hectares of holdings. A total number 3,010,393 people visit these properties, and spend a total of £10,588,854 every year. The Trust secured £1,951,170 of funding in 2000. The National Trust directly employs 667 staff on a permanent basis in the region, and a further 774 on a seasonal basis.

6.58. The funding programmes for the conservation and management of the natural environment, are summarised in Table 6.11 below:

Table 6.11: Examples of Funding Programmes to Conserve and Manage the Natural Environment

Funding Programme	Area targeted, amount of funding, details of programme
English Nature Management Agreements	• Spend for 1999/2000 was £1,384,000
LIFE-Nature Fund	• A total of £5.1 million is available over the next 4 years for a programme aimed at conserving and enhancing areas of the New Forest
Heritage Lottery Fund	• Over the last 5 years a total of £111m has been awarded to projects in the South East of which 19% has been directed to countryside and nature conservation.

OYSTER BED RESTORATION **Hayling Island**

Case Study Description: The oyster beds to the north of the eastern side of Langstone Harbour have historically been the site of various ventures, generally unsuccessful, connected with oyster farming. Long defunct, most of the old bunds, which were becoming dangerous, have been removed and the outer area is now an excellent feeding and roost area for the harbour's waders.

Key Outputs: Award-winning environmental project Best Practice in Environmental Management, 1998). This project has also been declared a Millennium Product by the Design Council.

Demonstration of Good Practice: Although oyster farming is no longer commercially viable, a sustainable use of the former oyster beds has been found, that contributes and enhances the natural heritage of the area, helping to support the visitor economy.

6.59. English Heritage's mission is to conserve and enhance the historic environment and broaden access and appreciation. This agency employs 151 people in the South East region, and has a total membership of around 147,900. 1,295,086 people visit their properties every, spending a total of £3,474,021 (Year end March 2001).

HERITAGE ECONOMIC REGENERATION SCHEME **Worthing**

Case Study Description: The scheme aims to improve the condition and attractiveness of older properties and bring wider benefits. Environmental enhancements are specifically sought to reinforce both commercial and conservation area attractiveness.

Key Outputs: To be completed

Demonstration of Good Practice: To be completed

SUSTAINABLE AGRICULTURE

Description of Activity

6.60. The growth in public interest and demand for organic and sustainable farming has been considerable over the past decade, arising as a result of the concern about mass farming methods and farming crises such as BSE. This has led to the return of more environmentally-friendly forms of farming on a commercial scale.

Top-down Analysis

6.61. The ‘sustainable’ farming industry is worth £52.9m in the South East, and employs an estimated 3,900 people. The top-down analysis produces a projected decline in GVA and employment over the next 10 years, however, this is based on predictions for the agricultural industry generally, and therefore cannot be taken as an accurate reflection on organic farming, which is known to be a growth industry at present.

Bottom-up Analysis

6.62. The number of farmers in the South East is included in Chapter 4 under ‘Agriculture’, although no distinction was made between the number of farmers employed in sustainable agriculture and those employed in intensive agriculture. The term ‘sustainable agriculture’ implies farming systems that are capable of maintaining their productivity and usefulness to society indefinitely and hence being resource conserving, socially supportive, commercially competitive and environmentally sound. Wildlife benefits are a key aim of sustainable agriculture.

6.63. There are a number of funding programmes in the region which promote the efficiency and effectiveness of agriculture or the development of land for nature conservation benefits. The range of schemes available (see Table 6.11 below) implies that a reasonable proportion of agricultural activity in the South East is becoming more sustainable. It is, however, very difficult to quantify this proportion.

Table 6.11: Funding Programmes Promoting Sustainable Agriculture

Funding Programme	Area targeted, amount of funding, details of programme
Agri-environment schemes	• Payments to farmers to undertake particular forms of land management
Environmentally Sensitive Areas (ESAs)	• There are 5 ESAs in the region: the South Downs, the Test Valley, the Avon Valley, the North Kent Marshes and the Upper Thames Tributaries. • There are currently 716 ESA agreements covering 25,493 ha. The region has a budgetary commitment of £3,524,724 (1998)
Countryside Stewardship Scheme (CSS)	• Payments to farmers and other land managers to conserve and enhance landscapes, their wildlife, their cultural history and help people to enjoy them. • There are currently 1,216 ESA agreements covering 21,545 ha. This is equal to a commitment of just over £4.8 million for 1999/2000.

Funding Programme	Area targeted, amount of funding, details of programme
The Organic Farming Scheme	• Available to farmers who wish to convert to organic production • There are currently 103 agreements with an annual expenditure of £367,528 in the region
The Habitat Scheme	• Set up to meet the mandatory requirement for a long-term set-aside measure • There are a total of 52 agreements in the region covering 1,358 ha with an expenditure for 1999 of £427,740
The Nitrate Sensitive Area Scheme	• Designed primarily to protect selected sources of drinking water in designated areas from nitrate levels • There are 7 agreements covering 373 ha with an expenditure for 1999 of £70,717
Organic Aid Scheme	• Largely superseded by the Organic Farming Scheme • 88 agreements with an expenditure for 1999 of £150,917
The Countryside Access Scheme	• Designed to provide new access to suitable long-term set-aside sites • There are 15 agreements covering 8.84 ha.
Land Management Initiative	• Programme aims to inform the development of a new policy framework which will encourage viable, diverse and environmentally beneficial land management practices • Planned spend is for £139,000 in 2000/2001

6.64. Technology transfer in agriculture and the rural economy was reviewed by ADAS in a MAFF funded study in 1996[35]. The study concluded that farmers are generally not well equipped to make complex strategic decisions. The report recommended the provision of face-to-face business advice designed to raise awareness of the need among farmers to change and of potential opportunities, such as agri-environment schemes offering public benefits. This indicates that many current farmers are not aware of the opportunities offered by sustainable agriculture and hence the potential for growth in this sector.

6.65. Public concerns about intensive farming have seen an increase in demand for organic and 'local products'. 'Farmers Markets' have been a particular success across the South East, as highlighted in the Local Authority questionnaire responses, where a number of examples were given. A number of farmers are adding value by processing their primary products and/or selling at retail prices. Farmers' markets have been established in the region in the last two years. A recent market held in Winchester, for example, attracted 60 stallholders and 13,000 visitors to the town. A survey of farmers' markets in the South East in 2000 showed that in a number of cases there are more producers than pitches available at markets. Abingdon and Tunbridge Wells, for example, have lists of producers waiting to sell at the markets in all product lines.

[35] Information in the study has been taken from MAFF (2000) *England Rural Development Programme 2000 – 2006, Appendix A7 – South East Region*

High Weald Land Management Initiative[36] **Around Rotherfield**

Case Study Description: The High Weald is an ancient landscape derived from a highly integrated and labour intensive land management system. The Initiative is one of the Countryside Agency's projects to show how England's rural land management and farming systems can respond to the changing demands on agriculture.

Key Outputs: The initiative aims to inform the Countryside Agency's advice to government on the future of the CAP and other rural policies through researching activities such as farm diversification, inward investment and family farms.

Demonstration of Good Practice: The initiative is centred on four parishes and will work with stakeholders to develop mechanisms that will deliver effective and integrated rural support to maintain and enhance the environmental, social and economic character of the High Weald.

SUSTAINABLE FORESTRY

Description of Activity

6.66. The South East is England's most wooded region with about 15% of the land area of the region under trees. Woodlands have historically been managed to provide a range of products, thus contributing to the local economy and the landscape, and providing a habitat for wildlife. Woodlands also have potential as a recreational resource and can contribute generally to the life of residents and visitors to the region.

6.67. Significant changes have taken place in the countryside over the last century, particularly since the Second World War. Data on the management status of the South East's woodlands is lacking, however, it is clear that a large proportion of the woodland resource is undermanaged or not managed at all. The loss of traditional markets for woodland products, together with the low bulk timber prices (fuelled by imports from abroad) has led to a lack of motivation for woodland owners to manage and harvest woodland. This also led to loss of traditional skills amongst woodland contractors, presenting a problem to those owners who still wish to undertake active management. The woods most likely to be undermanaged are small broadleaved woodlands because the problems facing woodland owners are exacerbated in small woodlands, as due to their small size, the economic viability of harvesting and timber sale is worsened.

6.68. Due to the wide range of benefits available from some managed woodlands, as well as un-managed woodlands, their neglect is widely seen as the biggest forestry issue in the region. The UK Woodland Assurance Standards and Forest Stewardship Council certification aim to achieve more sustainable approaches to forest management, and there are many smaller local woodland initiatives that seek to support woodland products within a wider sustainability agenda.

[36] Countryside Agency (2002) *The High Weald Land Management Initiative*

Top-down Analysis

6.69. The top-down analysis attributes 900 employees to sustainable forestry.

Bottom-up Analysis

Grants

6.70. Total grants to landowners in the region to plant new woodland and renovate old woodlands are £3.5 million/year. A total of 3,992 ha of new woodland have been established in the region since 1992 at a cost of £2,240,988 of grant aid through the farm woodland premium scheme and a total of £3.5 million of grants was paid to landowners in 1998/99 for woodland planting and management through the woodland grant scheme.

Woodland products

6.71. In 1991, production of timber in the South East was estimated at 800,000 tonnes/year, of which 100,000 tonnes finds a market (Dannatt, 1991). There is a lack of market for softwood timber, which is usually imported from abroad where it is cheaper to produce. Hardwood markets exist for some high quality products e.g. sweet chestnut sawlogs, oak and yew. However, there is a lack of market for low value wood, although use of wood fuel is seen as having some potential.

6.72. The value of landscape, recreation and wildlife benefits from woodlands has not been valued.

Employment

6.73. The Forestry Commission employs people in three separate areas. The Forestry Commission itself employs 19 staff, the Forestry Enterprise employs 80 and Forestry research has 183 staff. This makes a total of 282 people.

6.74. Woodland initiatives are sub-regional scale organisations involving a partnership of organisations that are involved in supporting sustainable management of woodlands. There are 3 initiatives in operation in the South East, supporting 5 FTE employees. There is also support from staff within partner organisations.

6.75. 1991 data for East Sussex indicates that 620 people were employed directly in forestry (Weald Woodnet, 1995). This includes forest nurseries, management, harvesting, haulage, processing and distribution. A further 4,900 were employed in timber manufacturing and distribution.

6.76. The contractor sector is currently in decline. There is a lack of skilled workforce in the South East, resulting from low wages and lack of markets for the low value woodland products.

6.77. The large-scale wood processing industries are also being lost, which is affecting the market. However, the local craft market appears strong (e.g. a recent showcase event highlighted at least 30 local craftspeople in Kent using local wood products). There are also a number of local furniture makers in the Chilterns.

SUSTAINABLE MINERAL ACTIVITIES

Description of Activity

6.78. What is and is not sustainable mineral activity is difficult to define, although there is very little doubt that the restoration of former mineral workings has created many valuable sites, both in terms of visual amenity and biodiversity. However, not all former mineral workings have been restored to such a standard.

6.79. In addition to the restoration of mineral workings, the minerals industry is being encouraged the use of recycled and secondary aggregates in preference to primary extraction. This is opening up a large market that will continue to develop in the future.

Top-down Analysis

6.80. The top-down analysis estimates that 1,000 people in the region are employed in sustainable mineral activities, producing £27.3m GVA (1995 prices).

Bottom-up Analysis

6.81. The South East Regional Aggregates Working Party (SERAWP) has a key sustainability objective to maximise the use of secondary alternatives and recycling. The high levels of construction and demolition could be more sustainable in their processes by recycling the materials demolished. The Aggregates Tax encourages the use of secondary and recycled materials. Members of the working party are in addition trying to encourage local authorities to persuade promoters and developers to consider on site materials both in the initial stages of site appraisal as well as through conditions attached to planning permissions[37].

6.82. Currently the main issue in the aggregates is the supply and demand equation, which is currently based on 1994 levels. This is soon to change, as well as responsibility for the balance being pushed towards a regional level to allow better apportionment. SEEDA has a part to play in this, in advising on the economic prospects for the region.

SUSTAINABLE WATER RESOURCE MANAGEMENT

Description of Activity

6.83. The South East comprises two water management regions. The Thames region is unique in that the entire area feeds one river, and therefore forms one catchment basin. The Southern region, however, due to its coastal location, is split into a number of catchments. The South East has a high population density relying on its water resources. Sustainable water resource management is therefore a major priority.

6.84. As with sustainable mineral activity, it is difficult to be precise about what is and is not sustainable water resource management. However, water companies have made significant efforts to reduce leakages in water supply, and in investing in cleaning water and waste water processes, which have contributed to a higher quality environment in the region, although there is still much work to be done.

[37] Personal communication with Chris Waite at SERAWP (2002)

Top-down Analysis

6.85. Given the above caveats, the top-down analysis estimates that c. 4,000 people are employed in sustainable water resource management activity.

Bottom-up Analysis

6.86. The Environment Agency has identified that without further action to manage demand and reduce leakage, the Thames region will suffer a water deficit by 2015. In the Southern region, achieving sustainable water supply is an acute problem. Opportunities for sustainable resource development are scarce, with future demand supply hinging on efficient use of water. The Southern region has to rely on other regions in the water supply network in order to guarantee water supply. This is one of the main obstacles to sustainable management, although greater integration of the public supply network is highlighted as a solution.

6.87. More recently, concern has shifted to balancing high flows during times of flood and low flows during droughts, particularly in the light of climate change. The sustainable management of water resources hinges around this balance.

SUSTAINABLE TOURISM

Description of Activity

6.88. Sustainable tourism is difficult to define. The English Tourism Council[38] states that "sustainable tourism is about managing tourism's impacts on the environment, communities and the economy to make sure that the effects are positive rather than negative for the benefit of future generations. It is a management approach that is relevant to all types of tourism, regardless of whether it takes place in cities, towns, countryside or the coast."

6.89. The environment of the South East is rich in attractions, such as its AONBs, coasts, wildlife and heritage sites, and historic settlements. These attract large numbers of visitors, who need to be managed in such a way as to avoid negative impacts on the very resources that they have come to enjoy. The ability to combine sustainable activities with economically successful tourism can be achieved in many ways, from National Trust working holidays to public transport initiatives aimed at tourists. Education is an important part of this process, and awareness campaigns, field studies and interpretation centres, heritage trails, etc., all have a role to play, and in themselves are creators of jobs.

Top-down Analysis

6.90. Although much good work is being done by operators and partners in the tourism sector, the negative impacts of some tourism activities continue to outweigh their positive contribution to the environment, local communities and the economy. In addition, the SIC codes do not identify 'tourism' as a separate industry sector, and so we have had to rely on those SIC codes that are most closely related to it, comprising activities such as hotels, restaurants, museums, recreational activities, etc. Whilst

---

[38] English Tourism Council (2001) Time For Action. A Strategy for Sustainable Tourism in England.

many of these activities are at least in part supported by a high quality environment, only a small proportion of them can genuinely be thought of as contributing to a high quality environment. As a result, the top down analysis calculates that only 2,200 people are employed in sustainable tourism activities. The total GVA from these activities is £45.9 million (1995 prices). This almost certainly underestimates the true figure, but without systematic categorising of individual activities into 'sustainable' and 'unsustainable' tourism, backed up by measures of numbers employed and GVA generated by each, there is no other data available.

Bottom-up Analysis

6.91. The importance of promoting a more sustainable approach to tourism is becoming increasingly acknowledged amongst a wide range of partners in the industry. For example, the English Tourism Council has launched a number of initiatives such as sustainable tourism indicators, business guidance, awards and green accreditation schemes. The Council also makes available examples of good practice, and is currently working with the Countryside Agency to develop a national sustainable tourism accreditation scheme. One of the latest expressions of grappling with the issues of sustainable tourism is the setting up of a SEERA task group responsible for producing a spatial strategy for tourism. This will be used for reviewing Regional Planning Guidance for the South East[39]. The key themes identified to date include:

- Establishing a vision for tourism at the local level (including its role in economic diversification).
- The role of tourism in promoting rural diversification and driving urban renaissance.
- Regeneration of the coastal resorts.
- Managing visitor pressures. Planning for tourism related developments.
- Sustainable tourism was not a theme that emerged clearly from any of the county strategies.

6.92. There are an increasing number of examples of good practice in sustainable tourism in the region. Examples include:

- 'Walking South East England', which promotes the region as a walking destination, focusing on a network of ten long-distance paths covering 840 miles that criss-cross the South East.
- 'Canterbury City Centre initiative', which was set up in 1994, and provides a practical approach to visitor destination management in partnership with the private/public sector and residential interests – the programme of works has included a theatre, visitor information centre, upgraded sports facilities, tourist pedestrian trails, riverside walk, park and ride, pedestrianised main streets, traffic restrictions, cycle routes, and stringent conservation policies concerning the design of shop fronts and the use of building materials in the historic core.

[39] Personal communication with John Pounder, Regional Planner, SEERA

- The ‘Welcome Farmer’ one day training course, which was developed by the South East England Tourist Board and aims to enable farmers and local producers to maximise sales and repeat business through improving customer care skills at farmers markets, in their farm shop or retail outlet.

- The inclusion of five beaches in the South East as ‘Blue Flag Beaches’, under which they have to meet stringent environmental standards.

SOUTH EAST AONB SUSTAINABLE TOURISM PROJECT **Region-wide**

Case Study Description: A partnership between SEEDA, the Countryside Agency, Southern and South East England Tourist Boards, is in the process of being set up to:

- develop sustainable tourism networks on all 10 AONBS in the South East (covering 30% of the region’s land area)

- raise the profile of AONBs and rural destinations within the tourism industry

Key Outputs: The project will provide a range of training and advisory services for businesses and other organisations involved in the tourism industry, covering such themes as the English Tourism Council ‘Green Advantage’ initiative, increasing awareness of AONBs, promoting local products, and sustainable transport, such as ‘Welcome Walkers’, and ‘Welcome Cyclists’. The Strategy is implemented at the local level, such as the development of strong sustainable tourism networks between business, conservation projects, local authorities and parish councils, being pursued in the High Weald and Kent Downs AONBs.

Demonstration of Good Practice: Although in its early days, the project should raise the awareness of tourism interests of the benefits of taking a responsible approach to their activities, and the opportunities available in rural areas, particularly AONBs, to promote sustainable forms of tourism. It also demonstrates the advantages of a region-wide partnership approach to common themes, implemented at the local level.

6.93. At the strategic level, the region is also able to demonstrate improving good practice. For example, New Forest District Council and English Nature have prepared a tourism and visitor strategy for the New Forest entitled *Our Future Together*.

LITTLE ACORNS **New Forest, Hampshire**

Case Study Description: The ‘Little Acorns’ marketing programme has been developed by New Forest District Council with the New Forest Tourism Association. This forms part of the wider tourism initiative featured in the Countryside Agency publication ‘Sustainable Tourism Management in the New Forest’. The concept is one of certification. Accommodation providers etc are able to display the Little Acorn symbol once they are participating in the New Forest ‘Little Acorns’ LA21 Tourism Kit Programme. The aims of the projects include:

- set aside at least 10% of their grounds for wildlife

- improve waste management and recycling

- increase us of local foods, suppliers and services

Key Outputs: A 'Little Acorns' LA21 Tourism Kit has been produced. Attendance and occupancy levels have been maintained and in some cases improved. **Demonstration of Good Practice:** The programme has raised awareness among both consumers and businesses of the benefits of adopting a sustainable approach.

6.94. Transport 2000 report *Tourism without Traffic: Gateways to the East Sussex Downs,* which is part of a national pilot project aiming to:

- Encourage and develop forms of tourism in the English countryside that are not dependent upon the private car.
- Reduce the number and impact of cars in vulnerable areas of countryside.
- Help sustain and support the local economy through sustainable forms of travel and tourism.

6.95. The East Sussex Downs study showed how the environmental assets could be made more accessible through public transport initiatives, changes in marketing of travel options and cycle and footpaths. The report suggested numerous action points to allow the vision to be realised.

6.96. At the local level, the benefits of promoting sustainable tourism are beginning to emerge. Increasing numbers of tourist operators, appreciate the advantages to the visitor experience, and hence business, of taking a more sustainable approach to its activities. For example. the Sandy Balls Holiday Centre, near Fordingbridge, Hampshire, has won six David Bellamy Gold Awards in a row for the conservation work that it has carried out, a fact that it is proud to advertise prominently in its marketing literature.

ISLAND 2000 TRUST	**Isle of White**
Case Study Description: The Island 2000 Trust evolved from a partnership between an AONB Project, local council, and Countryside Agency. An independent, self-financing, not-for-profit company was set up in April 2000 which aimed to demonstrate linkages between landscape, the economy and culture on the Isle of Wight, by: • acting as a catalyst, promoting new ideas and approaches • documentating and disseminating lessons learned • building partnerships **Key Outputs:** Island 2000 Trust has received the Business Commitment to the Environment award in 1997 and 1999; brought in over £1 million into the Island's economy over five years; resulted in 25 NVQ students accredited with 70% gaining employment in a related field; supported over 120 businesses; delivered 70 projects; developed productive partnerships locally, nationally and internationally; and forged strong links with UNESCO and with other European islands in the field of sustainable island development. The Trust's 'Gift to Nature' scheme is a good example of a 'visitor payback' scheme, whereby visitors and tourists are offered the opportunity to contribute to conservation works taking place on the Island.	

Demonstration of Good Practice: Significant benefits can be achieved by committed and enthusiastic champions with a vision for achieving a more sustainable approach to tourism. The Island 2000 Trust has shown how it is possible to achieve excellence in its field, bringing real improvements to the environment and benefits to business, without needing public funds for support.

7. ANALYSIS

7.1. Our research has shown that the Environmental Economy– whichever definition we choose to use – is sizeable: estimates under the top-down analysis of total employment range from 49,000 (Definition 2) to 155,000 (Definition 1).

7.2. The maximum number of people employed in the Environmental Economy in the South East is calculated using a combination of Definition 1 and Definition 3 (i.e. adding to the totals generated by Definition 1, those people employed in activities in Definition 3 that are not a sub-set of Definition of 1; Definition 2 activities are all considered to be a sub-set of Definition 1). Effectively, this means adding to Definition 1 the activities of 'Manufacturing of Environmental Technologies', 'Recycling', 'Sustainable Transport' and 'Environmental Advice'. This gives a maximum of c. 230,000 people employed in the Environmental Economy in the South East, contributing some £7.8b to the regional economy.

7.3. Given that the top-down analysis is only able to capture part of the Environmental Economy (as has been revealed by the bottom-up analysis), it is clear that the Environmental Economy undoubtedly comprises a significant proportion of economic activity within the South East region.

7.4. Chapters 4-6 provided a detailed narrative on the component activities that together constitute the Environmental Economy (bottom-up analysis). These embrace a range of sub-sectors, some of which are growing (e.g. environmental consultancy) while others are facing a much more uncertain future (e.g. farming). Moreover some (i.e. those within Definition 3) are contributing in a positive way to environmental sustainability while others (Definition 1 and 2) are much more equivocal in these terms.

7.5. Across the Environmental Economy, therefore, we can see a diversity of economic prospects and environmental impacts, some positive and others negative. A very important question for SEEDA and its partners – particularly in the context of the revised Regional Economic Strategy - is the extent to which there is a distinctive sub-regional geography that characterises both the environmental and economic domains within the Environmental Economy as a whole. On the basis of the evidence within this report, an emerging hypothesis is as follows.

7.6. The region as a whole seems to be developing two types of Environmental Economy that are spatially quite distinctive.

7.7. First, the area to the west of London, embracing Oxfordshire, Buckinghamshire, Berkshire, Surrey and – we suspect – northern Hampshire, seems to be developing a particular set of competences within the Environmental Economy. Many of these are within high value added activities and many, we suspect, make a positive contribution to environmental sustainability, whether or not they are themselves dependent on environmental inputs. For example:

- Surrey, Oxfordshire and Hampshire are within the top 10 counties nationwide in terms of the incidence of environmental consultancies. From our earlier work in the East of England we know that Cambridgeshire and Hertfordshire also score highly in the rankings, which suggests a degree of geographical clustering across the regional border.

- Environmental training providers listed by JEMU closely linked to environmental technologies and related activities are concentrated in Oxfordshire, Buckinghamshire, Berkshire and Hampshire, which again suggests a positive contribution to the environmental performance of businesses within the local economy; East Sussex and Kent can claim only one provider between them[40].

- Environmental research and development activity is focused in Berkshire, Oxfordshire and Buckinghamshire; again there are no such establishments in Kent or East Sussex.

- There are plans for an Enterprise Hub based around the University of Reading with a focus on environmental technologies.

7.8. The second distinctive component of the Environmental Economy embraces the southern area of the South East, being Kent, East Sussex, West Sussex, the Isle of Wight and the southern part of Hampshire. Here the focus of activity seems to be activities that capitalise on a high quality environment without – necessarily – contributing to its reproduction. In the Isle of Wight, for example, our Definition 2 of the Environmental Economy ('activities dependent on a high quality environment') accounts for nearly 5% of total employment; this compares with around 1% in all of the counties to the west of London. Kent has a strong representation of colleges and training courses that focus on management of the natural environment, such as Wye College near Ashford, Hadlow Colleges near Tonbridge, and the Durrell Institute of Conservation & Ecology at the University of Kent.

7.9. The importance of the distinction between the two geographies of the Environmental Economy is to some extent masked by the employment data, for many of the activities we have associated with the counties to the west of London are still embryonic in scale. The point however is that in considering the future of the Environmental Economy, these activities – and presumably these places – are focusing on enhancing the environmental future (although not necessarily of the specific area in which they are located), rather than simply using the resource in the context of low value-added (and low paid) activities.

7.10. For the counties in the southern part of the South East, where the Environmental Economy is characterised more by the traditional industry sectors of agriculture and tourism, the emphasis may well lie in restructuring and re-focusing efforts to provide for a more sustainable and long-term future. For example, the East Kent Area Strategic Partnership, focused on the triangle formed by Dover, Canterbury and Thanet, aims to re-brand the area on the basis of its outstanding historic and natural environment, in order to generate a major increase in visitor numbers combined with significant environmental improvements, and in so doing also attract inward investment.

[40] The list of environmental training providers (A Guide to Environmental Training in the UK, JEMU, May 2000) is not exhaustive, and focuses on those organisations involved with environmental technologies and related activities.

7.11. Two further issues are also worthy of note. Firstly, the top-down analysis identifies that all activities in the Environmental Economy are in sectors that offer no more than ‘modest’ growth over the next ten years, with the possible exception of the ‘provision of environmental advice’. What this could possibly mask, though, is that it is precisely the ‘environmental’ component within these sectors that offer the best prospects for growth, compared to more traditional approaches. The role of environmental regulation (e.g. EC Directives) is likely to be a driving force behind this, although the creation of new markets (e.g. renewable energies), and the search for improved efficiency and competitiveness are also likely to be important. The potential for growing the ‘environmental component’ as a proportion of each environmental activity warrant further examination.

7.12. Secondly, the role that the Environmental Economy plays in contributing to Quality of Life, inward investment decisions, and other non-quantifiable aspects of the sector are undoubtedly important, but difficult to unravel. However, they should not be discounted, however, just because they are difficult to measure.

7.13. To try and gain a better understanding of the geography of the Environmental Economy in the South East, and what the driving forces behind it are, a series of detailed case studies were investigated. These focused on different aspects of the Environmental Economy in different parts of the region, but together they have enabled us to build up a much more informed picture as to how the Environmental Economy is being delivered on the ground, and what the constraints and opportunities for progress are likely to be. The findings are reported in the next Chapter.

8. CASE STUDY FINDINGS

INTRODUCTION

8.1. In order to focus the case study component of the research, it was decided that two main themes should be explored further:

- The potential for growth of the environmental technologies sector, focussing in particular on the counties west of London, where there appears to be a concentration of the sector.
- The potential for environment-led economic development in five local area contexts within the South East.

8.2. Each case study comprised quantitative analysis of economic data, and qualitative research, primarily involving discussions with key players and examinations of policy documents, strategies, etc.

8.3. A summary of the case studies is provided below. The detailed findings can be found in the Appendices 4 – 7 of this report.

THE POTENTIAL FOR GROWTH OF THE ENVIRONMENTAL TECHNOLOGIES SECTOR

8.4. The Environmental Technologies sector comprises:

- Air Pollution Control.
- Water and Wastewater Treatment.
- Waste Management.
- Contaminated Land Remediation.
- Environmental Monitoring and Instrumentation.
- Energy Management.
- Renewable Energy.
- Noise and Vibration Control.
- Cleaner Technologies and Processes.
- Marine Pollution Control.

8.5. The bottom-up research indicated that more than 13,000 people could be working within this sector, and that it is particularly strong in the Thames Valley counties, and Hampshire. The JEMU database holds information on 530 environmental technology firms in the South East. The fields of environmental monitoring and water and wastewater treatment appear to be the main areas of strength for the South East.

8.6. JEMU also lists 84 organisations (69 excluding those based in London) in its Guide to Environmental Research & Development Centres in the UK (JEMU, 2000). Of these, 18 (21% of all those listed; 26% excluding London) are listed as being in the South East of which nine are based in Reading/Berkshire, six in Oxfordshire, two in Buckinghamshire, and one in Surrey.

8.7. Interviewees suggested that the main reason for this concentration to the West of London is in line with the general economic buoyancy and skills base of the area, and its proximity to London, Heathrow, and its high quality transport connections, rather than any specifically recognised cluster. Indeed, some interviewees expressed surprise when this concentration was mentioned.

8.8. It was noted, however, that this part of the region is the chosen location of major organisations, such as Thames Water and the Environment Agency in Reading, and the Centre of Ecology and Hydrology in Wallingford, and major multi-disciplinary companies working on environmental problems, such as AEA Technology, Babtie Group and JacobsGibb, which has led to a cluster of like-minded organisations. The strength of Reading University in Environmental Sciences (for which its research department has been graded 5*), is recognised in its designation as an Enterprise Hub in the field of Environmental Technologies, offering business the opportunity to use laboratory facilities, consulting services, joint research, student placements, business services (e.g. conference and lecture facilities), library resources, and education and training.

8.9. In terms of growth prospects, these are probably similar to the environmental technologies industries in other regions. The main drivers are seen to be:

- Regulation.
- Reputation (stakeholder pressure).
- Liability.
- Cost savings.
- Avoidance of incidents.

8.10. The South East appears to be well placed to increase its market share with respect to water environmental technology and environmental monitoring, and possibly the remediation of contaminated land and waste management.

8.11. The region has a lot of catching up to do with respect to renewable energy. The South East has opportunities to develop offshore wind, energy from waste (although this is not a very sustainable option), biomass, and on-shore wind. Local partnerships, and incorporation of renewable energy generation (e.g. photovoltaics) into built development schemes, and strong support for major schemes such as off-shore wind are seen as critical to meeting regional targets. However, existing and proposed projects are currently dominated by landfill gas schemes, again not the most sustainable of options, suggesting a step change is required. On-shore wind energy is unlikely to be a major generator of renewable energy compared to other regions, but the prospects for other more novel forms of renewable energy (e.g. hydrogen fuel cells) may be suitable, particularly related to ‘greening’ traffic, which is a major concern in the South East.

8.12. In terms of global markets, the best prospects (as for the UK as a whole) are in water and wastewater treatment, environmental monitoring, air pollution control, and renewable energy. The South East is well placed with respect to the first two of these, but less well placed for the latter two.

8.13. Major drawbacks for companies in the South East include the relatively small number of large companies, which are generally better placed to offer complete 'environmental solutions' and compete on the world stage. Also, the South East is not strong on turning innovative ideas into 'environmental products', with a weak manufacturing base of environmental technologies. Conversely, its strong research base offers opportunities if links can be made with industry.

8.14. SEEDA and its partners also have an educational role to play. Environmental technologies are still seen as a 'special' industry, and much of mainstream industry still has to be convinced of the benefits of taking an environmentally forward looking stance. The rise of consumer awareness and ethical investment criteria is changing this picture, but at a slow pace. In contrast with some competing countries (e.g. Germany; the Netherlands), the UK is lagging behind. The result is that other countries are able to develop technologies that are more advanced than those in the South East and the UK, which therefore finds it difficult to compete. A 'step-change' in thinking is therefore required.

THE POTENTIAL FOR ENVIRONMENT-LED ECONOMIC DEVELOPMENT

8.15. This theme represented the bulk of the case study research, and comprised three sub-themes:

- Environment-led economic development in a coastal context (East Kent Triangle; Portsmouth/Chichester).
- Environment-led economic development in a market town context (Battle; Petersfield).
- Environment-led economic development in the Chilterns.

Environment-led Economic Development in a Coastal Context

East Kent Triangle

8.16. The East Kent Triangle comprises the local authority districts of Dover, Canterbury and Thanet. The area consists of three distinct geographical areas: the coastal towns and coastal strip, Canterbury city and the rural hinterland.

8.17. Much of the coastal area, in particular, is suffering from economic decline, due to a general downturn in the traditional coastal resort tourist industry, the closure of the East Kent coalfield, and the adverse effects of the Channel Tunnel on the coastal ports. However, the area has great strengths in terms of its natural, historic and cultural assets. Therefore there are potential opportunities for regeneration that capitalises on and contributes to these assets.

8.18. Significant progress is being made in taking forward such an approach to regeneration, which is reflected in the strong partnerships that are emerging in the area, and a number of resulting initiatives.

8.19. A green tourism strategy is the key strand of the area's environment-led regeneration strategy. However, it is clearly recognised that a good quality built and natural environment can create a positive image of a vibrant successful place, which will be attractive to potential investors. Therefore many initiatives, such as the development of Margate Old Town Cultural Quarter will help to attract visitors, and will also serve a dual purpose by lifting the overall image of the area.

8.20. Several key messages for the future of environment-led regeneration in the East Kent Triangle have emerged:

- Strong partnerships have been forged between the district and county councils and other important bodies and the private sector. There is a need to maintain and strengthen these links. Such partnerships provide a sound basis for developing further the environment-led regeneration strategy that is already well underway.

- Partners should continue to promote a 'cohesive image' of the area to visitors in order to 'spread' the benefits of tourism from the coast to the rural hinterland, and from Canterbury outwards towards Dover, the ex coalfields, and the Thanet Towns.

- Linked to this is the un-realised potential of East Kent as the 'Gateway to the Continent', and for foreign visitors as the 'Gateway to England'. As such, it is a key axis in the communication and movement network. Few visitors are aware of the quality of the environment to be found in East Kent, and coupled with the advent of high speed rail travel, and improved transport infrastructure, there are considerable opportunities to sell the area as a place in which to invest, thereby taking pressure off some of the more overheating areas of the South East, such as the Thames Valley

- In pursuing this potential, it will be important to ensure that other economic regeneration initiatives do not compromise the opportunities for environment-led regeneration. For example, improved transport infrastructure (including a combination of motorway and road improvements, strategic rail schemes and other rail capacity improvements) will make the East Kent Triangle more accessible, but may lead to a focus on inward investment at the expense of indigenous investment building on the qualities that the area has to offer, including environment-led regeneration. Manston Airport could potentially act as a catalyst to regeneration, but only if its development is linked into the needs and potential of the area (e.g. to provide an access point for local business people, supported by environmental improvements, and the provision of high quality and affordable housing to support key skills and key workers).

- Sustainable agriculture is currently not making a significant contribution to the rural economy of the East Kent Triangle, although attempts are being made to add value to the rural economy through integrated rural development. There is scope to further enhance opportunities for rural diversification. A major education and branding exercise, such as 'The Organic Garden of England', would help to promote a clear and identifiable image of the area, attractive to visitors and consumers alike, but would need to be supported on the ground by support for organic markets, supply-side investment, access to the countryside where organic farming takes place so that people can view it in practice, and appreciate the wildlife and landscape benefits it has to offer. Key to this would be education for farmers and an element of under-writing to give them the confidence and security they need to invest.

- Tourism represents the key element of environment-led regeneration. There needs to be further recognition of other forms of environment-economy linkages. The Area Investment Framework, for example, outlines the right principles in terms of building regeneration and economic growth around the environmental strengths of the area. However, the action points in the AIF Action Plan do not fully reflect this principle. In Thanet, for example, there are some major infrastructure projects taking place to service industrial premises (sewerage, water supply, electricity supply, etc.), but there appears to be little thinking about environmental carrying capacity (e.g. water availability and the implications for the Stod and Stour). Other interviewees felt that many of the environment and tourism projects are 'add-ons' and that there needs to be a more fundamental underpinning of sustainable development in regeneration activities.

8.21. The challenge, therefore, is to encourage and promote the inherent qualities of the East Kent Triangle as an asset and resource that have the potential to underpin considerable economic activity, and that this must not be lost in the drive for more traditional forms of economic activity that have little specific reason to locate in the East Kent Triangle, and for which the area will be competing against other locations that in many instances may be better placed to succeed.

Portsmouth and Chichester

8.22. The coastal environment around Portsmouth and Chichester is of a high environmentally quality, with both Langstone and Chichester harbours having internationally recognised status. Parts of the built environment are also of a high quality, with the area around Portsmouth harbour in particular displaying a long history of naval activity.

8.23. The area is heavily influenced by the traditional presence of the defence industry in South Hampshire, most notably activities relating to Portsmouth Harbour. This legacy has a significant effect on the current economy of the area, with the manufacturing sector also playing a significant part. Local authorities in the case study region are trying to encourage diversification away from these two economic bases predominantly through attracting inward investors.

8.24. There have been extensive efforts made to regenerate urban areas, most notably the 'Renaissance of Portsmouth Harbour'. Equally, environmental agencies have been working hard to protect and enhance the natural assets of the area. However, whilst there is evidence of economic development initiatives capitalising on the historic built environment, there is little indication that the natural environment is considered as a valuable asset in economic regeneration terms.

8.25. The case study has highlighted a number of barriers that stand in the way of environment-led regeneration progress, as well as some opportunities to overcome them. Key barriers include:

- Poor accessibility to natural environment assets.
- Lack of awareness of the true value of the natural environment and the processes affecting it.
- High demand for development land and the consequent call for hard coastal defences are causing coastal squeeze.

8.26. The main opportunities comprise:

- Raising awareness and educating local people through site-based education facilities, greater involvement of school children and increasing access from urban areas through green links and public transport.
- Forging (greater) links and encouraging communication between environmental and economic partnerships, and developing centres of excellence (e.g. Portsmouth University).
- Recognising and promoting the area's 'cluster' of natural, historic and cultural assets as a means of encouraging visitors and inward investment, and for regenerating the former defence related industrial areas, bringing back into use derelict and contaminated land, encouraging sustainable solutions to coastal pressures (from both development, coastal erosion, and climate change) that value the natural environmental assets of the area, and increasing the awareness of this as a significant resource to the Environmental Economy.
- Encouraging green tourism as a positive outcome of environmental pressures (e.g. Hayling Island).

Environment-led Economic Development in a Market Town Context

Battle

8.27. Battle is a historic market town in East Sussex with a population of close to 6,000. Within the town there is a high quality built environment, much of which is a designated conservation area. The surrounding countryside is also environmentally outstanding - almost all of it is a designated AONB.

8.28. Battle is a vibrant market town with a good range of local services. The tourism sector is important and, locally, rates of unemployment are low.

8.29. Against the backdrop of an apparently successful economy and a high quality environment, a number of observations are made:

- Because of the importance of tourism there is a strong sense that conserving the environment is essential for economic success. Whether the reverse holds true is less clear and the nature and extent of reinvestment into the environment ought to be investigated in the context of long-term sustainability.
- There are issues surrounding career opportunities for young people. Notwithstanding current success, there is probably a need to diversify the economy

to achieve long-term sustainability in the round. Consideration ought to be given to the development of high value added jobs within the Environmental Economy.

- Local produce is a feature of economic activity in Battle. It is also a theme that is reflected in the successful LEADER+ bid. There are opportunities to develop this further and build stronger links between Battle and nearby rural businesses.
- Battle has relatively strong links to the north (Tunbridge Wells and London) but comparatively weak links to Hastings, just five miles to the south. The division appears across the spectrum of economic, social and environmental issues. This must be a concern for sustainable economic development in the future.

Petersfield

8.30. Petersfield is a historic market town in East Hampshire located on the main A3 trunk road 52 miles from London and 17 miles from Portsmouth. It is a typical market town acting as a focal point for surrounding villages. The natural and built environment in and around Petersfield is of high quality. The main open space in the town is Petersfield Heath a 90 hectare heathland dating back to the Bronze Age. The East Hampshire AONB and the South Downs are to the south of Petersfield. The economy is thriving with low rates of local unemployment and deprivation. Employment is dominated by a few large organisations but there are also a number of small businesses, a reasonably large amount of self-employment and a small but significant amount of tourism in the town.

8.31. There is evidence of the relationship between the economy and the environment through the demand for local food at the monthly farmers' market, the scale of tourist attractions based around the natural and built heritage, and the importance of the quality of life in the town for attracting inward investors and self-employment. This relationship is being further enhanced through the work of the part-time town centre manager in promoting initiatives in the town that promote the capacity of the community and through the work of the 'Petersfield First' local partnership. The local organisations are also aware of the Countryside Agency's market town toolkit to assess and improve the vitality of the town and surrounding area but need to identify funding in order to employ a co-ordinator to oversee the process.

8.32. A number of ways are suggested in which environmentally sustainable economic development could be promoted:

- The Countryside Agency's current approach to supporting towns in Hampshire do not seem to be effective at a local level although it should be acknowledged that this could be the best way of providing support in a relatively affluent part of the region.
- There is a need to promote the capacity of the community and encourage participation in local government.
- The proposals for a South Downs National Park include Petersfield within the boundary indicating the need for those with a stake in Petersfield to discuss and adopt a vision for the town that examines the settlement boundary and the amount of growth and activity that should be planned for.

- There are also opportunities for exploring and promoting local produce, tourism and inward investment.

Environment-led Economic Development in the Chilterns

8.33. The Chilterns represents one of the finest landscapes in the South East region. It stretches into the East of England region and across several county and district authorities, indicating the importance of taking an integrated and partnership approach to its future.

8.34. Perhaps surprisingly, the districts in the Chilterns appear to have a lower proportion of the total working population employed in the Environmental Economy than that of the South East as a whole. The main areas of strength lie in agriculture, forestry and tourism, as well as environment-related business services. Unemployment in the Chilterns is low compared to the UK average.

8.35. The main centres of employment are outside of the Chilterns AONB boundary, to be found in the towns of Reading, High Wycombe, Luton and Dunstable, where there is an emphasis upon the service economy, research and manufacturing – the Chilterns themselves have very restrictive planning policies and are therefore not suitable for large-scale business development. The Chilterns are also a major commuter area, with a large proportion of residents working in London. Heathrow is also easily accessible, particularly by car.

8.36. Many traditional industries, such as furniture (associated with High Wycombe) and agriculture have experienced decline in recent years, with the result that management of the land and its resources is now under some pressure. The Chilterns are an important visitor destination, although primarily for day-trips (it is estimated that nearly 52 million leisure visits are made to the Chilterns annually, primarily by local people, with nearly 75% of visits being day-trips). Walking is the most popular visitor activity, but 77% of all trips involve a car.

8.37. Many of the economic strategies of the counties within which the Chilterns can be found promote the high quality environment of the area as an attraction for inward investment. However, this is a ‘double-edged sword’ in that house prices are high compared to locations outside of the Chilterns. Whilst house prices are an indicator of the value placed on the environment of living in the Chilterns, they make it difficult for people working in lower paid jobs (including those associated with parts of the Environmental Economy, such as tourism, agriculture, forestry and conservation) to afford to live within the Chilterns.

8.38. There are various initiatives to support the Environmental Economy, such as:

- Countryside Stewardship.
- Business Link’s Farm Business Advice Service.
- Local branding of products (in its infancy), including 15 farmers markets.
- The Chilterns Woodlands Project, which aims to promote sustainable forestry.

8.39. Indirectly, projects such as the re-introduction of red kites offer opportunities to provide new attractions to support the visitor economy and conservation activities.

8.40. Challenges for environment-led economic development include:

- A lack of markets for agricultural and woodland products.
- Lack of capital funding for small-scale projects, and for producing marketable products (especially in woodland products, which used to be a mainstay of the Chilterns economy).
- Resistance amongst those living within the Chilterns (but not necessarily working there) to accept change.

8.41. Perhaps the biggest challenge, however, is the lack of awareness of the 'true' value of the Environmental Economy in maintaining the fabric and richness of the Chilterns as an attractive place in which to live, work and to visit. Many of the activities do not result in 'products' in usual economic terms, being difficult to quantify (e.g. the beauty of the landscape, the diversity of nature, the historic heritage, etc.). As mentioned above, house prices are one indicator of this value, but there is no simple economic measure. The danger of this is that such activities will be undervalued when compared to other sectors of the economy (such as industry and financial services), even though they provide an 'essential service' in maintaining the Chilterns as one of the prime locations in the South East in which to live and do business.

CONCLUSIONS FROM CASE STUDIES

8.42. In this study, we have considered two broad themes of the Environmental Economy, comprising six case studies in total, with a view to examining the scope and potential of the Environmental Economy as a vehicle for win-win outcomes which embrace both economic prosperity and environmental sustainability.

8.43. The findings of our research indicate that the two themes exhibit a significant relationship with a number of the objectives of the Regional Sustainable Development Framework[41], whilst demonstrating that there is still much work to be done in forging closer links between the Environmental Economy and sustainability objectives.

Table 8.1: Current Relationship between the Environmental Economy Themes and the South East Regional Sustainable Development Framework Objectives

Sustainable Development Objective	Growth of Environmental Technology	Environment-led Ecomonic Development
1. To ensure that everyone has the opportunity of a decent and affordable home		
2. To improve the health and well-being of the population and reduce inequalities in health	●	●

[41] South East England Regional Assembly et al (2001) A Better Quality of Life in the South East. The Regional Sustainable Development Framework

Sustainable Development Objective	Growth of Environmental Technology	Environment-led Ecomonic Development
3. To reduce poverty and social exclusion and close the gap between the most disadvantaged communities and the rest		○
4. To stimulate economic revival in priority regeneration areas		●
5. To raise educational and achievement levels across the Region and develop opportunities for everyone to acquire the skills needed to find and remain in work		
6. To reduce crime and the fear of crime		○
7. To create and sustain vibrant communities	○	●
8. To encourage the development of, and participation in, culture, sports and the arts		○
9. To improve efficiency in land use, through the re-use of previously developed land and existing buildings, and encourage urban renaissance		●
10. To reduce air pollution and ensure air quality continues to improve	●	○
11. To maintain and improve the water quality of the Region's rivers and coasts	●	○
12. To address the causes of climate change through reducing emissions of greenhouse gases	●	○
13. To conserve and enhance the Region's biodiversity	○	●
14. To protect, enhance and encourage enjoyment of the countryside		●
15. To reduce road traffic and congestion through reducing the need to travel by car and improving travel choice		○
16. To maintain, enhance and make accessible the historic environment and assets of the Region		●
17. To achieve sustainable water resources management	●	○
18. To reduce the risk of flooding that would be detrimental to public well-being, the economy and the environment		
19. To reduce waste generation and disposal, and achieve the sustainable management of waste	●	
20. To increase energy efficiency	●	
21. To increase the proportion of energy generated and consumed in the Region from renewable sources	●	
22. To ensure high and stable levels of employment so everyone can benefit from the economic growth of the Region	●	●

Sustainable Development Objective	Growth of Environmental Technology	Environment-led Ecomonic Development
23. To sustain economic growth and competitiveness, and ensure a better distribution of economic activity across the Region	●	●
24. To invest to secure our future prosperity and quality of life	●	●
25. To develop the knowledge economy by focusing on higher value, lower impact activities	●	○
Key: ● Major relationship ○ Minor relationship		

8.44. In two of our case studies, the focus was the South Coast and undoubtedly, it is this area which embraces the most deprived locations within the South East region: broad swathes of the coastal strip have been identified as priorities for regeneration in the recently published draft revised Regional Economic Strategy. Two other case studies considered market towns. Again, these are an established focus for regeneration in their own right, while the significance of their wider role in rural development is also acknowledged at both a regional and national level. These case studies contrast with that of the Chilterns, which sought to identify the value and potential of environment-led economic activity in an area that, in general economic terms, is buoyant. The final case study, looked at the theme of environmental technology, and attempted to understand what is driving the sector, and why the counties to the West of London appear to be the focus of activity in the South East.

8.45. Against this backdrop, what conclusions should we draw? Without exception, our case studies demonstrated that there is already a good deal of activity that is more-or-less consistent with the development of the Environmental Economy. In the East Kent Triangle, for example, local partners seem to be fully committed to the implementation of a green tourism strategy which recognises – and responds to – the opportunities surrounding the area's natural, historic and cultural assets. Conversely, in the market town of Petersfield, the quality of the natural and built environment is acknowledged to be a key factor in explaining the ability of the area to attract and retain inward investment.

8.46. But across all six case studies, we reached a common conclusion: although the development of the Environmental Economy is taking place, partners are not generally considering their actions strategically in these terms. Instead, partners are engaged in 'doing' economic development, or heritage-based tourism, or local produce. Seldom are these elements considered in a 'joined up' fashion that might be consistent with fully nurturing the Environmental Economy to maximum effect. The suspicion therefore is that opportunities may well be being missed. And in the context of the regional framework for sustainable development, this would seem to be sub-optimal for the South East region as a whole.

8.47. One of the great strengths of the Environmental Economy is that it is highly variable in character and form. It is, perhaps, more visible in 'nice places', but it is certainly not restricted to them. Moreover activities associated with the Environmental Economy can do much to transform degraded built and natural environments into high quality assets. Indeed, in a very real sense, the furtherance of the Environmental Economy is consistent with 're-investing in the place' and as we move – perhaps – from an economy of flows to an economy of places, this process may prove to be critical for long term economic as well as environmental well-being.

8.48. The only possible exception to this is the environmental technology sector, the development of which appears to be more closely tied to the wider economy. For this higher value-added sector, firms appear to wish to be associated with the stronger performing parts of the region, especially to the West of London, where skills, transport infrastructure, research facilities, and 'image of success' all appear to play an important role.

9. CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

Contribution of the Environmental Economy to the South East Economy

9.1. From our research, we are able to conclude that the Environmental Economy is a significant contributor to the regional economy of the South East:

- The Environmental Economy embraces a group of activities that collectively account for around 230,000 jobs in the South East region, representing 5.5% of the region's employment.
- Over a third of those employed in the Environmental Economy are contributing towards a high quality environment.
- In 2000, the Environmental Economy contributed over £7.8 billion Gross Value Added (GVA) to the South East Economy, which was equivalent to just over 6% of the total regional economy.
- The contribution of the Environmental Economy to the regional economy is similar in percentage terms to that of the West Midlands and the South West, but the total number of people employed and the absolute scale of GVA are highest in the South East.
- The Environmental Economy is larger than other sectors which have a much higher profile: financial services, for example, accounts for 138,000 jobs while mechanical engineering accounts for 51,000. The Environmental Economy contributed more to regional GVA than any other sector except financial services, and education and health.

Growth Prospects of the Environmental Economy

9.2. The Environmental Economy is not projected to grow as fast as the economy as a whole, largely because of poor prospects for agriculture and parts of the manufacturing sector. This probably masks the real growth potential of the Environmental Economy, since it is likely to be a main driver of growth within the wider economic sectors within which it lies:

- Growth prospects in primary industries and resource management are relatively weak. Employment in mineral extraction, fisheries, agriculture and forestry are all projected to decline over the next decade. However, niche activities such as organic farming, and aggregates recycling are likely to be more buoyant.
- Growth prospects in resource management are mixed. There is likely to be growth in waste recovery and recycling, and an increase in the proportion of the region's energy generated from renewable sources, since much work is required if challenging national and regional policy targets are to be met. In both fields, the region lags well behind its European counterparts. In the case of renewable energy, the South East lags behind many other UK regions suggesting that there

could be unrealised growth potential. The prospects for water resource management are less clear-cut, since a considerable amount of investment to increase efficiency and improve water quality has already taken place. However, rising consumption and the effects of climate change may mean substantial future investment is still required.

- Tourism is a major contributor to the regional economy and is predicted to continue to grow. The quality of the natural, built and historic environment helps to under-pin much of this activity.

- Another major growth area is environmental technologies, management and training. The Joint Environmental Markets Unit (JEMU) already lists 530 environmental technology firms from the South East on its database, and SEEDA believes this to be an underestimate of the true number. The new Environmental Technologies Enterprise Hub, based at Reading University, should assist with the continued growth of this sector.

- Local authorities and government agencies such as the Countryside Agency, English Nature, English Heritage, and the Environment Agency are significant employers in the field of environmental planning, regulation and management, although there is unlikely to be much growth in the numbers of people employed in this area of work.

- The voluntary sector and not-for-profit organisations, such as the National Trust, Groundwork Trusts, County Wildlife Trusts, RSPB and other environmental NGOs make a major contribution to the quality of the environment, and are significant employers in their own right. WWF, for example, has its headquarters in Godalming, Surrey, and employs 240 people in the region.

Sub-Regional Characteristics of the Environmental Economy in the South East

9.3. Different parts of the South East region have different strengths within the broadly defined Environmental Economy. Whereas many of the coastal and rural areas have well-developed tourism industries, parts of the north and west of the region have emerging expertise across the domain of environmental technology:

- The strongest growth in the Environmental Economy is in the higher value added sectors such as environmental technology, and the provision of environmental advice. The counties to the west of London, such as Berkshire, Buckinghamshire, Oxfordshire, Surrey, and northern Hampshire are particularly strong in this respect. A number of major companies working in the field are located here, such as Thames Water, AEA Technology, Babtie and JacobsGibb. There is considerable research activity in this part of the region, such as the Centre for Ecology and Hydrology in Wallingford, Oxfordshire, which amongst other things carries out studies into the effects of climate change and extreme weather conditions.

- The focus of activity in the southern counties, embracing southern Hampshire and the Isle of Wight, Kent, East and West Sussex, is more on activities that capitalise on a high quality environment, such as tourism, and primary industries such as agriculture. Here the growth potential is not so much in the individual activities, but in how they combine to provide a rich asset to support the visitor economy, and attract inward investment.

RECOMMENDATIONS

9.4. On the face of it, improving the performance of the Environmental Economy could do much to boost the performance of the region as a whole. However the Environmental Economy embraces a disparate set of activities and it is impossible to identify a common set of support measures to address their varying needs: the requirements of the embryonic environmental technology sector are, for example, quite different from those of sustainable agriculture.

9.5. What then is the logic for considering the Environmental Economy as a sector at all? In our view, the coherence lies not in the activities it embraces (i.e. the conventional definition of a sector) but in the nature of inputs and outputs. In short, there are two elements of the Environmental Economy, which were demonstrated in our case study research. For one set, the environment is an input into an economic activity (e.g. agriculture, tourism). For the other, reproducing the high quality environment is an output (e.g. environmental technology), which depends upon the right sort of economic activity to happen.

9.6. Given the disparate nature of the Environmental Economy, what are the implications for SEEDA and its partners across the South East? Two main sets of recommendations emerge from our research.

The Environmental Economy Should be Recognised and Valued as a Key Sector of the Regional Economy

9.7. The first message is that the Environmental Economy as a collection of activities that provides a significant contribution to the regional economy ought to be taken seriously. It should be a priority for the emerging local strategic partnerships and it ought to be taken into account in developing Area Investment Frameworks across the region, as an essential ingredient rather than an 'add-on'.

9.8. Although the Environmental Economy continues to develop, regional partners do not think of it as a sector in its own right, and therefore do not provide the knowledge, support and promotion that it deserves. Instead, the focus is on its component parts, such as economic regeneration, local produce, or heritage-based tourism, without properly understanding or developing the links that bind them together within the Environmental Economy. This suggests that opportunities are being missed, both within the Environmental Economy, and in the 'greening' of the wider economy. The message, therefore, is one of a group of activities all with a common factor based on the environment, whose untapped potential has yet to be fully acknowledged and realised.

9.9. Awareness and understanding of the linkages within different activities within the Environmental Economy, and with other sectors of the economy, must be improved. As has been demonstrated in both the top-down/bottom-up research, and the case study investigations, to appreciate the full value of the Environmental Economy requires an understanding of its contribution to regional quality of life well beyond traditional economic measures. Sustainable agriculture, tourism, water resource and waste management, mineral extraction, etc., all have a common factor in that the environment is integral to their decision-making. Used unsustainably, and the economic activity cannot survive. Other components of the Environmental Economy, such as environmental technology and environmental advice, can help this to happen.

9.10. All of these activities work together to provide a quality environment in which people find it a pleasure to live and work, providing the necessary foundations for business. Inward investors may or may not currently factor the environment as being high on their list of decision-making criteria, but it is likely that it would quickly become an important factor as soon as the environment within which they are investing dips below a certain quality threshold (this is one reason why people are willing to pay a significant premium to live within the Chilterns compared to less high quality surrounding areas). To dismiss the Environmental Economy as marginal to the wider economy would therefore be both risky, and short-sighted.

Table 9.1: The Environmental Economy – Strategic Recommendations

Initiative	Recommendation	Key Players
Strategic recognition	• Embrace the Environmental Economy within regional and local economic development strategies • Work with local partnerships and community based initiatives – particularly the newly emerging local strategic partnerships – to internalise the opportunities associated with the Environmental Economy within their own economic development strategies	SEEDA, local authorities, local economic partnerships
Branding and marketing	• Promote the Environmental Economy as a strength of the South East Economy • Ensure that the qualities of the Environmental Economy are featured within branding and marketing activities	SEEDA
Promote sustainable economic activity	• Within the Environmental Economy, continue to research and distinguish between those components that are 'sustainable' and those that are not • Support a shift within both the Environmental Economy and the wider economy to those activities that are environmentally sustainable • Provide advice and support to 'green' othersectors of the economy • Promote 'sustainable design' techniques within existing and new economic and mixed-use developments	SEEDA, SEERA, Govt Agencies, local authorities
Regional level intelligence	• Improve knowledge about the Environmental Economy, its opportunities and needs • Disseminate good practice backed by a database of leading examples from across the region	SEEDA
Appraisal and monitoring	• Monitor the development of the Environmental Economy • Ensure that objectives consistent with the Environmental Economy are integrated into appraisal systems of projects and programmes (e.g. AIFs)	SEEDA, local authorities, local economic partnerships

Develop a Flexible Approach that Harnesses the Strengths of Different Sectors and Locations of the Environmental Economy

9.11. The second message is that there is not – and should not – be a blue print for the manner in which efforts to support and encourage the Environmental Economy are effected, for this will depend heavily on the character of specific places, and the nature and potential of their Environmental Economy: whilst Hastings may share some similarities with Thanet, it is different from Maidstone and Oxford is different again. Likewise with different activities within the Environmental Economy as a whole. All have needs and opportunities, but the solutions need to be appropriate to their own context and terms.

9.12. Instead, SEEDA and its partners might be encouraged to put in place an over-arching framework for the development of the Environmental Economy. This should be consistent with the South East Framework for Sustainable Development but it would need to draw out more explicitly some of the potential win-win outcomes at the interface between the environment and economy. There should be scope to integrate this into project and programme appraisal systems and to disseminate examples of good and innovative practice to partners across the region.

9.13. In addition, the partnerships that are charged with nurturing the Environmental Economy in local area contexts would need to be fully ensconced in the agendas of both 'economy' and 'environment', their lexicons and both sets of surrounding institutions and funding streams. In this manner, it should be possible for the Environmental Economy to be treated in a strategic – rather than accidental – fashion and one that is fully aligned with the mainstream economic development agenda; there is a danger otherwise that the Environmental Economy is effectively the 'fall back' for struggling areas in which mainstream solutions have failed. In building a future that is both prosperous and sustainable, this is an outcome that needs to be avoided.

9.14. Within this broad approach, there are some real and practical recommendations that can be pursued that will help to harness the potential of the different sectors of the Environmental Economy. They follow two main themes.

- For those sectors where the environment is an input to economic activity (e.g. agriculture, mineral extraction, etc.), the key issue must be to ensure that environmental resources are used in a sustainable manner. Where this is not currently the case, a series of actions needs to be put in place.

- For those sectors of the Environmental Economy that have a role in maintaining and enhancing the environment in the South East, further support is required. The environment underpins many of the South East region's economic strengths and opportunities. In reproducing the scope for a high quality of life, this element of the Environmental Economy is contributing implicitly (if not explicitly) to the inward investment decisions made by companies and relocation choices made by employees. It is also contributing hugely to the quality of life of the existing populations of businesses and people alike, and generates jobs in its own right. Particularly important is securing investment in the environment where it is damaged and degraded, in order to generate better economic, environmental and social returns in the future.

9.15. Understanding the contribution – through its quality of life-related output – of the Environmental Economy to the regional economy writ large, whilst recognising the direct contribution of the Environmental Economy in terms of direct employment and wealth creation, points to some serious win-win opportunities for regional partners across the South East. Our recommendations only represent a starting point, and should be developed and built upon as understanding of the Environmental Economy continues to improve.

Table 9.2: Environmental Economy Sector Recommendations

Sector	Recommendation	Key Players
Sustainable Agriculture	Implement the recommendations of the Curry Report	DEFRA, SEEDA, agri-business, Countryside Agency, English Nature, local authorities, NFU, CLA
	Support farmers markets and local produce schemes and outlets	
	Promote sustainable agriculture flagship schemes (e.g. High Weald Land Management Initiative; Whole Farm Plans)	
	Support 'green branding' and develop unique schemes to the South East (e.g. promote Kent as the Organic Garden of England).	
	Ensure diversification proposals deliver sustainable development	
Sustainable Forestry	Promote sustainable forestry in a Regional Forestry Strategy	SEERA, SEEDA, Forestry Commission, Woodland Trust
	Promote the accreditation scheme for sustainable sources of timber and woodland products, and encourage key players to lead by example	
Sustainable Mineral Operations	Promote the use of secondary and recycled aggregates	SEERA, SEEDA, mineral operators, mineral planning authorities, construction industry
	Ensure RPG and minerals local plans promote sustainable restoration schemes providing habitat, landscape and community benefits	
Sustainable Water Management	Ensure RPG and development plans promote water efficiency, and assess water resource availability in determining type and location of development	SEERA, SE Water Resources Forum, water companies, Environment Agency, planning authorities
	Develop River Basin Management Plans as a framework to assist in delivering sustainable economic development	
Sustainable Waste Management	Introduce 'waste audits' for business and retailers	SEEDA, local authorities, waste industry, Environment Agency
	Develop market opportunities for recycled waste products and provide an advisory service	
	Support the waste hierarchy and proximity principle, and ensure that land and labour are available to support this aim	
Sustainable Energy	Develop a regional strategy for renewable energy, and promote a 'Centre of Excellence'	SEERA, SEEDA, energy developers, local authorities, research institutions
	Ensure RPG and development plans promote energy conservation, and appropriate renewable energy projects	
	Increase significantly renewable energy production, and develop markets and supply chains	
Sustainable Tourism	Promote 'sustainable tourism' through RPG, development plans, and flagship schemes (e.g. East Kent Biosphere proposal)	DEFRA, SEERA, SEEDA, Regional Tourist Board, tourism operators, Countryside Agency, English Heritage, English Nature, farming and landowner interests
	Encourage integration between tourism, farming and environmental interests to help ensure tourism enhances sustainable access, biodiversity, and landscape enhancements and landowners' income	
	Introduce and support existing tourism 'pay-back' schemes to invest to maintain high quality environments and improve poor quality environments	

Sector	Recommendation	Key Players
	Promote accreditation schemes to brand 'sustainable tourism' products and services	(e.g. NFU, CLA)
Environmental Technology	Support the continuing development of a South East Environmental Technology Sector Group	SEERA, SEEDA, Reading University, key industry players, JEMU
	Develop the Enterprise Hub at Reading University as a Centre of Excellence, and encourage satellite centres at other regional education and research establishments	
	Investigate markets and business needs in UK and overseas, and promote the strengths of the South East (water, environmental monitoring research, contaminated land and waste management, environmental consultancy)	
	Support development of other parts of the sector where less strong (air pollution control, noise and vibration control, energy management and renewable energy, cleaner technologies and processes)	
	Support commercialisation and manufacturing of environmental technologies to capitalise on the region's strong research base	
Sustainable Transport	Use RPG, RTS and RES to 'break the link' between economic growth and traffic growth, and significantly boost investment in alternatives to roads to achieve a significant modal shift to public transport, cycling and walking	Dept of Transport, SEERA, SEEDA, transport providers, highways authorities
	Discourage economic developments that are likely to increase traffic, and promote those that support alternative modes	
	Promote the development of Green Travel Plans by businesses throughout the region	
Conservation of the Natural, Historic and Built Environment	Recognise the role and economic value of the voluntary sector in maintaining a high quality environment, and provide support and include in economic development partnerships accordingly	SEERA, SEEDA, local authorities, NGOs
	Avoid development that erodes or destroys the natural, historic and built environment of the region	
	Support investment in damaged and degraded environments to improve their contribution to the economy and society	
	Recognise environmental features and attributes as having economic value, and where appropriate harness them as essential ingredients of economic regeneration	
Greening Business Behaviour	Provide advice, education and training, to improve awareness of the benefits to business of good environmental housekeeping	SEEDA, BusinessLinks, local authorities, CBI, Chambers of Commerce
	Promote environmental accreditation schemes across all sectors	
	Research the role of environmental quality as a reason for inward investment	

Land Use Consultants
SQW Limited
Cambridge Econometrics
August 2002

S:\2100\2197 SE Envt'l Economy\Documents\Final Report\Final Report (23 August 02).doc

APPENDIX 1

PROFORMA LOCAL AUTHORITY QUESTIONNAIRE

STUDY OF THE ENVIRONMENTAL SECTOR OF THE ECONOMY OF THE SOUTH EAST OF ENGLAND: LOCAL AUTHORITY PERSPECTIVES

Land Use Consultants, SQW and Cambridge Econometrics have been commissioned by SEEDA to undertake research into the economic significance of activities relating to the environment of the South East. In this context we are contacting all of the region's local authorities and we hope you will be willing and able to help by responding to the questions outlined below. The questions are intentionally broad and they are designed to provide some different perspectives on the economy-environment interface as it relates to your local authority and your local area.

Please feel free to continue your answers on a separate sheet of paper, and also to send any information that you may think is relevant to the study. Please send your response to arrive by 19 December 2001, to:

Land Use Consultants
43 Chalton Street
London
NW1 1JD

Attention of: Jane Elliott

Questionnaire

Name:	Job Title:	Name of Authority:

1. For your local authority, please indicate the number of people currently employed within the following areas:

Local Authority Activity	**Nos. (FTE) employed***
Built environment/conservation officers/archaeology	
Countryside/nature conservation	
Environmental Health	
Development Control	
Forward planning (structure/local plans/unitary development plan/minerals and waste planning)	
Grounds maintenance/landscaping services	
Tourism	
Environmental education/interpretation	
Waste management/recycling	
Building control/regulations	
LA21/community planning/sustainability	
Public transport/cycling/walking/access/rights of way	
Other (please describe)	
Total number of LA employees in the above activities	

* Full Time Equivalent

Formatted

2. What steps has your local authority taken to "green" behaviour (a) within the local authority itself and (b) in the context of the local authority's wider activities?

3. Do you have a local economic strategy? If so, is the 'Environmental Economy' (defined as activities that rely on or contribute to a high quality environment) a priority within the strategy? Are you aware of any research in this field, and if so, please would you provide details?

Deleted: ¶

¶

4. Within your district (or county), who are the largest players within the Environmental Economy (this might include firms, NGOs, agencies etc)?

5. Please describe two examples (and give contact details) of good practice in terms of activities that support the Environmental Economy within your district (or county); this might include re-use of historic buildings, projects concerned with recycling waste, environmental technology, farmers markets, etc

a)

b)

6. In your district (or county), how important do you consider the quality of the environment to be in terms of local economic performance? Please comment on the nature of this relationship. In this context, what ways is the rest of the SE similar or different from your local area?

APPENDIX 2

INWARD INVESTMENT:
REASONS FOR LOCATING IN THE SOUTH EAST

INWARD INVESTMENT IN SOUTH EAST ENGLAND

SEEDA monitors the reasons given by companies for setting-up in a particular location in the South East. Examples are given below.

Company Type	Location	Reasons for choosing location
ICT companies	Thames Valley	• Concentration of ICT companies in the area • Skills base • Presence of competitors/suppliers • Good communications (M4, Heathrow)
ICT companies	North Hampshire	• Properties cheaper than in the Thames Valley • Concentration of ICT companies • Skills base • Good communications
Pharmaceutical and biotechnology companies	Oxfordshire, Buckinghamshire, Surrey	• Concentration of similar companies
Finance/ business sector: company providing business services to the shipping industry	Guildford	• Proximity to London • Cheaper properties than in London
Environmental sector: company involved in clearing up redundant petrol stations	Thames Valley	• Needed a small office to provide back-up support to their staff who worked throughout the UK • Were able to meet their needs through a site in the Thames Valley
Environmental sector: environmental technology company	Thames Valley	• Looking for a location to expand • Skills base • Potential research and development links
Japanese hi-tech engineering company	Milton Keynes	• Looking elsewhere to expand • There needs for additional space were able to be accommodated in Milton Keynes
Swimming pool cover manufacturer	Newhaven, East Sussex	• Cheap location due to the Government Grants available • Close to clients (households with swimming pools and schools)
Customer Call Centre	Brighton	• Large workforce • Skills base
Asian company in electronics sector	Milton Keynes	• Amongst other reasons proximity to Asian companies

Source: consultation with SEEDA's inward investment team

APPENDIX 3

FUNDING PROGRAMMES TARGETED AT DEPRIVED AREAS

FUNDING PROGRAMMES TARGETED AT DEPRIVED AREAS

The following funding mechanisms all aim to improve the economic prospects of deprived areas, and offer the potential to provide integrated economic, social and environmental regeneration.

Funding Programme	Area targeted, amount of funding, details of programme
Objective 2	• Programme for the period 2000-2006, targeted at deprived areas in Thanet, Dover and Hastings worth around £22 million • The main priorities for the programme are business development and innovation, spatial development, heritage, culture and the environment, and community economic development. The programme also addresses a number of cross-cutting issues, including the environment and sustainable development, equal opportunities and the information society.
Leader +	• Programme for the period 2000-2006, targeted at rural areas with a population of between 10,000 and 100,000, worth around £30 million • The programme will provide support for enhancing the nature and cultural heritage of rural areas, for reinforcing the economic environment in order to contribute to job creation and for improving the organisational abilities of the rural community.
Interreg II	• The present round ends in December 1999 and was targeted on counties of Kent and East Sussex in a cross border programme with France. The present round included support to farm diversification and farm tourism projects. • The new Interreg II programme will build on the themes of cultural exchange, help for local communities, economic development, tourism, help for small businesses, training and education and environmental conservation.
Urban	• A proposal for a new Urban programme will focus on ten wards in the Thames Gateway area of Kent that have suffered high levels of industrial decline, unemployment and social exclusion. • Once the programme has been approved by the Commission the area can expect to receive some £7.4 million of European funding to support regeneration projects.
Rural Development Areas	• Expenditure of between £1.1 and £1.5 million per year has been provided to designated areas in Kent, East Sussex and the Isle of Wight to tackle a variety of social, economic and environmental problems

APPENDIX 4

CASE STUDY:
THE SCOPE FOR GROWTH OF ENVIRONMENTAL TECHNOLOGIES

THE SCOPE FOR GROWTH OF THE ENVIRONMENTAL TECHNOLOGY SECTOR IN THE SOUTH EAST OF ENGLAND

INTRODUCTION

Defining the Environmental Technology Sector

1. According to the Joint Environmental Markets Unit (JEMU), the Environmental Industries sector comprises[42]:

- Air Pollution Control.
- Water & Wastewater Treatment.
- Waste Management.
- Contaminated Land Remediation.
- Environmental Consulting Services.
- Environmental Monitoring and Instrumentation.
- Energy Management.
- Renewable Energy.
- Noise and Vibration Control.
- Cleaner Technologies and Processes.
- Marine Pollution Control.

2. For the purposes of this study, we focused our research on those activities that broadly correspond with those listed under 'Manufacturing of Environmental Technologies' (one of the thirteen themes identified in the top-down analysis using SIC codes in our Stage 1 Report), plus the energy sector (both energy management and renewable energy), which we were specifically asked to examine by the Steering Group. The environmental consultancy sector was specifically excluded.

Key Questions

3. Our research sought to provide answers to the following questions:

- What are the key Environmental Technology activities where the South East has a leading edge?

[42] JEMU (2002) Global Environmental Markets and the UK Environmental Industry. Opportunities to 2002.

- What is the main driving force for this leading edge (e.g. response to South East pressures; environmental regulations; incentives; growing markets in the region, elsewhere in the UK, overseas)?
- Why does there appear to be a concentration to the west of London (should future growth be concentrated here, or should it be dispersed across the region)?
- Should the South East concentrate upon those aspects of Environmental Technology where it already has a lead, or should it aim to broaden the base?
- What are the constraints to development of the sector (e.g. skills; premises; competition; etc.)?
- What support or assistance is required to develop the sector's potential?

4. A wide range of data sources were examined to build up a picture of the environmental technology sector in the South East. In addition, telephone interviews were undertaken with key players in the sector:

- Anne Johnstone, Reading University, Business Development Manager
- Ian Dwyer, Reading University, Business Development Manager, with specific responsibility for environmental technology
- Kathy Vuillaume, SEEDA representative on South East EnviroTech Business Group
- Clifford Bebb, JEMU, South East Co-ordinator
- Gary Poole, JEMU
- Keith Richards, Director of TV Energy
- Morris Alphandry, NETCEN
- Martin Gibson, ETBPP at AEA Technology
- John Kerr, Envirowise
- Barbara Moye, Thames Valley Environment Forum
- Nick Morley, Sustainable Technologies Initiative
- Marilyn Mansfield-Williams, Corporate Environmental Advisory Centre (CEAC)
- Nigel Haughton-Baker, Surrey Economic Partnership
- Simon Hewitt, Head of Waste Strategy, DEFRA
- John Hayle, Association of British Insurers (ABI)
- Merlin Hyman, Director of Environmental Industries Commission
- Douglas Robinson, Deputy Director of Environment, DTI
- Dave Foxner, South East Representative for EIC, Colts International
- Terry Clarke, GOSE
- Joanne Bennison, UK Environmental Industries Forum

THE KEY ENVIRONMENTAL TECHNOLOGY ACTIVITIES IN THE SOUTH EAST

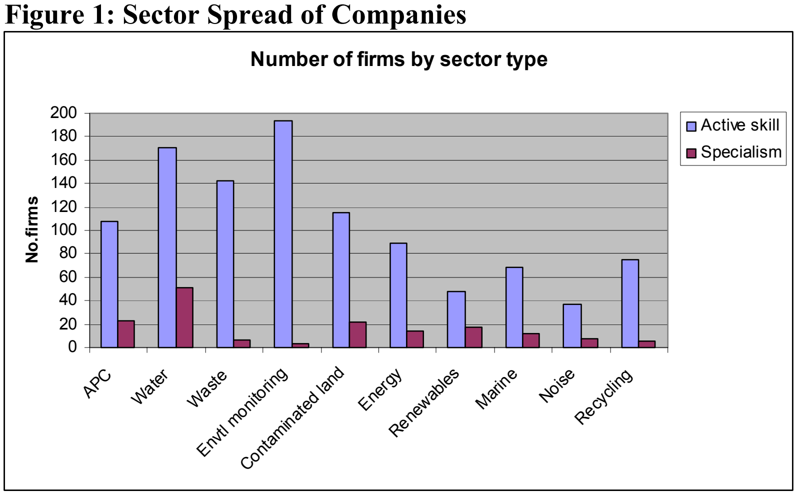
5. Quantifying the environmental technology sector is inherently difficult using standard industrial classification data. The SIC Codes do not distinguish between those technological sectors that can be considered 'environmental technology' and those that are not. For example, SIC Code 3430 relates to 'manufacture of parts for motor vehicles'. Vehicles can be extremely environmentally damaging, in terms of noise, pollution, demand for road infrastructure, etc. However, car manufacturing companies are placing considerable emphasis on developing cleaner technologies to reduce the environmental impact of traffic. So within SIC Code 3430 there will be an element of technology that should be captured within 'environmental technology'. Where this division lies is almost impossible to determine, at least within the scope of this study. We have therefore interrogated the highly detailed JEMU database for the South East region, as well as consulting the Environment Business Directory 2002 and the Environmental Industries Yearbook 2002.

JEMU Database Analysis

6. The JEMU database holds information on a total of 530 environmental technology firms in the South East region (the JEMU database is a useful source of information, although it is understood to be out-of-date due to the fast-moving nature of the industry – SEEDA maintains that they are beginning to identify many more organisations involved in the environmental technologies sector in the South East through more detailed research). Figure 1 shows the number of firms in each environmental technology sector. The first bar indicates the number of companies that offer a certain skill ('active skill'), the second shows the number of these firms that offer all sub-sectors of the skill ('specialism').

7. Environmental monitoring and analysis is carried out by almost 200 of the companies in the South East (although only three companies specialise in it). Water and wastewater treatment is the next most popular activity, practised by 169 companies, of which 51 specialise in this sector.

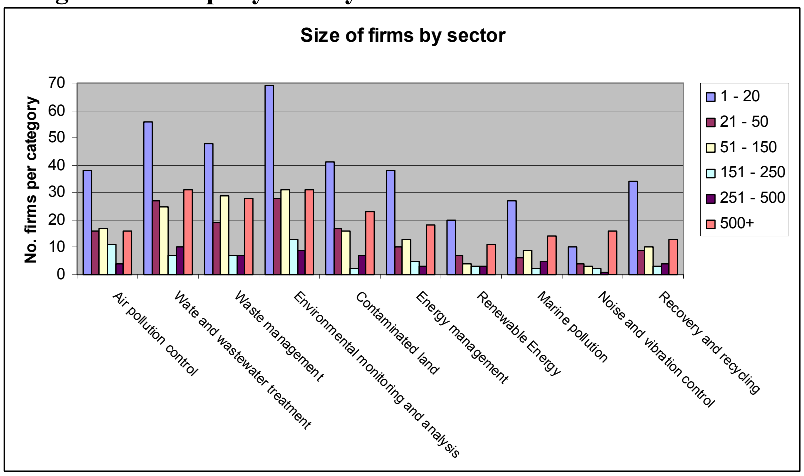
Figure 1: Sector Spread of Companies



8. Figure 2 shows the relative size of companies by sector. As previously mentioned, environmental monitoring and water treatment are the two technologies offered by the greatest numbers of firms in the South East. It is therefore not a surprise to note that the highest number of 500+ employee companies are also within these sectors. This suggests that the two skills/technologies are closely associated in the South East.

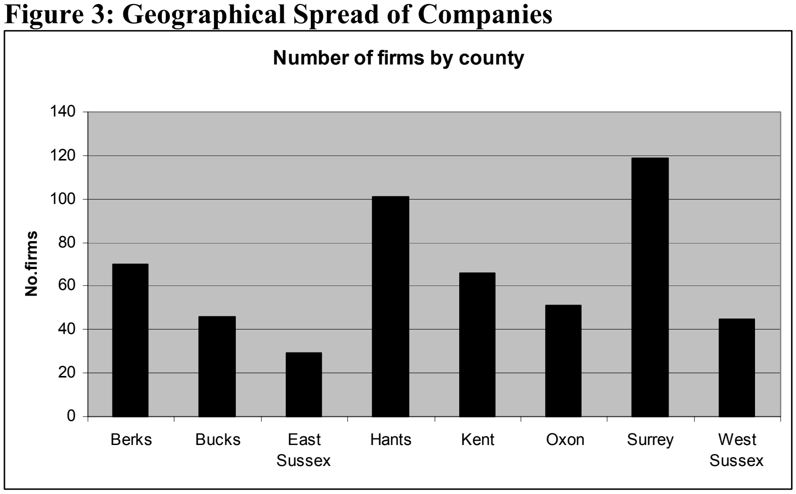
9. Figure 2 also shows the importance of SMEs in the environmental technology sector. Such firms are significant because they are often more flexible, being created or being bale to move quickly to exploit market niches and new opportunities.

Figure 2: Company Size by Environmental Sector



10. Figure 3 below shows the geographical spread of environmental technology companies on the JEMU database by county. Surrey and Hampshire have the highest numbers of firms (119 and 101 respectively). East and West Sussex, and Buckinghamshire, have the least.

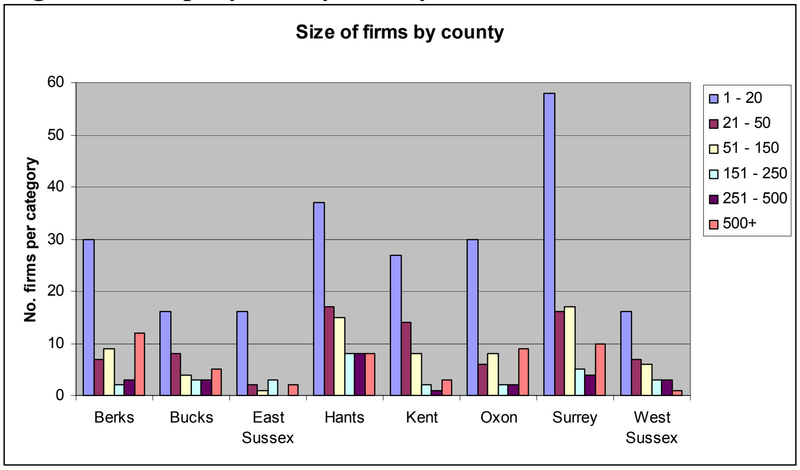
Figure 3: Geographical Spread of Companies



11. Figure 4 relates the size of companies with their locations by county. Companies of up to 20 employees are universally more proliferate across the South East (223 in

total). However, other than this similarity there are significant differences across the counties. For example in both Berkshire and Oxfordshire the second biggest category is companies of over 500 employees, whereas in West Sussex this category is the smallest.

Figure 4: Company Size by County

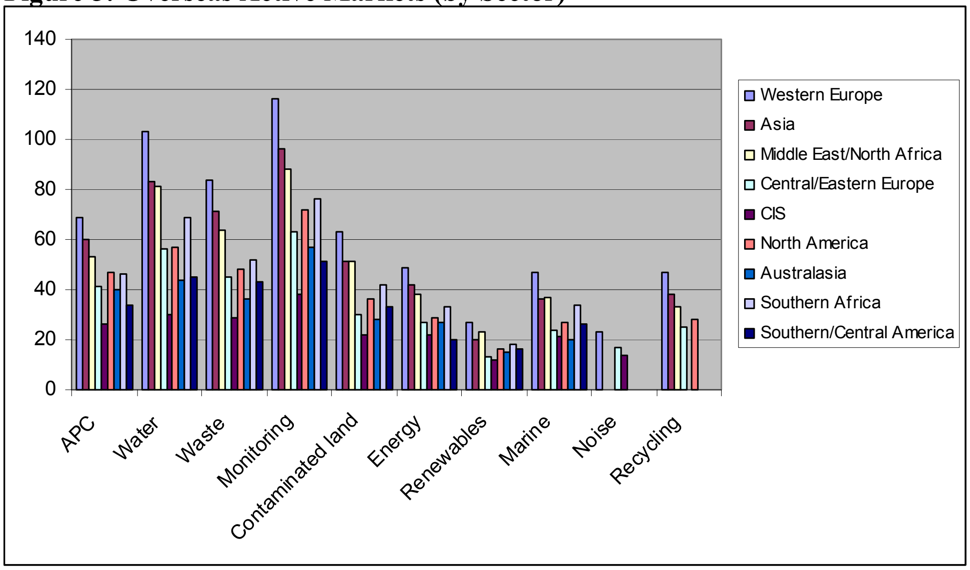


12. From Figures 3 and 4 it would appear that in terms of numbers employed, Surrey, Berkshire, Hampshire and Oxfordshire employ the most people in the Environmental Technology Sector. The issue of this geographical concentration was queried with interviewees. Few were aware of a cluster to the Environmental Technology sector. The general consensus was that the main reason is the area's general economic buoyancy, rather than any specific issues pertaining the Environmental Technology sector, although proximity to London and Heathrow were seen as being important. It was noted that:

- The west of London is the chosen location of major organisations, such as Thames Water and the Environment Agency in Reading, and the Institute of Hydrology in Wallingford (the Thames Valley is particularly strong in water related services).
- Berkshire has a high number of companies dealing with contaminated land issues (2.6% of companies, compared to 1.3% UK average, according to the Environmental Industries Yearbook).
- The area has strong energy associated businesses, such as AEA Technology, and TV Energy.
- It is the chosen location of major multi-disciplinary companies working on environmental problems, such as Babtie Group and JacobsGibb.

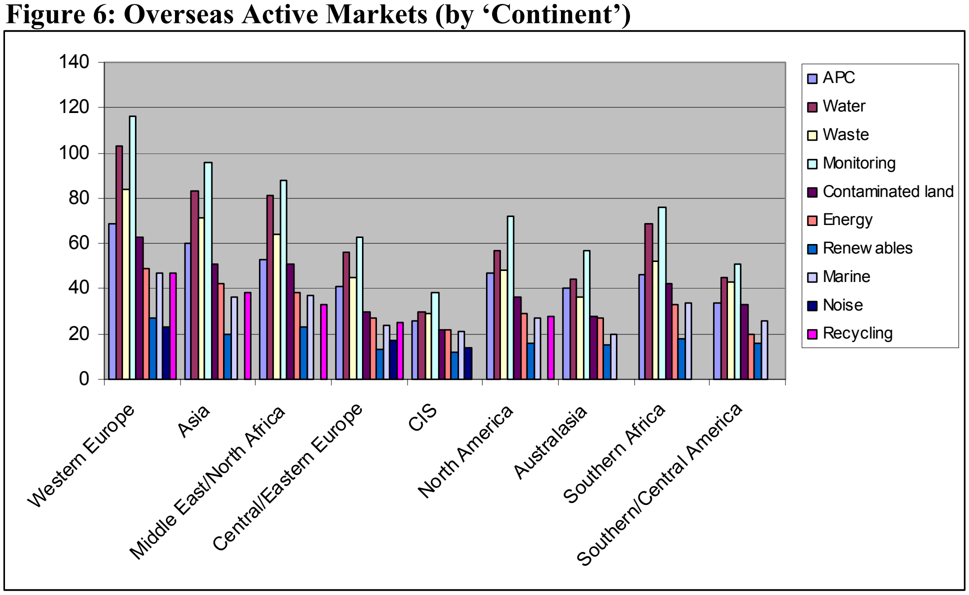
13. In terms of overseas markets, the JEMU database shows that environmental monitoring and analysis is the environmental technology in the South East most widely marketed technology overseas.

Figure 5: Overseas Active Markets (by Sector)



14. An average of 60% of South East companies are active in the Western Europe market in each of the sectors.

Figure 6: Overseas Active Markets (by 'Continent')



15. In terms of export activity types, the database reveals that there are in fact more companies involved in the export of research/know-how than of equipment (199 compared to 191). A substantial proportion of companies also have an overseas subsidiary/associate or are involved in a joint venture with an overseas firm (22% and 20% respectively).

Research Centres, Enterprise Hubs and Partnerships

Research Centres

16. JEMU lists 84 organisations (69 excluding those based in London) in its Guide to Environmental Research & Development Centres in the UK (JEMU, 2000). Of these, 18 (21% of all those listed; 26% excluding London) are listed as being in the South East of which nine are based in Reading/Berkshire, six in Oxfordshire, two in Buckinghamshire, and one in Surrey. These include organisations such as the environmental research and training organisations, such as Earthwatch and the University of Oxford Environmental Change Unit (both based in Oxford), the National Environmental Technology Centre (Abingdon), climate change (e.g. Hadley Centre for Climate Prediction and Research and in Bracknell, and the Centre for Global Atmospheric Modelling at the University of Reading), and water (e.g. Institute of Hydrology, in Wallingford, Oxfordshire).

17. Universities with good Environmental Technology research include Imperial, Brunel (Centre for Environmental Research), and Kent. There is good social policy work in this area at Brighton and Sussex (SPRU). Surrey has an excellent centre on methodological development in environmental research, including lifecycle analysis.

18. There is a strong research base in the South East, including Rutherford, Southampton and Reading. There is an equally strong service base in the region. However, these elements are not matched by an adequate manufacture base, which is a major missing piece to building the environmental technology sector. In order for the region to successfully build up a competitive edge in this sector, it must have the ability to translate innovations into products quickly, at present this is not possible.

Enterprise Hubs

19. Reading University has just been sponsored by SEEDA as an Enterprise Hub in the field of Environmental Technologies[43]. The University is particularly strong in Environmental Sciences (for which its research department has been graded 5*). The University has set up a Business 'Incubator Unit' which aims to develop links between the University and business in the fields of environmental technologies (the main focus), life sciences, ICT, and material sciences. An economic cluster in these businesses is beginning to emerge in the Thames Valley.

20. This builds upon the work of the University's Business Development Team. The main focus of this team in terms of environmental technologies has been contaminated land and land based pollution (e.g. water quality), air pollution and associated meteorology, waste disposal, and remote sensing data[44].

21. Reading University offers business the opportunity to use laboratory facilities, consulting services, joint research, student placements, business services (e.g. conference and lecture facilities), library resources, and education and training.

---

[43] Anne Johnstone, Reading University (pers. comm.)
[44] Ian Dwyer, Reading University Business Development Team (pers. comm.)

Partnerships

22. There are a number of business-orientated partnerships that are aiming to encourage sustainable practices in the region. For example, the vision of the Surrey Sustainable Business Partnership is to raise awareness of sustainability in local businesses, and encourage those businesses to be more sustainable in their operations. These partnerships act as important links between the environmental technology companies and their potential business market. The Surrey Partnership also offers help with advertising to aid environmental technology firms.

23. Currently, there is a project running called *Egeneration* which is regional in scope, but which four counties are taking responsibility for (www.egeneration.co.uk/surrey). This website includes a suppliers directory which evidently helps local companies get business. In addition, there is a 'waste exchange'. Recently, the Partnership was able to subsidise small local businesses to have a stand at a local exposition.

ENVIRONMENTAL TECHNOLOGY SECTOR IN THE SOUTH EAST BY ACTIVITY

24. The general consensus from consultees was that essentially there was little difference in the environmental technology sector between regions

Air Pollution Control

25. The South East's position in relation to London would suggest that there would be substantial activity in this sector with respect to improving air quality. However, there tends to be some proliferation in the North of England and Europe (Germany), where a lot of our competitors to South East firms are located.

26. Market leaders in the South East APC sector are:

- Colt International, Havant; APC and building services products.
- ERG, Horsham; APC and wastewater treatment.
- Beverley Gencor, Billingshurst; APC and combustion systems.
- Hamworthy, Poole; APC and combustion systems.

27. Up until several years ago, Colt put a lot of time, effort and funding into Research & Development of Air Pollution Control (APC) technologies which at the time were cutting edge, e.g. plasma destruction of pollutants. However, due to lack of Local Authority enforcement, relaxation of the regulations (EPA 1990), and market apathy, spending on this type of work was drastically cut in the late 1990s. Colt no longer conducts APC research unless the customer specifically commissions it. This is likely to be true of many APC companies in the region.

Water and Wastewater Treatment

28. The South East appears well placed to develop further in the water industry, with a significant number of companies and research institutions established west of London. As the analysis of the JEMU database indicated, this is the second largest technology

in the South East. The Environmental Yearbook registers ten out of the 34 water companies in England and Wales to be based in the South East.

Waste Management

29. Recycling practices in the South East are considered by DEFRA to be better than in any other region. There are five companies producing recycling equipment in the region (as registered in the Environment Business Directory). These are mainly in west Surrey and Hampshire. There are 18 companies registered as specialising in waste management and remediation, and a further five in solid waste treatment.

30. The management of municipal waste is relatively successfully employing technologies to enhance sustainability. The management of commercial and industrial waste is not as yet being tackled, and this will be the area requiring development.

31. Most environmental technology companies are providing 'end of pipe' or abatement technologies, largely driven by legislative requirements. Oakdene Hollins focus is mainly beyond this, on recycling, re-use or avoidance technologies, which are more sustainable.

Environmental Monitoring and Instrumentation

32. As previously seen, this is the largest of the environmental technology industries in the South East. The Environment Business Directory (EBD) shows there to be seven laboratories in the region. The water industry would also appear to be closely linked as a further ten firms are in the field of effluent monitoring.

Energy Management

33. There are four specialist energy equipment suppliers in the region who are registered in the EBD. During consultation with professionals in the industry in general, it became evident that the sector of energy management is not a hugely exploited market in the region.

Renewable Energy

34. Low representation particularly applies to the renewable energy sector. Wind energy generation for example is not really feasible due to relatively low and unreliable wind speeds. There are no wind farms in the South East, whereas there are 26 operational landfill gas projects with another 23 outlined as potential sites[45]. There is also a significant number of biomass growers, some with large estates.

35. TV Energy's director sees there to be a real opportunity in the South East to develop environmental technologies and renewable energy. There is currently a blank sheet from which to work from, allowing the strategy for development to be wholly new and innovative. Conversely, however this could also be seen as a barrier as there is next to nothing to work with.

36. The interviewee suggested that personal networks were the main driving factor in development and business location.

---

[45] ETSU (March 2002) *Renewable Energy Monitoring Database*

37. New ideas emerging from research hold much promise for the South East. The realm of hydrogen economy fuel cells and other transport fuels is a major opportunity, and one that the region is behind on but still well placed to develop. The transport issue is high on the agenda and could act as a stimulus to the environmental technology market.

Noise and Vibration Control

38. There are three companies in the region registered in the EBD.

Cleaner Technologies and Processes

39. No detailed analysis was available.

MAIN DRIVING FORCES BEHIND THE ENVIRONMENTAL TECHNOLOGY SECTOR AND PROSPECTS FOR GROWTH

40. Most Environmental Technology companies are driven by national or international issues, not regional, because their markets are national or international. There is no specific SE agenda. The key drivers[46] identified in the environmental technology and service industry are:

- Regulation.
- Reputation (stakeholder pressure).
- Liability.
- Cost savings.
- Avoidance of incidents.

41. A 2000 survey reported that regulation drives 90% of purchasers from mainstream industry to invest in environmental protection measures[4]. It is therefore not surprising that those countries where environmental legislation has been historically strong now have the most competitive environmental technology industries. For example, Germany holds 11% of the world market share of the environmental sector, which can be primarily attributed to stringent environmental policy directives leading innovation.

42. Within the UK, regulation is increasingly becoming locally based and the responsibility of local authorities. It is possible that SEEDA could play a role in encouraging consistency, which is arguably being eroded through this shift in focus.

43. With the public at large and commerce recognising the impact of their activities on the environment, the relevance of environmental issues in business activities is climbing the priority ladder. Companies are now beginning to see taking positive action in the environmental field can be a profitable marketing tool (backed by the growth in ethical investments). A company's environmental record is increasingly forming part of its corporate image, with public concern fuelling stakeholder pressure. In addition, new

---

[46] Waters J (ERM), *Speech at Foundation for Science and Technology Conference 08/02/00*

guidelines on socially responsible investment produced by the Association of British Insurers (ABI) encourage companies to put systems in place to minimise environmental risks, as well as have procedures in place to monitor these risks, which should in theory produce growth in the demand for environmental technologies. Interestingly, the ABI's monitoring of the largest firms confirmed the majority had acknowledged the guidelines in their annual reports. The new guidelines also act as a marketing opportunity for those companies to if they are doing particularly well in managing, controlling and monitoring environmental risks.

44. The third main driver is cost savings. Waste minimisation and cleaner technologies are now producing major cost savings and increasing commercial competitiveness. It is possible that the consultancy and service industries that are currently producing these cost savings for businesses will encourage the use of environmental technologies to further such savings, and therefore create further markets for the environmental technology sector. Moreover, this development could also create opportunities for partnerships between service and technology providers, which would help produce the larger companies needed in the UK to conquer the export.

45. Some research (by others) is going on but only in small measures in the Air Pollution Control sector. The main driver is competition. A so far limited market provides limited opportunities therefore suppliers tend to be conservative in their ideas. Existing technologies tend to be re-worked and developed rather than radical new systems being brought in.

45. The sectors with the best prospects in the South East are almost certainly wastewater, land remediation and emissions monitoring. Due to uncertain market prospects for the APC sector, companies can only respond to demand using growth by acquisition and merger, which is short term at best, and may even take some companies out of the South East (Dave Foxner).

Overseas Markets

46. JEMU's report on 'Global Environmental Markets and the UK Environmental Industry: Opportunities to 2010' (JEMU, 2002) looks at potential export markets. It concludes that:

- The world market for environmental goods and services is currently valued at US$515 billion (equivalent in size to economic sectors such as pharmaceuticals or aerospace) and is anticipated to grow by 3% per annum over the next decade.
- 'Developed' countries account for 85% of the world markets, but here rates of growth are likely to be lower than the 1990s as markets mature – although much investment has already taken place to meet environmental regulations, new opportunities will arise as new legislation and issues emerge.
- Higher growth rates in developed countries are forecast in areas such as cleaner technologies and processes, renewable energy, waste management, and environmental consulting, driven by:
  - The need for a fundamental 'step change' in resource productivity in order to address global environmental issues such as climate change, resource depletion, and waste generation.

- Growing use of ‘economic instruments’ as tools of environmental policy to increase the costs of poor environmental performance and to strengthen the financial incentives for environmental improvements.
- Further development of environmental regulations.
- The shift in policy towards ‘’integrated’ pollution control techniques, rather than relying on ‘end-of-pipe’ solutions.
- Increasing consumer and investor expectation for companies to adopt higher standards of environmental performance.

- ‘Developing’ regions such as Central and Eastern Europe, the Commonwealth of Independent States (CIS), South East Asia, China and Latin America will see high rates of growth, particularly in areas such as water and wastewater treatment, waste management, air pollution control and environmental monitoring and instrumentation (and to a lesser extent cleaner technologies, renewable energy, contaminated land remediation and environmental consultancy), driven by:
  - Long-term economic development, industrialisation and urbanisation.
  - Massive investment to improve environmental infrastructures such as water and waste management and to improve air quality to address health impacts of pollution.
  - The need to protect scarce resources such as water, land and forestry.
  - The need to address the legacies of pollution and related health impacts in regions such as Central and Eastern Europe and the CIS.
  - Growing recognition of the way poor environmental quality can hinder long-term economic growth and quality of life, and also awareness of the importance of a high quality environment to industries such as tourism.
  - Increasing development and enforcement of environmental regulations.
  - Increasing presence of multi-national corporations and their growing commitment to adopting global standards of environmental performance.
- The world’s environmental industry is adapting to these market trends by:
  - Increasing overseas activity, particularly in developing countries.
  - Very large international companies are emerging and providing environmental services and technologies on a global basis, and will become increasingly dominant in world markets as the environmental industry continues to consolidate.
- Smaller suppliers of innovative, niche technologies and services will continue to have considerable success in overseas markets.
- Indigenous suppliers in developing countries will strengthen rapidly, often in partnership with leading Western suppliers, meaning that UK suppliers need to establish close links with indigenous suppliers, and also consider moving up the ‘value chain’ away from higher bulk, lower value equipment.
- Leading suppliers are increasingly providing ‘complete solutions’ rather than just supplying the technologies, meaning the importance of applications expertise is increasing.

- Major environmental infrastructure projects (e.g. water and waste management) are increasingly characterised by full or partial privatisation, with long-term contracts to 'build-own-operate' (BOO), which has major implications for the way that goods services are delivered.

47. For the UK, the JEMU report concludes that it is best placed to capitalise on overseas markets in those areas where it is already active, and where it is traditionally strong.

Prospects for UK Environmental Industries in Overseas Markets

Best Prospects	Good Prospects	Medium Prospects	Poor Prospects
• Water and wastewater treatment • Environmental consulting services	• Air pollution control • Environmental monitoring and instrumentation • Renewable energy	• Waste management • Marine pollution control • Cleaner technologies and processes	• Contaminated land remediation • Noise and vibration control • Energy management

48. There is no reason to believe that the environmental industries of the South East are any different than the overall national picture.

CONSTRAINTS/BARRIERS

49. There are a number of barriers to UK success were suggested by interviewees and the literature reviews:

- As previously mentioned, the majority of leading companies in the ET sector in the UK are SMEs, whose needs and abilities to develop and exploit opportunities are very different from the larger companies which have their own resources and export facilities[47]. Therefore the UK is not well-placed to automatically export environmental innovations.

- Funding opportunities exist at a national and European level, however awareness and ability to exploit these possibilities is not high.

- Training could pose a possible barrier to the South East fully engaging in new innovations. Environmental professionals need to have a wide range of skills and knowledge in order to approach problems with the 'bigger picture' in mind, however, only by ensuring everyone e.g. engineers have sufficient environmental training to integrate environmental considerations into their jobs will the full potential be realised[48]. SEEDA could certainly

[47] Lord Lewis of Newham (President of EIC), *Speech at Foundation for Science and Technology Conference (08/02/00)*
[48] Baxter. M (2001) *Incentives for Environmental Improvement on EIC Guide Online*

- There has been a history in the UK of environmental legislation being slow to materialise, this in effect has prevented the fostering of an innovative atmosphere and could be partly blamed for the UK lagging behind in the industry.

- Most Environmental Technology companies would say that failure to implement existing legislation is the biggest constraint on their growth.

- As previously mentioned, the main constraints are market reluctance and lack of governmental pressure. Skills are specialist but can be found as long as Universities are allowed the funding to continue producing the chemical & mechanical engineers required. Competition will always be there as long as it is not government endorsed, such as the BioWise initiative.

- Universities are only likely to court the more promising sectors already mentioned, such as wastewater. None in the South East appear to be undertaking major research projects in the field of APC. However, an environmental centre, based at the University of Surrey, Guildford, complete environmental remits including a specialisation in product / process life cycle analysis.

OPPORTUNITIES

50. A number of opportunities and suggestions that have emerged from this research:

- The production of European legislation in the form of directives such as the Water Framework Directive offer major opportunities for innovative technologies to meet new demands on both a national and European market.

- Countries looking for accession to the EU have also opened up opportunities for UK industries abroad. Hungary, Czech Republic and Slovenia for example are currently applying for EU membership, which is the main driver for environmental initiatives in these countries at present[49].

- The national level of support for British environmental technology firms must be comparable to that provided by the UK's major competitor countries. However, there still remains a lot that could be done at the regional level to cultivate progress.

- Education of the public and raising awareness generally can only benefit the industry. However, whilst the diversity of the environmental industry is a strength, it also creates problems in cohesively promoting the commercial benefit of its activities for the UK. The Environmental Industries Commission works at a national scale to make the industry more accessible. At the regional level, this work can be added to by local knowledge.

- Much of mainstream industry still needs to be convinced of the benefits of environmental technologies and practices. SEEDA already plays a part in this through local economic partnerships and sustainable business environment forums. However, in addition to funding and encouraging their existence, SEEDA could

---

[49] Peter Smith (2001) *The Right Environment for Business on EIC Guide Online*

also promote a more consistent and regional approach in co-ordinating these groups, which could provide an identity to which businesses might aspire.

- Encouraging partnerships between higher education establishments and local environmental technology firms is already taking place in the South East. The recent Enterprise Hub creation at Reading University is evidence that this approach is being supported both by SEEDA and the local industry. Further encouragement of this type of collaboration can be used elsewhere. For example, in Surrey there are current discussions about a possible Gateway hub that would focus on encouraging rural economic development including the employment of environmental technologies.

- It is generally accepted that the UK has missed out on a large chunk of the industry in the last decade. However, more fundamental changes in attitudes and consequently the environmental industry are now taking place, which the UK should now be aiming to benefit from. Technology such as fuel cells is one such example where the UK is well placed to capitalise. The South East is particularly well placed, both in current research and the transport pressures on the region. These type of 'step-change' technologies are produced by and create lifestyle changes. As the South East promotes itself as a 'world class region', these types of technologies could be integrated into this image.

- JEMU's remit is to look at the industry on a national level. They are keen to use regional and more local knowledge in order to supply more tailored advice and aid, and they are looking to the RDAs to provide this.

- The Environmental Industries Forum deals specifically with the North East, and is associated with the One North East. Together with One North East, EIF have published a report (by ERM) on environmental (technology) companies in the region. In addition, EIF have mapped environmental technology companies in the region over the past 2 years to help in their work. The same type of partnership organisation would be of benefit in the South East region.

- Further support for a network of Environmental Technology Enterprise Hubs could be provided. For example, Surrey University has been considering the possibility of an environmental technology hub, although there are no such plans at present (there is currently an enterprise hub set up through Leatherhead Foods, Surrey University and Royal Holloway University which focuses on ICT, media, telecommunications, and food/biotechnology).

- The growth in awareness and consumer demand for ethical products represents an opportunity to be exploited in the affluent South East. The ABI has issued investors with social responsibility guidelines asking companies to identify major social, environmental and ethical risks in response to changes brought about by the new pension regulations. The guidelines were conceived as a way of implementing such changes by putting the responsibility onto companies themselves. The ABI's monitoring of the largest firms confirmed the majority had acknowledged the guidelines in their annual reports.

OTHER SUPPORT AND ASSISTANCE NEEDED TO DEVELOP THE POTENTIAL OF THE ENVIRONMENTAL TECHNOLOGY SECTOR

51. There is a lack of incentive for business to use environmental technologies (and particularly Air Pollution Control) because of the lack of financial incentive from the government, which does not financially support or provide incentives for compliance with regulations or standards that should already be met. In addition, local authorities are inconsistent in their enforcement of regulations.

52. It was suggested that a form of accreditation ought to be issued to reputable companies to allow them to market & trade on the back of this, and also to increase pressure on the local authorities to enforce regulations more rigorously.

53. Funding is an area that would greatly enhance the possibilities in the region's renewable sector. Capital support grants, DTI/NFFO funding and regional funding through SEEDA are all of great use.

54. It was suggested by one interviewee that the environmental technology industry in the South East should not be seen as a special sector, but should take on a more ordinary reputation or guise. In order for uptake and healthy growth to occur the business (and products) need to be seen as the natural and normal choice. Standard grants need to apply, and an easy method of setting up businesses available.

55. Greater connection between government rhetoric and action on the ground would aid the sector. There is also a need to facilitate joined-up government to avoid duplication and confusion.

APPENDIX 5

CASE STUDY: ENVIRONMENT-LED ECONOMIC DEVELOPMENT - MARKET TOWNS

ENVIRONMENT-LED ECONOMIC DEVELOPMENT - MARKET TOWNS

INTRODUCTION

1. Research by the Countryside Agency[50] on the relationship between market towns and rural areas has established that market towns play a pivotal role in providing essential services for rural communities and concluded that there is a need to encourage joint working between urban and rural areas to develop policy and deliver services. This case study examines to what extent and in what ways the environment is being used as a focus for regeneration in the market towns of the South East using Petersfield and Battle as case studies.

2. Market Towns are defined by the Countryside Agency as towns that have the capacity to act as a focal point for trade and services for a rural hinterland. The term covers towns with a wide variety of backgrounds including seaside resorts, fishing ports, mining and manufacturing towns. Broadly speaking market towns have populations of between 2,000 and 20,000.

BATTLE

Introduction

3. With a population of close to 6,000, Battle is an historic market town in East Sussex: it occupies the site of William the Conqueror's defeat of the Saxons in 1066. Battle is located about 60 miles from central London, 50 miles from Gatwick Airport, 45 miles from Dover and 5 miles from Hastings. Both the town and its immediate hinterland can claim a high quality built and natural environment, and a distinctive economic structure. Battle is part of the East Sussex Rural Priority Area – a designation that has been in place since the early 1990s – and is now part of a successful LEADER+ bid and a beneficiary of SEEDA's market towns programme. It has benefited from projects funded through the INTERREG Programme and English Heritage has also supported a number of projects concerned with the built environment. Thus Battle has been (and is) a recipient of a range of regeneration support, although much has been quite modest in scale. In principle therefore, Battle should provide useful insights into (a) the nature of the relationship between the economy and a high quality environment in a South East market towns context, and (b) the extent to which this has been (and is being) actively harnessed and nurtured as a focus for sustainable economic development and regeneration.

4. In this short case study, we attempt to provide some insights into some of these issues. Our observations are based on a review of web sites and relevant documentation including the preliminary findings from the Battle market town health check, the successful Wealden and Rother Rural Renewal LEADER+ bid and the mid term evaluation of the East Sussex Rural Priority Area. We have also benefited from a small number of consultations with local partners, for which we are grateful.

---

[50] The Countryside Agency, 2002, *Urban/Rural Interdependency,* Research note issue CRN 46

The Environmental Characteristics of Battle and its Hinterland

5. The historic centre of Battle consists of the High Street and the town end of Mount Street. It has been designated as a conservation area, which indicates the high quality of the built environment. Within the town, there are a number of listed heritage buildings. Battle Abbey – probably the most distinctive building and one of the few stone buildings in Battle – is owned and administered by English Heritage.

6. Consultations undertaken as part of the market town health check identified two main townscapes within Battle which might be in need of improvement: the area around the Market Square was considered to be of a lower quality than the rest of Battle while the approach to Battle Station (which contains commercial buildings) was also thought to need some re-investment.

7. In terms of the natural environment, the countryside surrounding Battle is of a very high environmental quality. Almost all of it falls within the High Weald Area of Outstanding Natural Beauty (AONB). It is characterised by ridges and valleys with large areas of semi-natural woodland, irregular small fields and hedges.

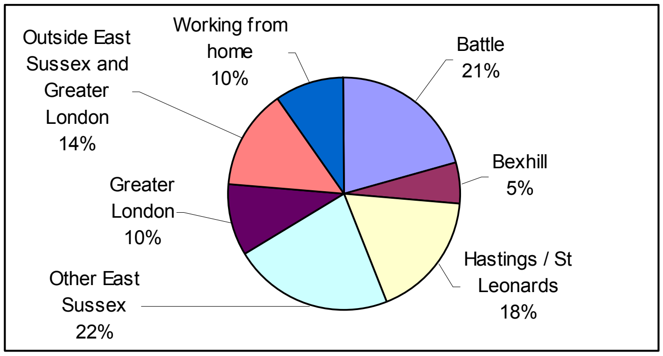
The Economy of Battle and its Hinterland

8. On the face of it, Battle is a thriving market town with a good range of shops and services, and very low rates of unemployment (2% in 2001). The economy is dominated by SMEs (there are only five private sector firms within the town that employ more than 50 people) and people working from home. Notwithstanding the lack of broadband, it is thought that within Battle there may be a fair number of small ICT service companies. Although individually small in scale, these could be important wealth generators for the town.

9. Tourism – and activities related to it – is a major employment sector within Battle. A recent visitor survey suggested that close to a million people visit Hastings and Rother each year; of these, 17% visit Battle. The town's tourist information centre is used by 80,000 people annually and in surveys, the majority of visitors express satisfaction with the quality of the tourism "offer": restaurants, etc. are all rated highly. Tourism within Battle is considered to be relatively robust: as an urban destination, it stood up well in the context of FMD. And another important feature of tourism within Battle is its comparative lack of seasonality; this distinguishes it from a number of nearby destinations.

10. Another feature of the economy of Battle is especially worthy of comment. In a recent household survey, respondents were asked to indicate their main place of employment, training or study. The results are presented in Figure 1 below.

Figure 1 - Residents of Battle: Main Place of Employment, Training or Study



(Source: Battle Partnership)

11. From this graph, it is apparent that:

- If we include those who work from home, almost a third of Battle residents work or study within the town, suggesting that Battle is an important focus for employment in its own right: it is not therefore a dormitory settlement.
- Hastings is a large town which is located within five miles of Battle, yet fewer than a fifth of respondents work or study there: the level of interconnectivity between Battle and Hastings seems very limited
- Conversely 10% of respondents work or study in London: this figure seems high given the length of the commute (1.5 hours to Charing Cross).

12. The suggestion then is that Battle has a dynamism of its own as an employment centre. But it is also characterised by a significant proportion of people commuting long distances to work: London features within the data, but Tunbridge Wells is also likely to be a significant destination (accounting for a high proportion of those working outside East Sussex and Greater London). Conversely the level of connectivity with the adjacent coastal towns is lower than we might expect.

The Relationship Between the Environment and the Economy

13. What, then, of the relationship between the environment and the economy in Battle? Evidence suggests a high level of interdependency, both now and in the past.

- *tourism* is a major employment sector within Battle and the tourism "offer" is premised on the attributes of the built and natural environments; some specific examples are provided in Table 1.

Table 1: Tourist Attractions in and around Battle

Attraction	Location	Description
Friar House	Battle	A house standing as it would have done at the outbreak of the British Civil War. It includes a working pottery.
Almonry & Town Model	Battle	The 15th Century Almonry building (also the Town Hall) set within gardens. The Town model provides a comprehensive history of the Town and its buildings.
1066 Country Walk	Sussex	31 mile walk between Pevensey and Rye via Battle. The walk follows much of the route taken by William the Conqueror and his troops.
Battle Abbey	Battle	Built by William the Conqueror to commemorate his victory over Harold at the Battle of Hastings in 1066. Battle Abbey is one of English Heritage's top three visitor attractions and it brings a large number of visitors to the town
Battle Museum of Local History	Battle	Small display of local artefacts including a Bayeux Tapestry print; the museum has received lottery funding to upgrade its premises
Buckleys Yesterday's World	Battle	Discover what life was like from the 1850's onwards, experience sights, sounds and smell of a bygone age.
Sedlecombe Vineyards	Nr. Robertsbridge	Organic vineyard

- *Local produce* is sold at a monthly farmers' market, which is held at Abbey Green – the area in front of the Battle Abbey. Shops on Battle High Street also sell local produce. In addition, a local producer consortium has recently been established to consider local production and branding issues. This all suggests an important link between the market town and its rural hinterland.

- In terms of *minerals,* the gypsum mines at Mountfield (immediately to the north of Battle) have been a major source of local employment. In the past, they employed as many as 650 people; the figure is now thought to be 120. This is still significant in the context of a predominantly rural economy.

- In the context of a high quality natural and built environment, Battle can provide a high quality of life and this in turn has prompted *inward investment* enquiries. However there has been some difficulty finding sites and premises to accommodate inward investors (and expanding indigenous businesses) and as a result, the economic potential surrounding inward investment may not have been fully realised. In the context of an economy that recognises the case for diversification, this may be a concern.

Intervention Mechanisms and Partnerships

14. Battle is a focus for various regeneration partnerships. Two partnerships and their strategies are outlined below.

Battle Partnership

15. The constitution of the Battle Partnership states that the Partnership is an unincorporated association of bodies representing the business community and other organisations in Battle and district. Its members include: the local Chamber of Commerce, local authorities (from Battle Town Council to East Sussex County Council), English Heritage, Sussex Police, the primary care group and Battle and District Council for Voluntary Services. The objective of the Partnership is to promote "*the economic and community regeneration of the town of Battle and District, including the enhancement of its historical and architectural heritage and to ensure the social well-being of its residents*". Thus the relationship between the economy and the environment is implicit within its constitution, as is a close relationship between the market town and the surrounding villages.

16. The Battle Partnership has successfully applied for INTERREG II funding and is using this to address the landscaping of the Abbey Green, to create a Town Trail, and to provide a new bus shelter at the station. Arguably all of these projects are consistent with establishing win-win solutions at the interface between the economy and the environment.

17. The Battle Partnership is also overseeing the delivery of a £240k Market Towns Programme, which is funded by SEEDA. It is currently completing a "Health Check" which focuses on environmental, economic and community/social issues and involves a good deal of local consultation. Once the health check is place, projects will be identified and delivered. The action planning process is underway.

Wealden and Rother Rural Renewal Local Action Group: Creating a Sustainable Balance (LEADER+)

18. Based around the pre-existing East Sussex Rural Priority Area – which includes Battle and the surrounding countryside – the Wealden and Rother Rural Renewal Local Action Group has bid successfully for funding under LEADER+, one of the European Commission's community initiatives; the total value of the six-year programme is £3.8m of which £1.7m derives from Europe. Executive members of the LEADER+ partnership include representatives from the district and parish councils, the Sussex Rural Community Council, the Country Landowners Association, National Farmers Union and the community/voluntary sector.

19. The overall aim of the strategy is to "*create a balance between maintaining the exceptional natural environment and achieving sustainable economic growth*". From this, two key objectives are identified: assisting the development of the rural economy in a way that makes best use of its natural and cultural resources; and providing opportunities for young people and those that have been affected by rural restructuring that will encourage them to remain and participate in the local rural economy.

20. Following consultation, the intention is now to bring projects forward under three key headings:

- Maximising human and cultural resources – and a theme within this is involving young people in the nature and diversity of their local area.

- Transferability of skills and enterprise development – some consideration is being given to business accommodation in Battle, to developing new approaches to marketing local products and to developing an alternative energy centre (at Rye).

- Investment in local products and landscape – projects will retain and develop local products so that they are available to local people and also to visitors.

Developing the Environmental Economy in and around Battle

21. On the basis of what we know about the nature of the environment and the economy in and around Battle and the partnership structures that are now in place, what further opportunities and issues might be considered in striving towards win-win outcomes of environmentally sustainable economic development over the long term? Based around our wider study of the Environmental Economy of the South East, we make a number of suggestions and observations, all of which could be investigated further.

- The aims and objectives of both the Battle Partnership and the Wealden and Rother Rural Renewal Group seem to encompass many aspects of the relationship between the environment and the economy in Battle and the surrounding area[51]. In both cases, this relationship will need to be taken forward into project design, appraisal, delivery and monitoring. Partners will need to avoid the danger of losing the synergy as the focus shifts from strategy to delivery.

- On the basis of travel to work patterns, external linkages seem to be primarily to the north: London and Tunbridge Wells have been highlighted specifically. It may be that the quality of the environment the key factor in encouraging in-migration and out-commuting and/or working from home. However this is contributing to growing concerns about affordable housing – particularly for young people and particularly in the villages surrounding Battle. The suggestion is that local people are being displaced and many are moving to Hastings which – although geographically proximate – is culturally quite distinctive. The issue of affordability in a high quality environment is a growing concern – and not one that is unique to Battle.

- There seems to be some recognition of the need to develop a greater range of higher value added activity within the town and the surrounding area. Inward investment could be a route forward – and as a response to the quality of the environment, it is one part of the Environmental Economy – but to date, opportunities have been difficult to realise because of a shortage of appropriate sites and premises. A number of sites have been allocated on the outskirts of Battle, but these will take time to come on stream.

- Sustaining the environment in Battle and sustaining the economy may actually be one and the same thing: tourism will not happen in a degraded environment and neither will in-migration. But are environmental and economic regeneration occurring on parallel paths, or are attempts being made to achieve both

---

[51] Although the overall aim for the LEADER+ Programme could be seen in terms of a trade-off between the two, much of the rest of the document seems to positively encourage meaningful synergies

simultaneously? Evidence suggests a mixture of both. It may be that more could be done to proactively harness the interconnections.

PETERSFIELD

22. Petersfield is a historic market town in East Hampshire originally built as a Norman 'new town' at the end of the 11th Century. The main square provides an attractive focal point. At its centre stands the statue of King William III and the impressive Church of St. Peter, which dates back to 1120 and retains many original features. Petersfield is located on the main A3 trunk road from London to Portsmouth, being 52 miles from London and 17 miles from Portsmouth. The town is also connected by main road to Aldershot, Chichester, Famham, Southampton and Winchester. By rail Petersfield is 70 minutes from London and 30 minutes from Portsmouth. Petersfield has a population of about 13,000 and covers an area of 2,771 acres.

23. Petersfield is a typical market town acting as a focal point for surrounding villages. There is an attractive natural and built environment both within the town and in the surrounding hinterland and there is evidence of ways in Petersfield in which the environment is being used for regeneration. In this case study we firstly, present a summary of the environment and economic characteristics of Petersfield. This is followed by a discussion of mechanisms through which the environment is being used for regeneration and a consideration of the potential for developing this form of regeneration further in the future in Petersfield.

24. Our research has involved a review of web sites and consultation with national and regional organisations including the Countryside Agency, SEEDA and Action for Market Towns as well as local organisations including Hampshire County Council, East Hampshire District Council and Petersfield Town Council, Petersfield Town Centre Manager and the local Petersfield First Partnership. Information on the economy, environment and ways in which the environment is being used for regeneration has been obtained.

The Environmental Characteristics of Petersfield and its Hinterland

25. The policies of the Town and District Council are to encourage development that retains the historic character of the town. Within the town, there are a number of listed heritage buildings including St. Peter's Church. Consultations with local partners identified three distinctive shopping areas in the town: the thriving Rams Walk shopping mall and the struggling high street and older shopping area. The identification of areas which are of lower quality than the rest of the town centre highlights the need for some regeneration.

26. The Town Council owns and manages all the open space within the town including three sports grounds and six recreation grounds/open spaces. The main open space is Petersfield Heath, which is a 90 hectare heathland half a mile from the town centre. The Heath dates back to the Bronze Age and is home to one of the most important groups of burial mounds in Britain. Petersfield Heath is a popular recreation area for the local people and visitors. The Heath is widely used for walking and picnicking, the boating pond hires out canoes and rowing boats and fishing is very popular. There is a children's play area, an outdoor cafe, public toilets and car parking space. A

recent addition to the Heath is the millennium path, which has been laid around most of the lake to enable easier wheelchair and pushchair access to the Heath. The Heath plays host to the Centuries old Taro fair every October and there are plans to use the Heath for this years Jubilee celebrations.

27. The area surrounding Petersfield is rural consisting of villages, isolated houses, private land, forestry and a small amount of agricultural land. The surrounding area, particularly the South Downs, are popular for outdoor based recreation and tourism particularly walking and cycling. There are plans for the designation of the South Downs with National Park status and Petersfield is within the proposed boundary.

28. To the south of Petersfield is the Queen Elizabeth Country Park, which forms part of the South Downs and is in the East Hampshire Area of Outstanding Natural Beauty (AONB). The Park covers an area of 1,400 acres and of particular note is home to 38 species of butterfly and 12 species of wild orchid. A large area of the park is designated as a Site of Special Scientific Interest and there are a number of Roman and Iron Age sites in the park, which are preserved as Scheduled Ancient Monuments.

29. The East Hampshire AONB stretches from Winchester to Petersfield and from Hambledon in the south to Selbourne in the north, an area of 391 square kilometres. The East Hampshire Hangers landscape, an assemblage of woodland and other habitats that cling to the steeps slopes of the chalk and upper greensands scarps around Selbourne, lies within the AONB. The landscape has important historical connections with the 18th Century naturalist Gilbert White, and the poet Edward Thomas. The Hangers are of international importance for their ecology and safeguarding this for the future generations is of paramount importance. Many of the woods within the AONB have been designated Sites of Special Scientific Interest (SSSI) or are Local Nature Reserves.

30. The East Hampshire Hangers Project was set up in response to concern at the deterioration of the Hanger landscape and its habitats through the decline in management. Loss of markets for small woodland produce, particularly hazel coppice, coupled with the inaccessibility of many of the woods, has led to their becoming uneconomic to manage. A project Officer was appointed in 1985 to assist the Hanger owners with the conservation and regeneration of the woodlands. The project was funded by East Hampshire District Council, Hampshire County Council and the Countryside Commission for a period of three years, later extended to five. The project showed that conservation and small-scale forestry could go hand-in-hand and that income from forest produce together with grant-aid can support the continued management of the landscape. The project ended in March 1990, however, the work encouraged and developed by the Project Officer, has been continued by woodland owners who individually and collectively are now promoting sympathetic management. By joint effort, the woodland owners can enhance their opportunities to take advantage of the resources and markets necessary for the long-term well being of the Hangers.

The Economic Characteristics of Petersfield and its Hinterland

31. Petersfield is a thriving market town with very low rates of unemployment (1.3%, 2001). The three wards that Petersfield covers are all in the top 30% least deprived

ward in England (DTLR Index of Deprivation 2000). This indicates that the area is relatively affluent. This was reflected in consultations with local organisations although they did also highlight that there were localised pockets of deprivation and also a number of small businesses within the town that were struggling to survive.

32. Petersfield is an important market town and administrative centre. Employment in the town is dominated by a few large employers in both the public and private sectors including pharmaceuticals and toiletries (Estee Lauder), manufacturing (Danish Bacon Factory), the County Council and the District Council. There are also a number of small businesses in the town and a reasonably large amount of self-employment in the surrounding area. There are very few vacant premises in the town for new businesses to move into. However, there is a speculative development on the A3 at Petersfield, Vision Park, which is attracting relocations from within the area as well as inward investors and has obtained planning application to extend.

33. Tourism and related activities are also an important although relatively small employment sector within the town. Consultations with local partners indicated that Petersfield was a popular destination for day visits with a few overnight stays at one of the number of bed and breakfast type accommodation in the town although there are no hotels.

34. Due to the good road and rail connections a large proportion of the resident workforce commute out to work in London, Portsmouth or other towns in the area. The commuting and employment patterns in Petersfield reflect those in East Hampshire District as a whole: 50,000 resident workforce of which 20,000 commute out and 30,000 work within the District. 10,000 people commute into East Hampshire to work and self-employment is in the region of around 10,000 people. The presence of a few large employers and the commuting patterns suggests that Petersfield has a dynamism of its own as an employment centre. However, it is also characterised as a commuter town for London and the south coast.

35. Petersfield has the largest retail centre in the area, which attracts people from the surrounding villages to shop in the town. The town's retail position was strengthened with the creation of the Rams Walk shopping mall, which opened in 1993. As well as being a major redevelopment for the town; it has been a major boost to the town's economy. An improved selection of shops and the opening of Waitrose have seen an increase in the number of people who come to the town to do their shopping. Outside the main shopping mall there are a number of small privately owned shops in quieter areas of the town centre.

36. The main square provides the venue for the twice-weekly markets held on Saturdays and Wednesdays. The market sells a wide variety of produce including fruit/vegetables, meat/fish, bread/cakes, plants/flowers, garden ornaments, shoes, clothes, hardware, household goods and pet foods. A series of Farmers Markets have recently been introduced to the town. These take place on the first Sunday of the month and sell local produce.

The Relationship between the Environment and the Economy

37. There is evidence of a relationship between the environment and economy in Petersfield. This can be seen through the demand for local food, tourism attractions

both within and around Petersfield and the importance of the environment for inward investment and in encouraging self-employment in the town.

Demand for Local Food and Local Produce

38. Local produce is sold at the monthly farmers' market. In an attempt to combat the crisis in the rural economy farmers and growers have set up their own limited company. The company, Hampshire Farmers' Markets Ltd, have taken over the running of the Hampshire Farmers' Markets programme, previously organised by Hampshire County Council. This suggests an important link between the market town and its rural hinterland. However, consultations with local partners suggested that this link was relatively weak with little demand or supply for local produce by town centre shops.

Tourism

39. Petersfield is home to a wide range of tourist attractions and places to visit. The tourism 'offer' in Petersfield is based on the attributes of the historic and natural environment. Table 2 lists the attractions within Petersfield and provides a brief description.

Table 2: Recreation and Tourist Attractions in Petersfield

Attraction	Location/ nearest town/village	Description
Petersfield Perambulations & Petersfield Town Trails	Petersfield	Leaflet guided walks available from Tourist Information Centre
Bear Museum	Petersfield	The Bear Museum in Petersfield was the first of its kind and is now known internationally. The Museum houses one of the largest and most interesting collections of teddy bears on public display in the country.
Flora Twort Gallery	Petersfield	Images of Petersfield between the wars by local artist Flora Twort.
The Physic Garden	Petersfield	Garden laid out with beds of herbs in a formal geometrical pattern typical of 17th Century physic gardens.
Open Air Heated Swimming Pool	Petersfield	Open air heated pool funded by ticket sales and contributions.

40. The main opportunities for tourism can be found around Petersfield. This tourism 'offer' is based on the opportunities that the natural environment provides and shows the strong link between the rural hinterland and the town. Table 3 lists the attractions around Petersfield and provides a brief description.

Table 3: Recreation and Tourist Attractions around Petersfield

Attraction	Location/ nearest town/village	Description
Ashford Hangers	Petersfield	320 Acres of woodland and beech hanger. Large number of footpaths and outstanding scenery.
Queen Elizabeth Country Park	Petersfield	1,400 acres of parkland with Visitor Centre, shop, mountain-bike trails, guided walks, horse riding and cafe.
East Hampshire Cycle Way	East Hampshire	22 mile on-road Cycle Route. Twenty-two mile circuit, starting and finishing in Petersfield.
The Hangers Way	East Hampshire	21 mile linear path from Alton Railway Station through 'The Hangers' to Petersfield and beyond to the South Downs at Queen Elizabeth Country Park.
The Staunton Way	Havant	12 mile linear path from Queen Elizabeth Country Park across the Downs to Staunton Country Park then on to Broadmarsh on Langstone Harbour.
The South Downs Way	Hampshire to Sussex	Runs between Winchester to Eastbourne and is entirely within the two Areas of Outstanding Natural Beauty – East Hampshire and the Sussex Downs.
Old Winchester Hill	Droxford (village to south west of Peterfield)	National nature reserve, with steep downland slopes, an iron age hillfort and wonderful views.
Uppark House	South Harting (village to south east of Petersfield)	Uppark is a fine late 17th Century house owned by the National Trust situated high on the South Downs with magnificent views towards the Solent.
Woolmer Forest	Liss, Nr Petersfield	Remnant of a medieval hunting forest, situated in Northeast Hampshire. One of Britain's richest nature heathland reserves.

Inward Investment

41. The good communication links provided by the A3 and the railway as well as opportunities for a good quality of life provide by the attractive built and natural environment attract people to work in the area both to set up business and in self employment indicating that there is a link between the economy and the environment. Consultations with local partnerships indicated that the challenge is to hold onto the businesses that move into the town. There is a trend for companies to move into the area, to expand and then move on to the south coast taking their workforce with them. Managers tend to stay within East Hampshire and commute out of the area to work.

Intervention Mechanisms and Partnerships

42. There is evidence of opportunities for regeneration in Petersfield through the Countryside Agency's market town toolkit and through the work of the town centre manager and local partnership.

Countryside Agency's Market Town Toolkit

43. The Countryside Agency launched their market towns toolkit in May 2001 to help communities assess and improve the vitality of market towns and their surrounding area. The Countryside Agency is using a variety of approaches in supporting Market Towns in the South East in using the toolkit. In Hampshire rather than funding a market town co-ordinator for individual market towns the Countryside Agency has funded a County Wide co-ordinator. The idea is to provide the tools rather than a prescriptive list of actions that should be carried out in the hope that it will achieve greater community capacity building.

44. The co-ordinator has contacted Petersfield and explained the process of using the toolkit through a seminar. The District Council, Town Council, Town Centre Manager and Petersfield First Partnership are all very supportive of the idea of the toolkit but not of the approach used to present it to them. Due to the amount of work needed they feel that they cannot carry it out until they have identified funding to employ a co-ordinator to oversee the process.

Town Centre Manager and Petersfield First Partnership

45. The Town Centre Manager is employed two days a week by Petersfield Marketing Limited, which is funded by private sector contributors, the Town Council and the District Council. The Rural Towns/Rural Life Project, a successful SRB6 project (£700,000) running from January 2001 for two years is also part funding the Town Centre Manager. Initiatives which the town centre manager has and will be promoting include:

- A French Market which was held in the town last year. There are three distinct shopping areas in the town: the Rams Walk shopping mall, the high street and an older shopping area. The shopping mall is in the centre of Petersfield and attracts most customers while some of the shops in the other areas are struggling for survival. The idea was to hold the market in two different locations to attract people not only to the centre of Petersfield but to the other areas as well.

- Obtaining a licence from the District Council for Petersfield Square. This will then enable Petersfield Marketing to market the square for events which will help generate revenue which can be spent on other initiatives in Petersfield as will as helping to generate local interest in local events.

46. The Petersfield First local partnership represents local retailers in the town but is currently struggling due to lack of volunteers. The partnership organises initiatives such as Petersfield in Bloom and would play a role in using the Countryside Agencies toolkit although they emphasised the importance of needing funding to carry out the research required for the Health Check.

Developing the Environmental Economy in and around Petersfield

47. There is evidence of links between the environment and the economy in Petersfield; however, in many cases these links are relatively weak. Below we have listed a number of suggestions and observations of ways in which environmentally sustainable economic development could be promoted.

Intervention Mechanisms and Partnerships

- Firstly, despite localised pockets of deprivation, Petersfield is in a relatively affluent area of the South East and it is unlikely that it will receive resources on the scale of those received in Rural Priority Areas. There is a need to promote the capacity of the community to carry out the Health Check and deliver initiatives itself.

- Secondly, and related to the first point, there is an issue in Petersfield of lack of participation in local government and local initiatives. The appointment of a part time town centre manager is a good first step in creating the catalysts that are required to encourage local people to become involved in local issues but it is likely that more is needed.

- Thirdly, and in slight contradiction to the need to promote the capacity of the community discussed above, the approach that the Countryside Agency have adopted in Hampshire does not seem to have been effective at a local level. Those we spoke to in the local community felt that they were receiving multiple messages from layers of public sector organisations and government on what needed to be carried out. They felt that the funding which was available at a County level needed to be invested directly into local communities.

A Vision for Petersfield

- In relation to the above points on the need for local participation to carry out the Health Check and implement local initiatives it is not clear that there are agreed aims and objectives for Petersfield. Consultation with local partnerships indicated that there were weak links between the economy and the environment and there were opportunities to strengthen these. A 20-year vision owned by the local people needs to be developed. This is particularly significant within the context of the on-going debate to designate the South Downs with National Park status. Petersfield will need to agree and adopt a settlement boundary that will allow expansion to meet the needs and maintain the vitality of the town while not impacting on the characteristics of the market town and the environment.

Relationship Between the Economy and the Environment

- There is little demand for and supply of local produce in the town. The opportunities and potentials surrounding local produce need to be exploited as fully as they can.

- There is huge potential to attract tourism to Petersfield based on the opportunities provided by the surrounding environment. Petersfield is being promoted as a destination for day visits. The opportunities to attract overnight stays in

Petersfield and link cycle and walking trails with bed and breakfast accommodation in the surrounding area need to be explored.

- The quality of life is attracting some inward investment and self-employment. The opportunities to encourage more of the population who commute out of the area to work within the town needs to be explored. The implications of in-migration on local people should also be considered in terms of affordability issues.

APPENDIX 6

CASE STUDY:
ENVIRONMENT-LED ECONOMIC DEVELOPMENT
- THE COAST

ENVIRONMENT-LED ECONOMIC DEVELOPMENT - THE COAST

THE EAST KENT TRIANGLE

Introduction

1. This report seeks to investigate the environment and economy linkages in the East Kent Triangle. The Triangle comprises the local authority districts of Dover, Canterbury and Thanet. The main towns are Canterbury, Margate, Ramsgate, Sandwich, Deal and Dover. The area comprises three distinct geographical areas:

   - The coastal towns and coastal strip.
   - Canterbury.
   - The rural hinterland.

2. Much of the coastal area, in particular, has suffered from economic decline. However, the area has great strengths in terms of its natural, historic and cultural assets. Therefore there are potential opportunities for regeneration that capitalises on and contributes to these assets. Significant progress is being made in taking forward such an approach to regeneration. Any approach must build on linking the different strengths of the area to create a cohesive area.

3. This case study investigates the links between the area's economy and the coastal/rural environment, and considers how and to what extent environmental attributes are featuring in approaches to its regeneration. It concludes by addressing the barriers and opportunities to environment-led regeneration in the future.

Environmental Characteristics

Coastal Environment

4. The coastline includes the famous White Cliffs, Pegwell Bay, Richborough and Reculver Roman Forts, and several internationally designated wetland areas for wildfowl. There are two SAC's: Thanet Coast and Sandwich Bay; Sandwich Bay is a dynamic area of dune and marsh habitats. In the north, the chalk cliffs and reefs are features of international nature conservation importance. The chalk cliffs at Dover are included in the Kent Downs AONB (this portion of the AONB is separate from the main body of the AONB to the west). The water quality and clean beaches are also considered to be important attributes.

Rural Hinterland

5. The East Kent Triangle also has a very diverse range of inland habitats, which include ancient woodland, chalk grassland, wetlands, intensively cultivated agricultural land and parkland. To the north of Canterbury, Canterbury/Blean Woods is one of the largest semi-natural blocks of woodland in England (managed by the RSPB, English Nature, the Woodland Trust and Kent Wildlife Trust). There are several areas of

historic parkland towards Canterbury. The Kent Downs AONB lies to the west of the East Kent Triangle, although a small strip along its eastern edge falls within the Triangle, which is designated due to the landscape value of the rolling chalk downland. The Stour Valley, which includes Stodmarsh National Nature Reserve, and stretches to Sandwich and Pegwell Bay, is one of the largest reedbeds in South East England.

Cultural Heritage

6. Up until about 1500 Thanet was an island separated from the mainland of Kent by an arm of sea known as the Wantsum Channel. The area around the Wantsum Channel has a rich history reflecting many different themes and periods that are likely to be of potential interest both to tourists and local visitors. The Isle of Thanet, lying close to the continent of Europe with a sheltered sea channel offering an entry point to Britain, was a prime target for raiders and invaders from pre-historic times. It has been argued that England's political, ecclesiastical and maritime history all start from here.

7. The area also includes a number high quality historic built environments, including, most notably, Canterbury, but also seaside towns such as Margate and Ramsgate, and smaller rural villages.

8. In order to protect and develop these assets, a Canterbury Triangle Environment Framework (February 2002) and a Draft East Kent Environmental Action Plan (February 2002) were prepared by the Area Strategic Partnership and East Kent Environment Group, respectively, comprising representatives from a wide range of bodies. The vision for the role of the environment in regeneration is set out in these plans and is discussed further below.

Economic Characteristics

9. The economy of the East Kent area is suffering from a decline in its traditional coastal resort tourist industry, the closure of the East Kent coalfield, and the adverse effects of the Channel Tunnel on the coastal ports. Thanet, in particular, has suffered continued economic decline in its tourist industry over the past two decades resulting in persistently high levels of unemployment and social deprivation, which are amongst the highest in England. SEEDA's first Regional Economic Strategy recognises that despite being the most prosperous region in the UK, the South East contains pockets of physical and social deprivation, which include coastal towns in East Kent.

10. A contact at Thanet District Council[52] described how tourism declined from around the mid-1970's to the mid-1990's. This decline occurred because the traditional seaside image was no longer popular and the industry in Thanet failed to keep up to date with developments in the industry as a whole. 1994-95 saw a bottoming out of this decline, and now there is some growth occurring in the industry, as measured by tourist spend, tourist numbers and local employment and the state of the local economy. Economic activity generally is also increasing as new companies are moving in.

---

[52] Pers comm. Neil McCollum, Thanet District Council Tourism Development Officer

11. In Dover the key sectors were historically port activities, brewing and coal mining. The current economic base maintains a strong maritime orientation, but with the demise of the coal mining industry alternative industries have become prominent in the area: transport and logistics, pharmaceuticals, instrument engineering and tourism. This represents a fairly narrow economic base[53]. The Economic and Social Benchmark Report[54] indicates that tourism is an important element of the Dover district economy, and provides data on numbers of visits, reasons for visits, and expenditure by tourists. The report clearly indicates that the cultural and natural environment is an important reason for visiting the area.

12. Thanet has an unemployment rate significantly higher than that experienced in Kent and the UK as a whole. In the Thanet Travel to Work Area unemployment is 8.3% (Feb 2001), the second highest in the UK. In terms of deprivation, Thanet has 7 wards in the top 10% most deprived wards in England (1999 Draft Index of Local Deprivation). Unemployment in Dover is significantly less than for Thanet, at 3.9% in March 2001, but this is still more than double the rate for the South East (1.7%). Dover similarly suffers from high levels of deprivation. The Economic and Social Benchmark Report indicated that three wards within the Dover urban area are amongst the worst 10% most deprived in England, according to the Index of Multiple Deprivation 2000. These wards also have high levels of residents on low income.

Summary of Environmental Economy

13. According to the top-down SIC data, agriculture is by far the largest employer within Definition 1 activities (activities dependent on the environment), with an estimated 4,700 employees. The strong farming focus in this region supports this estimate. Perhaps surprisingly, very little employment (under 50 jobs) was registered in the fishing sector.

14. Employment in activities dependent on a high quality environment are predominately in tourism, and account for 1,500 jobs.

15. Under 7% of the employment in tourist activities, is in sustainable or green tourism initiatives (a total of 100 jobs). Environment-related services (e.g. scientific research, environmental consultancies, architectural and engineering activities, public services, education and membership organisations) employ 2,400 in the area, which accounts for the majority of employment in activities contributing to a high quality environment, and 40% more than are employed in banking and finance. Other activities likely to be of importance, but which cannot be separately identified using SIC data, include recreation activities, particularly those associated with the shoreline (e.g. walking, fishing, cycling, sailing, swimming, etc.).

16. Table 1 summarises employment within each of the three definitions, both past and predicted future levels. Employment in Definition 1 is projected to decline and employment in Definition 2 is projected to remain relatively stable. Definition 3 shows a slight estimated growth, however, this is likely to be an underestimation due to the growth being predicted by more general market trends.

---

[53] Pers comm. Emma Wakelin, Dover District Council, Economic Development Officer
[54] Dover District Council Economic and Social Benchmark Report 2001

17. Table 1 also shows that East Kent has a higher percentage of its work force employed in the Environmental Economy than the South East as a whole. This is particularly true for Definition 1, presumably because of its agriculture base, but Definitions 2 and 3 also show the area is strong in all sectors.

Table 1: Top-down Analysis of Employment Estimates in East Kent by Definition (as Percentage of Total Employment)

	Actual				Predicted			
	1995		2000		2005		2010	
	East Kent	South East	East Kent	South East	East Kent	South East	East Kent	South East
Definition 1: Activities directly dependent upon the environment	4.6	4.2	6.7	3.7	5.7	3.3	5.4	3.2
Definition 2: Activities dependent upon a high quality environment	1.9	1.3	1.5	1.2	1.5	1.1	1.5	1.1
Definition 3: Activities contributing to a high quality environment	3.5	2.4	3.5	2.1	3.5	2.1	3.5	2.1

18. The Draft Area Investment Framework Action Plan (2002) (discussed further below) draws attention to the recent expansion of university facilities in East Kent, and suggests that these should help to nurture new technology based businesses and the development of 'knowledge based' industries, which could include businesses in the environmental technology sector – which is a sector included in Definition 3 (activities contributing to the environment).

Environment-led Regeneration Approaches

Partnerships and Strategies in the East Kent Triangle: the Background to Environment-led Regeneration

19. It was noted that whilst regeneration initiatives in the East Kent Triangle began several years ago, these initially concentrated on deprivation problems facing tourism and concentrated on economic regeneration, taking little account of the environment[55]. The linkages between the environment and economy in the East Kent Triangle are only recently being realised on a significant scale. There are now very real attempts being made to integrate the environment into regeneration of the area.

20. Partnerships and joint working to address the future of the East Kent Triangle as a whole gained momentum with the publication of the Canterbury Triangle Vision Statement, which was published in 2000. This came about when Pfizer, a key business in the East Kent Triangle, which places considerable demands on local labour supply and transport infrastructure, pointed out a need to address the lack of co-

[55] Pers comm. Jim McKenzie, Kent County Council Environment Officer

ordination in the area, in terms of economic and planning strategies. In 1999 a consortium of strategic local interests led by Kent County Council, and consisting of local authorities (Dover, Thanet and Canterbury), Pfizer and SEEDA, commissioned consultants to prepare the Vision Statement.

21. The Vision Statement sets out issues to be addressed over the Triangle as a whole, including:

- The demand and supply of housing.
- A transportation system serving the whole area effectively.
- The realisation of the cultural, heritage and tourism assets.
- The conservation and enhancement of the environment.
- Enabling a strong quality of life for the different communities.
- Nurturing the employment and business development opportunities to ensure the widespread and sustainable economic regeneration of the area.

22. The aim of the Vision was to provide an identity and a common set of themes for partners and to present a logical framework for preparing plans, programmes, projects and funding bids. In terms of environment-led regeneration the Vision recognises the potential of a green tourism strategy, but it also makes wider links between environmental quality and jobs and housing.

23. In practice however, regeneration activities were still not fully recognising the potential role that the environment can play in regeneration. The East Kent Environment Group was set up in 1999 to address the potential role of environment-led regeneration.

24. In February 2002, the East Kent Environment Group produced a Draft East Kent Environmental Action Plan (February 2002), which sets out a wide-ranging vision that clearly exhibits the intention to build on the potential environment-economy linkages to achieve regeneration. It aims to '*create a high quality sustainable environment, building on the substantial existing environmental strengths, to enable it to play a key role in the economic and social regeneration of East Kent by positively changing the perceptions and image of the area, thereby facilitating inward investment, green tourism and encouraging community pride*'.

25. Also in February 2002 a Draft Canterbury Triangle Environmental Framework was produced by the Area Strategic Partnership that includes the three district councils, Kent County Council and Pfizer. This framework follows on from the earlier Canterbury Triangle Vision Statement and aims to move that vision forward by focussing on how environmental issues and opportunities should underpin regeneration activity. It sets out a vision to

'Establish [the Triangle] as an attractive place to live, work and visit; to protect and promote the area's natural and man made heritage; to reuse poor quality and run down derelict sites to improve the image of the area; to promote sustainable

development including the reuse of derelict sites and to encourage tourism and recreational opportunities'.

26. Another important strategic plan, which builds on these ideas, is the Draft Area Investment Framework (AIF) Action Plan, which has also been developed by the Area Strategic Partnership. This stems from an initiative that SEEDA is piloting in six areas. The framework is funded through the SRB and managed by Kent County Council and the three district councils. The plan looks at the current state of investment, what is scheduled and what is needed to fill the gaps. The Partnership is responsible for lobbying and seeking funding.

27. The Environment Officer at Kent County Council and a member of the East Kent Environment Group indicated that the AIF is the key way in which an environment-led regeneration strategy can be taken forward. The AIF includes a section on quality of life, which recognises that '*the quality of life and particularly the quality of the environment enjoyed within East Kent also has a significant impact on the perception of the area by individual decisions on areas to live and work and also on those taking investment decisions*'. The strategy contains a priority entitled 'a Green Heart for Kent', which sets out a number of Milestone Projects, which clearly show that an environment-led regeneration strategy is being pursued. For example, an area-based project centred on the Wantsum Channel to create a visitor attraction is proposed.

28. However, at this stage, environment-led regeneration is still at the strategy planning stage, and the strategic partners in East Kent must decide how to take it forward and develop an overall strategy[56].

29. It would appear that there are a number of ways in which the environment can and should contribute to regeneration in the East Kent Triangle, as discussed below:

- Green tourism and the visitor economy.
- A high quality built and natural environment to attract indigenous business, inward investment, and to encourage living and working in the area.
- Regeneration of the Kent Coalfields.
- Sustainable agriculture and integrated rural development (IRD).
- Environmental drivers: job creation in response to demand for environmental management/environmental services.

Green Tourism and the Visitor Economy

30. The National Tourism Strategy 'Tomorrow's Tourism – A Growth Industry for the New Millennium' (DCMS, Tourism Division, undated) recognises the benefits tourism can bring by:

- Generating wealth.
- Creating jobs.

[56] Pers comm. Jim McKenzie Kent County Council Environment Officer

- Promoting entrepreneurship.
- Providing social and environmental benefits and supporting local diversity and cultural traditions.

31. However, there is a need to balance the economic benefits within a sustainable tourism strategy, to ensure that the benefits of tourism can be maintained in the future.

32. In the East Kent Triangle, there is considerable opportunity for promoting green tourism, and much work is already underway, with many influential bodies supporting green tourism as a feasible regeneration strategy. Many of the approaches and initiatives involve cross-district groupings, for example:

- Measures set out in the AIF e.g. an area-based project centred around the Wantsum Channel, linking Reculver to the Wetland areas at Stodmarsh and the amenity areas around Pegwell Bay to attract visitors to the area.
- An East Kent Marketing Initiative is underway which is preparing a joint guide aiming to draw together the diverse appeal of the area into a cohesive marketable package. This initiative is developing a new brand: Canterbury and Coastal Kent which will be marketed through an alliance to oversee the brand, and accompanied by a website.
- A Draft East Kent Tourist Strategy is being prepared which is a joint venture between districts, representing a new approach to addressing tourism issues. The Strategy focuses mainly on tourism in urban areas, but it does touch on green tourism, which is addressed further in the Draft East Kent Environmental Action Plan (February 2002).
- Canterbury has submitted a bid to become European Capital of Culture in 2008. The bid clearly aims to incorporate and benefit the wider area of the East Kent Triangle through the promotion of sustainable tourism that builds on the quality of the built and natural environment. The bid contains an aim for '*Urban renaissance in Canterbury and the East Kent towns, and a rural revival in the countryside'*, and goes on to set out an objective '*to enable tourism to benefit the community, our visitors, and the environment; and to do so economically, culturally and sustainably*'. The bid covers a wide range of potential tourism assets, which it hopes will lead to success in its bid. These elements of the strategy are very much aiming for higher value, sustainable tourism, and cover:
  - Strengthening European cultural and tourism networks.
  - Revitalising 100 miles of coastline, in particular the traditional seaside resorts of Margate, Broadstairs and Herne Bay, through the development of water sports, festivals and visual arts.
  - Sustaining and making available the area's natural assets of woods, coast and countryside.
  - Promoting and developing the historic cultural heritage.

33. The *European Capital of Culture 2008 bid* outlines three specific projects, which are also set out in the *Draft East Kent Environmental Action Plan*. These will provide a framework where environmental enhancement supports rural and green tourism, and contributes to the regeneration of East Kent. These are:

- A wetlands, Camargue type, environment along the length of the Stour, possibly via UNESCO Biosphere Reserve status, or a similar designation that captures its importance.
- An integrated vision for a 'new Forest' surrounding Canterbury.
- A magnet for local residents and green tourism, with projects using INTERREG funding and Countryside Agency support.

34. The National Trust is promoting the potential of the former hover port site in Pegwell Bay within a wider 'Green Tourism Strategy' and has commissioned a report by LUC to look at the potential of the site. The report suggests the former hover port site could be used for a 'visitor interpretation and education facility' providing an introduction to the surrounding area, which, as already noted, has been identified as a potential international 'Biosphere Reserve'. The report also highlights the rich history of the area, including the area around the Wantsum Channel, and suggests that this could be promoted through a coordinated strategy, as is now being proposed in the AIF. The report concludes that the area is lacking any coordinated information on the multi-dimensional attractions of the area, and better needs opportunities for linking the attractions together. The report indicates that Thanet District Council considers that Pegwell Bay is an important development site to aid regeneration in Thanet.

35. The Environment Officer at Kent County Council noted that it is now down to the Strategic Partners in East Kent to finally decide what strategy should be taken forward. It was suggested that further studies would be needed before the strategy for the area could be decided upon. The Countryside Officer at Canterbury City Council[57] similarly highlighted a need to carry out further research into what visitors want from the area and what the potential of niche markets actually is, before formulating an investment programme. He felt that there is a danger of 'talking up' a proposed strategy, without firmly basing it on research. He noted that nature conservation alone does not necessarily equal a green tourism attraction and also questioned whether visitors may demand a greater critical mass of natural attractions.

36. The Environment Officer at Kent County Council noted that the AIF is seeking to bring together the various projects that are taking place in the East Kent Triangle into a common framework, as at present much work is taking place on the ground, with little coordination. Initiatives taking place within the districts are outlined below. It should be noted that many of these are seeking to sit within the wider framework of green tourism and environment-led regeneration.

<u>Thanet</u>

37. The Thanet Economic Development Strategy discusses Green Tourism initiatives in Thanet, such as walking and cycling routes, which are being developed. It sees an

---

[57] Pers comm. Brian Watmough, Canterbury City Council Countryside Officer

opportunity to build on the cultural and aesthetic values of the area. The Strategy sets out an aim to develop and market green tourism opportunities. Much of the work the Council is doing uses European Objective 2 and SRB funding.

38. There are three main tourist initiatives that aim to utilise the environment to attract tourists:

- Promoting Minster as a heritage village, which aims to attract visitors and boost the local economy. Thanet has funding through the Countryside Agency's market towns initiative for this.

- The Viking Coastal Trail. This is a 28 mile coastal cycle route which runs along the coast and loops back through several villages along the former Wantsum Channel. This has been open since June 2001, and counters at two locations have noted a huge increase in use. The Council is now aiming to build on the appeal of this route, which links into the sustainable Sustrans network.

- Walking routes. The Council is also aiming to incorporate walking routes into the Viking Coastal Trail. The infrastructure already exists, so this initiative only requires appropriate signage and promotion.

39. The Council is now aiming to improve the appeal of the environment immediately beyond the beach (the seafront and towns). Developing Margate Old Town is another regeneration aim set out in the Economic Development Strategy. The contact at the Council[58] noted that regeneration of the area is a slow process. The area has a lot of historic buildings, which have fallen into decline as small shops close. The aim is to restore the area using grant funding to create art galleries and studios and other cultural attractions. The County Council and District Council also have plans to develop a Turner centre on the sea front. The two areas of development will complement each other.

41. The contact at Thanet District Council claimed that the tourist industry is now growing again, and felt this is because the Council is getting to grips with the problems facing the industry in a number of ways:

- Marketing the area as a tourist destination.

- Improving the quality of the built environment in terms of the quality of hotels and the quality of the sea front.

- Promoting short breaks.

- Undertaking measures to increase the variety and appeal of the area.

42. The regeneration work taking place in Thanet is far from complete, but it would appear that so far it has been successful with increased visitor numbers, expenditure and problem properties being brought back into use. However, it is too early to see whether the work will be self-sustaining in the long term.

---

[58] Pers comm. Neil McCollum, Thanet District Council Tourism Development Officer

Canterbury

43. Developing green tourism in and around Canterbury is somewhat constrained by the fact that only around 15% of visitors to Canterbury stay overnight. Most visitors do not venture into the wider area, because the renown of Canterbury itself overshadows other attractions to visitors. Research[59] carried out by the Transmanche Tourism Research Programme, a private/public sector partnership initiative part-funded by Interreg II and managed by Kent Tourism (part of Kent County Council), highlighted the lack of awareness of attractions outside Canterbury, such as the woodlands. It concluded that '*Canterbury has a very strong rural tourism product which if developed further and marketed effectively could make an even greater contribution to rural local economies in the future'*.

44. The overall aim for the environment-led visitor economy in Canterbury is therefore to continue to promote Canterbury as a cultural centre, but also to link the city to its hinterland, for example, through developing trails to facilitate exploration of the Canterbury woodlands and the Stour Valley. This is a key aim as set out in the *European Capital of Culture 2008 bid.* The Council also has SRB funding to make improvements to Whitstable Harbour, which includes arts uses and holiday lets as well as a fish market and industrial premises. This initiative is aiming to attract visitors and businesses.

Dover

45. The Economic Development Business Plan for Dover is split into objectives for community, regeneration, environment and opportunity and access. Several of these sections include objectives for tourism. For example, in relation to regeneration there is an objective to '*develop the potential of tourism to provide sustainable economic activity and employment within the District*'. The community objectives also include a tourism and marketing objective '*to develop and promote an approach to a sustainable tourism industry in the area to be of long lasting benefit to the local community and safeguard the natural and built heritage that makes the District unique*'.

46. However, tourism alone is not enough to bring about the levels of regeneration necessary in the East Kent Triangle. The area is also pursuing other forms of environment-led regeneration, for example to attract indigenous and inward business and investment. However, there is clearly an overlap between attempts to develop green tourism and attempts to attract inward investment, since they both, to some extent, require the creation of a positive image of the area to achieve success. Therefore measures to improve and promote the natural and cultural environment, some of which are discussed above, are likely to benefit more than one form of environment-led regeneration.

---

[59] Transmanche tourism research: Canterbury District Rural Tourism Study

A High Quality Built and Natural Environment to Attract Indigenous Business, Inward Investment, and to Encourage Living and Working in the Area

47. According to the Chief Executive of the Kent Maritime Chamber of Commerce[60] it would not appear that the quality of the natural environment is being promoted to potential investors. She was not aware of any initiatives that are aiming to promote the environment as a factor in the investment decision. She stated that the quality of the environment is a secondary factor in businesses' decisions to locate in the area. The major factors are cheap labour and cheap housing. A contact in the regeneration team at Thanet[61] noted that available space and Regional Selective Assistance Grants to investors creating jobs are key reasons for businesses choosing to locate in the area. However, skills levels are perceived to be low (even though this is changing) and low land prices may actually put people off, as they have a negative effect on the company's asset base.

48. The Economic Development Department at Dover District Council runs a website at www.doveruk.com which provides information for businesses considering locating in the area. It includes information on premises, transport links and workforce, as well as a section entitled 'enjoy' which promotes the natural environment: '*enjoy the miles of seafront, the acres of unspoilt Kentish countryside, the areas of outstanding natural beauty, the orchards and the oast houses'*. However, the Economic Development Officer noted that whilst the quality of the environment is mentioned on the website, it is not really marketed to businesses, and it is not a key reason why businesses locate in Dover[62].

49. The regeneration contact at Thanet felt that Thanet's problems are largely urban and that the environment cannot therefore be a key driver in regeneration, and indicated that socio-economic measures are the key focus. However, she did note that there are major attempts being made to improve the ambience of towns, such as the Turner Centre in Margate, which in a wider sense is still a form of environment-led regeneration, as it is capitalising on the built and cultural environment. The Thanet Economic Development Strategy refers to the redevelopment of Ramsgate New Port as a key driver within the business and tourism employment generation plan. The Strategy identifies Thanet as having strengths based on its environment, which make it a pleasant place to live and work.

50. Despite suggestions that the environment is not a key reason for inward and indigenous investment, there is evidence that poor image issues can put investors off the area. The East Kent Triangle Vision Statement notes that the area fails to compete as well as it could in attracting new businesses and encouraging their employees to live locally, due to the lack of 'soft infrastructure'. It goes on to suggest that facilities provided through initiatives such as Margate Old Town renewal and the Turner Centre and Ramsgate Harbour may generate clusters of other businesses generating economic benefits, which might become a centre for a 'Cultural Plan'. Similarly the Pegwell Bay Report commissioned by the National Trust, notes that one of the problems of attracting inward investment and sustaining current business activity is the poor image

---

60 Pers comm. Anne Peaks, Chief Executive, Kent Maritime Chamber of Commerce
61 Pers comm. Anne Fox, Thanet District Council, Regeneration Strategy
62 Pers comm. Emma Wakelin, Dover District Council, Economic Development Officer

of the area e.g. a number of sites within the Sandwich Corridor which are visually unattractive and occupied by 'bad neighbour' uses or are vacant or derelict.

51. Pfizer, a global leader in pharmaceuticals, dominates much of the local economy and is very interested in the environment-business relationship. It places considerable emphasis on 'core values', which include integrity, respect for people and community; Pfizer takes an active role in supporting environmental and community initiatives. The Pegwell Bay study discusses the ways in which the proposals for the former hover port site, and wider proposals to create an internationally important nature reserve, could provide important business benefits to Pfizer in relation to its core values:

- The proposals would enable Pfizer to develop further its existing links with community schools, as it could use the proposed visitor centre at Pegwell Bay to continue its award winning Academic Liaison Programme.
- An association with the National Trust (who would manage the Pegwell Bay site) would enhance the company's profile.
- The proposed initiatives would also give a general uplift to the environmental image and identity of the whole area, which could help Pfizer to attract highly qualified staff to the area.

52. In conclusion, the quality of the environment is rarely overtly marketed to potential inward investors and is perhaps not a key factor in the location decision. However, it would appear that there is an underlying realisation that a good quality built and natural environment can create a positive image of a vibrant successful place, which will be attractive to potential investors. There is evidence to suggest that some investors are put off by the poor image they have of the area. Therefore it is arguable that improving the cultural and built environment will lead to a stronger sense of pride and sense of place, which will attract people and businesses.

Regeneration of the Kent Coalfields

53. In Dover District there is an area of former coalfields – the Kent Coalfields, located to the west of Deal, including Betteshanger, Tilmanstone and Snowdown Collieries. This area is suffering from economic and environmental problems. Environmental improvements in this area are being utilised to secure wider regeneration of the area. In 1981 mining accounted for 54% of all employment and 69% of male employment within this isolated rural area[63]. By 1989 all the collieries had closed, which had a significant effect on the local economy. There are aims to regenerate the area, which is designated as a SEEDA Rural Priority Area, and there are a number of economic/social regeneration initiatives going on. There is also a need to address the problems of a poor quality environment. The biggest problems are the derelict buildings and quality of life issues.

54. The study prepared for the DTLR found that the major barriers to development of the area as a source of employment and to the reclamation and/or development of the pit sites is the remoteness of the area and the difficulties in reaching satisfactory terms with the private owners of the Snowdown and Betteshanger sites.

---

[63] DTLR (2000) Regeneration of Former Coalfield Areas - Interim Evaluation: Case study notes – East Kent

55. Improvements to the A256 during 1998-2000 have improved road access, which opened up the areas around Betteshanger and Tilmanstone with links south directly to the M2. The Snowdown Colliery remains a problem site because it is still badly connected in terms of road communications (although it is located on the main railway line) and because suitable terms could not be agreed with the private owner.

56. SEEDA has acquired the site at Tilmanstone, which is to be developed for employment land, and Betteshanger Colliery, which will also be developed for employment space or mixed uses of live/work and leisure. SEEDA also owns the Betteshanger Tip site, and there are plans to develop it as a country park with public open space / low-key leisure uses once remediated. At Betteshanger the spoil tip now has woodland cover, and, like other coalfield sites, is now an ecologically sensitive area. There are also proposals to develop a wood fuel plant. The proposals will remove a significant eyesore from the landscape and have the effect of raising standards generally in the area.

57. The report concludes that the prospective remediation of the colliery sites would remove the main barriers to the redevelopment of the East Kent coalfield area, providing the opportunity for renewed growth of employment opportunities in the area for its residents.

Sustainable Agriculture and Integrated Rural Development (IRD)

58. The rolling chalk downland west of Dover is quite intensively farmed for arable cereal crops and oilseed rape. There are also areas of semi- and unimproved grassland. The National Trust is a large landowner in the area, and it is aiming to bring agricultural land back into grazing. The Kent Downs AONB officer indicated that there is still a strong farming focus with families aiming to make a living out of farming.

59. In terms of agri-environment payments available to farmers to encourage sustainable farming practices, the East Kent Triangle contains a small area in the North Kent Marshes ESA. Farmers throughout the East Kent Triangle are eligible to enter ERDP schemes that cover the whole country, such as Countryside Stewardship, the Rural Enterprise Scheme, and other smaller initiatives such as the Countryside Agency's renewables initiative. Also SEEDA grants are available for farm diversification across the region and other SEEDA funds which are only available in Rural Priority Areas (which cover parts of Kent e.g. the Coalfields area), including a redundant buildings grant. A contact at the Kent branch of the RSPB[64] considered that agri-environment payments are not significant to the rural economy and that Countryside Stewardship agreements have only been taken up on a small scale. It is therefore unlikely that sustainable agriculture is making a significant contribution to the rural economy of the East Kent Triangle.

60. Countryside Stewardship and other schemes include payments for access provision. However, given the low level of uptake it is unlikely that farmers are providing access that could benefit rural tourism. An economic evaluation of access provisions in MAFF agri-environment schemes commissioned by MAFF[65] found that agri-

---

[64] Pers comm. Simon Busutil, RSPB East Kent Branch

[65] MAFF (no date) Economic evaluation of access provisions in the MAFF agri-environment schemes. By the Centre for Research Into Environmental Appraisal and Management, University of Newcastle upon Tyne

environment schemes offer a useful mechanism for increasing public access to the countryside. Therefore access payments should perhaps be incorporated into any future schemes targeted in the area.

61. Like all rural areas in the UK the agricultural economy is facing great pressures, and is being encouraged to diversify. In East Kent SEEDA grants are available for diversification, however, the RSPB contact noted that there are problems with the quality of farm diversification efforts, such as food and accommodation and the marketing of these products.

62. The AONB has created a post for two years aimed specifically at developing diversification of farms. Dover District Council and Canterbury City Council are signed up to this, so it covers part of the East Kent area, and will have spin-off effects for the area outside the AONB. The aim is to increase farm diversification and develop the potential for farm-based tourism.

63. Kent County Council and the Forestry Commission are leading an initiative to manage the woodland around Canterbury more effectively, such as for tourism and economic products.

64. In conclusion it would appear that there are attempts being made sustainably to add value to the rural economy through integrated rural development, but that considerable progress has still to be made.

Environmental Drivers: Job Creation in Response to Demand for Environmental Management/Environmental Issues

65. The RSPB noted that whilst environmental management employs very few people as compared to industry, on a per hectare basis it employs more people than agriculture. It is likely that employment in this area will become increasingly important. There are no figures available for the East Kent Triangle, but the RSPB has data for other areas that shows that nature conservation creates jobs and supports local economies.

66. In this respect, it will be important to put conservation activity of the natural, built and historic environment into the wider package of enhancements taking place in East Kent. They should not be evaluated in isolation to the wider benefits that they bring. Managing and improving the rich environment of the area will help to reinforce one of the key resources that distinguish it from other areas, helping to improve local people's quality of life, attract visitors, and encourage businesses to invest in the area. This mutual relationship could be encouraged through commercial sponsorship of conservation projects, or by directing some of the spend by visitors towards improving the management and accessibility (physical, educational, and spiritual) of the East Kent environment.

Barriers to Environment-led Regeneration

67. It can be seen that some progress is being made in developing environment-led regeneration. However, a number of issues surrounding further development of this potential have been identified.

- In order to further promote the area to investors, potential residents and visitors, it is widely considered necessary to improve the transport **infrastructure** in the area. However, there is a need to ensure that other economic regeneration initiatives do not compromise the opportunities for environment-led regeneration. In particular improved transport infrastructure[66] (including a combination of motorway and road improvements, strategic rail schemes and other rail capacity improvements) will make the East Kent Triangle more accessible, but may lead to a focus on inward investment at the expense of indigenous investment building on the qualities that the area has to offer, including environment-led regeneration. One example of this is Manston Airport, which could potentially act as a catalyst to regeneration, but only if its development is linked into the needs and potential of the area (e.g. to provide an access point for local business people, supported by environmental improvements, and the provision of high quality and affordable housing to support key skills and key workers).

- **Funding sources** must continue to be made available to support regeneration initiatives. For example, green tourism and general tourism marketing currently need continued funding – such as from Objective 2 and SEEDA – and many other regeneration initiatives rely on such funding, especially in areas where there is a high level of dependency on benefits which takes up a large proportion of local authority budgets[67].

- There is a need for further **information and research** to underpin the chosen environment-led regeneration strategy and investment programme, in terms of promoting the area for green tourism. A need for information on visitor requirements and the potential value of niche markets in particular was highlighted.

- The need for **quality accommodation** is a problem in the old seaside resorts, and also in Canterbury where the small proportion of staying visitors has not facilitated the development of high quality accommodation, which is needed if the area wishes to attract staying visitors. Therefore there is a need to improve the facilities needed to support a green tourism strategy.

- Tourism and the visitor economy represents the most significant strand of the environment-led regeneration strategy in the East Kent Triangle. However, **tourism alone is unlikely to be a regeneration solution** for coastal resorts. The English Tourism Council's report entitled 'Sea Changes' (2001) which chronicles the slow but steady decline in the number of visits to the English seaside recognises that tourism alone is not enough, and that resorts will need to diversify their economy, and look for overlaps between the provision for visitors and the benefit of such facilities for other users.

- There is a big effort for environment led regeneration in the East Kent Triangle. However, it was apparent that some key players, particularly in the economic development teams at the councils, do not fully recognise the opportunities for

[66] Kent and Medway Structure Plan consultation document
[67] Pers comm. Neil Mc Collum Thanet District Council Tourism Development Officer

utilising the environment in regeneration strategies. This indicates a need to ensure that regeneration efforts are **fully coordinated**.

- The contact at the RSPB noted a need to address the economics of **changing farming practices**. Sustainable agriculture is a key opportunity for integrating the environment and economy, but it is currently not being sufficiently encouraged.

- **Climate change** is a serious issue, which will have a big impact on East Kent. For example, in Thanet two thirds of the coast is low cliffs (around 30ft) and the rest is at sea level, some of which is marshes, which are therefore likely to be affected by sea level rise. The implications of climate change are beginning to be addressed, for example through aspirations for a new wetland. Such initiatives are likely to have a bearing on environment-led regeneration, as the coastline undergoes change.

Potential Opportunities for Environment-led Regeneration

68. There is great potential for further developing environment-led regeneration in the future, which is considered below.

- Strong **partnerships** have been forged between the district and county councils and other important bodies and the private sector. There is a need to maintain and strengthen these links. Such partnerships are essential to developing the overall vision for environment-led regeneration in the East Kent Triangle, which must now be agreed and taken forward. SEEDA must continue to work with, and encourage such partnerships.

- The **Area Investment Framework** provides a significant opportunity to take forward an environment-led regeneration strategy in the East Kent Triangle. SEEDA must recognise this and deliver the necessary support and funding.

- Partners should continue to promote a **'cohesive image'** of the area to visitors in order to 'spread' the benefits of tourism from the coast to the rural hinterland, and from Canterbury outwards towards Dover, the ex coalfields, and the Thanet Towns. The contact at the RSPB likened the area's potential appeal to that of the North Norfolk Coast, which has succeeded in creating such a 'brand'.

- Promotion of the 'image' and assets of the area to **inward investors**. The environment does not serve as a major pull factor to inward investors. However, there is evidence to suggest that the poor quality of the environment in some places and the perceived image of the area do put off businesses and potential employees from locating in the area. Therefore there is scope to promote the cultural and natural assets of the area more fully to potential inward investors.

- Linked to this is the un-realised potential of East Kent as the **'Gateway to the Continent'**, and for foreign visitors as the **'Gateway to England'**. As such, it is a key axis in the communication and movement network. In South East terms, it may seem remote, but in terms of the relationship between the UK and the Continent, is it at its very heart. At the moment, the area is seen as a place to pass through as quickly as possible in order to gain access to London, and beyond. Few visitors are aware of the quality of the environment to be found in East Kent, and coupled with the advent of high speed rail travel, and improved transport infrastructure, there are considerable opportunities to sell the area as a place in which to invest, thereby taking pressure off some of the more overheating areas of the South East, such as the Thames Valley.

- Tourism represents the key element of environment-led regeneration. There needs to be further **recognition of other forms of environment-economy linkages**. The Area Investment Framework, for example, outlines the right principles in terms of building regeneration and economic growth around the environmental strengths of the area. However, the action points in the AIF Action Plan do not fully reflect this principle. In Thanet, for example, there are some major infrastructure projects taking place to service industrial premises (sewerage, water supply, electricity supply, etc.), but there appears to be little thinking about environmental carrying capacity (e.g. whether there is sufficient water availability and, if not, what the implications will be for Stodmarsh, the River Stour and the creation of the new wetland reserve – solving such environmental constraints provides new development opportunities in themselves)[68]. Other interviewees felt that many of the environment and tourism projects are 'add-ons' and that there needs to be a more fundamental underpinning of sustainable development in regeneration activities.

- The contact at the RSPB noted that there are threats to the environment from **economic growth**, but felt that there are plenty of opportunities to integrate environment and economy. He noted that in infrastructure plans for the Sandwich Corridor the environment is being built in. The fact that economic growth in the region can largely be planned means that there are great opportunities to protect the environment and build on environment-economy linkages.

- Sustainable agriculture is currently not making a significant contribution to the rural economy of the East Kent Triangle, although attempts are being made to add value to the rural economy through integrated rural development. There is scope to further enhance opportunities for **rural diversification**:

  - Green tourism initiatives in the East Kent Triangle should bring more visitors to the area, which will increase the market for diversification products. There is a need to improve the quality and marketing of farm diversification products on offer. Scope for branding of locally produced products should be explored (a meat branding scheme is being trailed in the Chilterns, and is popular with farmers and small shops).

  - Scope to develop woodland industry – for example, renewables and woodland products.

  - Opportunities for developing networks between tourism sectors e.g. link good walks, with good pubs and restaurants serving local produce.

- The Countryside Agency is promoting integrated land management strategies nationally, and it has been suggested that East Kent could benefit from being used

[68] Pers comm. Diana Pond, English Nature, East Kent Branch

as a pilot area[69]. The contact at the RSPB similarly felt that there is a need for a more targeted agri-environment scheme in the East Kent Triangle to encourage a change from arable to grazing and the creation of heathland.

- Perhaps an even more radical approach is required, capitalising on Kent's image as a whole, but focusing on East Kent. A major education and branding exercise, such as '**The Organic Garden of England'**, would help to promote a clear and identifiable image of the area, attractive to visitors and consumers alike, but would need to be supported on the ground by support for organic markets, supply-side investment, access to the countryside where organic farming takes place so that people can view it in practice, and appreciate the wildlife and landscape benefits it has to offer. Key to this would be education for farmers and an element of under-writing to give them the confidence and security they need to invest.

69. The challenge, therefore, is to encourage and promote the inherent qualities of the East Kent Triangle as an asset and resource that have the potential to underpin considerable economic activity, and that this must not be lost in the drive for more traditional forms of economic activity that have little specific reason to locate in the East Kent Triangle, and for which the area will be competing against other locations that in many instances may be better placed to succeed.

---

[69] Pers comm. Brian Watmough, Canterbury City Council Countryside Office

PORTSMOUTH-CHICHESTER COASTAL STRIP

Introduction

70. This case study aims to determine the extent to which links exist between the environment and the economy of the Portsmouth-Chichester 'Coastal Strip', and the degree to which the high quality environment is being utilised to encourage economic development and regeneration. For the purposes of this study the area has been loosely delimited by Portsmouth Harbour to the west and Chichester town and Pagham Harbour in the east.

Environmental Characteristics

71. The coastal strip has a recognised high quality environment, both built and natural. It is located within the South Coast Plain and Hampshire Lowlands Natural Area, which centres on the tidal basins of Portsmouth, Langstone and Chichester Harbours, which all enter the Solent through relatively narrow tide-swept channels. However, the character of these harbours ranges from Portsmouth's densely developed shoreline to the tranquillity of Chichester Harbour[70]. The South Coast Plain Character Area also encompasses the study area, a key characteristic of which are 'coastal inlets and harbours containing a diverse landscape of narrow tidal creeks, mudflats, shingle beaches, dunes, grazing marshes and paddocks'[71].

72. The quality of the natural environment is illustrated through the numerous environmental designations. The entire study area falls within a candidate Special Area of Conservation (cSAC) boundary. Chichester and Langstone Harbour are both SPA and Ramsar sites. Portsmouth Harbour is also an SPA and Ramsar. The high quality built environment is exemplified by the historic Portsmouth Docks, a number of listed forts and the historic villages around Chichester.

Economic Characteristics

73. The coastal strip is heavily influenced by the traditional presence of the defence industry in South Hampshire, most notably activities relating to Portsmouth Harbour. This legacy has a significant effect on the current economy of the area, with the manufacturing sector also playing a significant part. The case study region is trying to diversify away from these two economic bases predominantly through attracting inward investors.

74. Other economic sectors of significance are:

- Agriculture (east of Portsmouth on peninsulas etc).
- Current clusters (e.g. electrical engineering, aerospace - linked to defence), enterprise centres.
- Tourism (transformation from traditional holiday resort to short break destination).

---

[70] English Nature (1998) *South Coast Plain and Hampshire Lowlands Natural Area Profile (126)*
[71] Countryside Agency (?) *Countryside Character Initiative: South East – South Coast Plain*

- Sea-based recreation e.g. International Festival of the Sea.
- Portsmouth University – research.

Summary of Environmental Economy

75. The top-down SIC data analysis, shows that agriculture is a significant employer in the coastal strip and dominates economic activities dependant upon the environment with a total of 4,100 employed in the agricultural sector (this accounts for more jobs than the banking and finance sector). As would be expected there are a number of people employed in fishing, although a total of only 100 is estimated. Employment in energy production and distribution is also significant at 900 employees.

76. Tourism activities dependent upon a high quality environment produce 2,700 jobs, a figure which has grown by 500 since 1995, but is projected to stay stable into 2010.

77. Activities which contribute to a high quality environment (Definition 3) are heavily dominated by the environmental advice sector. 4.8% of the agricultural employment in Definition 1 is estimated as being within more sustainable forms of agriculture, accounting for 200 employees. Sustainable transport also employs a significant number (600).

78. Table 2 summarises the total employment in each definition of the Environmental Economy compared to the South East as a whole. This shows that the Environmental Economy of the Portsmouth-Chichester Coastal Strip is much stronger than much of the South East, across all three definitions. For activities dependent upon the environment (Definition 1), the proportion working in the Environmental Economy is around double that of the South East average. A similar relationship can be found for Definitions 2 and 3. The Environmental Economy can therefore be considered to a strength of the area.

Table 2: Top-down Analysis of Employment Estimates for the Portsmouth-Chichester Coastal Strip by Definition (as percentage of total employment)

	Actual				Predicted			
	1995		2000		2005		2010	
	Coastal Strip	South East	Coastal Strip	South East	Coastal Strip	South East	Coastal Strip	South East
Definition 1: Activities directly dependent upon the environment	7.1	4.2	8.3	3.7	7.6	3.3	7.5	3.2
Definition 2: Activities dependent upon a high quality environment	2.2	1.3	2.7	1.2	2.7	1.1	2.8	1.1
Definition 3: Activities contributing to a high quality environment	4.4	2.4	5.0	2.1	5.0	2.1	4.9	2.1

79. The lack of predicted growth for Definition 3 may well be understated, as the growth prospects are based on wider SIC codes, and therefore do not take account of the higher levels of growth that are likely in the environmentally orientated activities within industry sectors.

Environment-led Regeneration Approaches

Agriculture and Rural Development[72]

80. Farming in the case study area is predominantly cereal crop production. The two peninsulas of Chidham and Bosham, as well as Chichester Plain are mainly used for cereal planting with some field vegetable planting interspersed. Farmers in the Chichester Harbour area work within the rules set by the Conservancy, with no problems evident. One of the farmers sits on the Conservancy Board to ensure successful management of the reserve. This partnership/stakeholder involvement appears to be successful.

81. There has been some uptake of organic farming. The two main dairy herds in the Chichester area have gone organic. Most farmers have considered the option, but further uptake is likely to be deterred as funding has dried up. One major organic endeavour has been the location of the 'Nature's Way' headquarters near Chichester, where the company grows organic salad ingredients. This and other smaller enterprises locate here mainly because the land is of high quality, and it is the lightest part of the country (allowing early and late season growth).

82. The major opportunity in the locality for farm diversification is tourism. A number of farmers have converted buildings to holiday flats, a development which appears to be in keeping with the area's transition from a traditional holiday resort to a short break destination. These farmers have taken advantage of funding opportunities for diversification from DEFRA as well as local councils (e.g. Chichester).

83. The major opportunity in the area may be through tourism. However some farms have converted to commercial use, to cater for businesses coming into the area. Farmers are able to offer cheap space outside the crowded cities, which small businesses are willing to invest in.

84. Flooding is a perennial problem in this area, particularly over the past few years. There has been extensive structural damage to buildings as well as to crops. Last winter there were particularly bad crop yields due to fields having remained flooded, having serious economic implications. The National Farmer's Union representative commented that it appeared cities and urban areas were prioritised for sea defence, whilst only the rural coastline was considered for retreat or options other than hard defence. Managed retreat was planned for Selsea, however, the NFU and others argued against this plan on the grounds that it would isolate the town and lose valuable land (much of the land is of Grade 1 quality). Retreat is not happening at moment, but is still considered an option (West Sussex Council Manhood Peninsula forum).

[72] Personal Communication with James Wiseman (NFU Representative) March 2002

Encouraging Indigenous and Inward Investment

85. The three main authorities with interests in this case study area (Portsmouth City, Havant Borough and Chichester District) all consider inward investment to be a major priority in securing economic diversification. Hampshire County Council includes the high quality environment in its marketing of the area. For example, under good reasons for businesses to locate in the county, three out of seventeen specifically concentrate on the high quality accessible environment[73].

86. There are three enterprise centres in and around Portsmouth. They act as self-sufficient companies that let out industrial units. Generally users of the units are local people (i.e. not attracted from outside the locality). The main benefit is the ease with which tenants can occupy the units. Licence agreements are simple and only require tenants to give 2 weeks notice. One of the centres is the former Victory brush factory built in 1923. However, whilst the reuse of the Victory factory is a sustainable option, it was felt that the historic environment at this site was not a key factor in its attractiveness to investors[74].

87. Havant Borough Council's main priority is to attract inward investment. Havant is within Portsmouth's Travel to Work Area, and as such has some dependence upon the port's defence economy. The decline in defence related industry in Portsmouth has therefore affected Havant. Havant also has a strong dependence on the manufacturing sector, and consequently is susceptible to trends in these industries. For example, the decision of Kenwood to downsize and shift some operations abroad has had a significant impact on the local economy[75].

88. The Council's first priority, therefore, is to diversify the economy through attracting inward investment that is less manufacture-based. Initiatives to achieve this include two Enterprise Centres, one at Brambles, Waterlooville and another at Broadmarsh (northern edge of Langstone Harbour, just south of Havant).

89. Havant's regeneration strategy revolves around a vision to *'build pride and prosperity by working as a community to encourage economic growth, improve the quality of life and conserve and enhance the environment within the Borough of Havant'*[76]. However, closer inspection shows that environmental conservation and improvements are limited to 'building pride' and do not feature in 'building prosperity'. The strategy highlights the pressures involved in realising environmental improvements including overcrowding, pressure to develop more intensively, and that designations restrict development opportunities and place restrictions on business.

90. The local delivery mechanism for the strategy is the Havant Borough Partnership (formalised into a company limited by guarantee) that will aim to secure external funding and private sector support for the strategy. It includes an environmental task group whose aim it will be to raise environmental awareness in the Borough. This could be the first step towards securing environment-led regeneration in the area. However, given the large number of other aims it may well not be a priority issue.

---

[73] www.hants.gov.uk/business/locating.html
[74] Personal communication with Janet Cops (Portsmouth Enterprise Centre) March 2002
[75] Personal communication with Roger Sherlock (Economic Strategy, Havant Borough Council) March 2002
[76] Havant Borough Council (1998) *Havant Borough Regeneration Strategy*

91. To encourage diversification and economic development further, a partnership has been set up between Havant, Portsmouth, Gosport and Fareham called the 'Harbour Economic Development Forum' [77]. This forum, although without specific remit to cover environmental issues, does provide a medium within which to address such issues, particularly given the geographical area it covers, including the natural linkage of the Portsmouth and Havant coastline.

92. The quality of the environment is always used in marketing the Havant area, both through the Forum and other initiatives. The accessibility and aesthetics the environment affords are the major pulling factors the area can boast (e.g. Hayling Island, Emsworth, harbourside recreation and the South Downs). The area's proximity to the coast and to the continent is a strong factor for promoting the Havant area south of the A27.

93. Hayling Island is little developed, and a traditional seaside resort (which has suffered some decline). It is still, however, a very attractive resource. The coastal area of Langstone Harbour and Chichester Harbour is highly protected, and the Council is very conscious of protecting and preserving this attractive area.

94. The suburban environment is also of concern. For example the social housing estate of Lee Park is the 4th most deprived ward and therefore attracts considerable SRB monies to the district. The Prince's Foundation is working with the Council to look at ways to improve the estate's environment, including links to employment etc throughout the locality.

95. Chichester District Council's economic strategy vision recognises the high quality environment as being one of the district's greatest assets[78]. However, the strategy itself does not include any reference to the environment in achieving economic development.

96. Portsmouth has experienced a significant makeover during the past decade. A large number of strategies, initiatives and partnerships have combined to create an urban renaissance, with a view to attracting businesses, potential inhabitants and visitors.

97. The Renaissance of Portsmouth Harbour project is a Millennium Commission project to create an international maritime heritage arena. The project represents will cost in total £84 million, £38 million of which was funded by the Commission[79]. The project is led by a partnership of Gosport Borough Council, Portsmouth City Council, Portsmouth Historic Dockyard and the Portsmouth & South East Hampshire Partnership. The aims of the scheme include regenerating historic buildings and creating new public access to the Harbour's historic waterfront. The project is expected to 'attract an extra 1.64 million visitors each year, create 3,500 new jobs and act as a catalyst for £300 million of investment in the local economy'.

---

[77] http://www.harbour-forum.co.uk
[78] Chichester District Council *Economic Development Strategy (2001-2006)*
[79] http://www.gosport.gov.uk/millennium/

Visitor Economy

98. As noted above, the historic environment, including the military legacy, has been largely capitalised upon in the Portsmouth area. A tourist survey of visitors to Portsmouth Historic Ships was carried out in 1996. Around 50% had primarily come because of the heritage aspect, and a further 25-30% for recreation. 45% of all visitors were staying in hotels or guesthouses in the vicinity. The Renaissance scheme has further developed this by aiming to provide an integrated package that attracts businesses, inhabitants and visitors to the historic urban fabric through an image re-branding.

99. In order to facilitate environment-led regeneration it is likely that a baseline level of awareness is required. Awareness is inextricably linked to accessibility. The Portsmouth Harbour area, by virtue of its location, is highly accessible, and with the planned improvements, will become more accessible to all. Accessibility is a common theme through the Renaissance project. The scheme includes extra parking facilities, a Light Rapid Transit System, a water bus network and a new bridge.

100. The more rural stretch of coastline east of Portsmouth has much poorer linkages. It was highlighted by many conservation organisations with interests in the Langstone and Chichester Harbour area that the level of awareness of this environment is low. Nonetheless, the value of this more natural area has been recognised. Chichester Harbour Conservancy produced a report 'Valuing Chichester Harbour'[80] in 2001, which aimed to begin the process of valuing this area of high quality environment. This found that annual visitor numbers are approximately 1.5 million, resulting in annual visitor expenditure of between £15 and £20 million.

101. In landscape and environmental terms, the coastal marsh harbour area is naturally linked to the commercial harbour area. This offers the opportunity to improve the link between accessibility and awareness. For example, the planned Light Rapid Transit system does not extend east of Portsmouth's centre, but potentially could harness the natural linkages by being extended and in so doing encourage economic development across the entire coastal area. This would require closer integration and co-ordination between neighbouring local authorities than is currently appears to be the case.

102. Many commented that there was a definite need for some kind of educational or visitor centre to encourage interest in the remoter parts of the coast. The Wildlife Trust and RSPB have researched the possibility of establishing an interpretation centre in Langstone Harbour at Broadmarsh. At the other end of the spectrum, the northern Coastline of Langstone Harbour has been earmarked for a marina and housing development, which although it will increase access and awareness, could have damaging effects upon coastal habitats and the dynamic natural processes of the coast, which is sensitive and vulnerable to development. It will be important, therefore, to ensure that any such development is sustainable in the long-term before being given the go-ahead (taking into account the effects of climate change, and environmental impacts) and that it is linked into a programme of management, enhancement and environmental education for this part of the coast.

[80] Chichester Harbour Conservancy (2001) *Valuing Chichester Harbour*

Environmental Drivers

103. The major driver in environmental terms is the future of the more vulnerable 'soft' coastline, where coastal management and awareness raising issues have given rise to a number of partnerships:

- Solent European Marine Site (SEMS) which looks at many issues affecting the SAC area. It is made up of all relevant authorities in the Solent including harbour authorities, local authorities, Sea Fisheries Committees, English Nature, Environment Agency, Trinity House and Southern Water. One of the aims of this initiative is to help other authorities to direct and prioritise their environmental management options in the Solent European marine site.

- SCOPAC (Standing Conference on Problems Associated with the Coastline) – wide membership – looking at sustainable shoreline management in coastal zone of central southern England.

- Solent Forum, which has sponsored the Hants & Isle of Wight 'Marine Week' and also supported a joint event with the Environment Agency at Portsmouth Sea Life Centre, which aimed to raise environmental awareness amongst local young people, as well as the Solent Water Quality Conference.

- CAMS initiative, led by the Environment Agency, with partners including Portsmouth Water and East Hampshire District Council, which is looking at abstraction from local rivers. The majority of rivers are over abstracted, which will have an impact on where future development can feasibly be located.

- CHAMPS (Coastal Habitat Management Plans) – a joint English Nature and Environment Agency initiative looking at coastal defence/flood defence, which is looking at areas that could be purposely flooded again (i.e. managed retreat to create saltmarsh). CHAMPS is looking strategically at the whole Solent area, including the implications for development.

- Hazardous Dive Trail – set up by the Hazardous Project with support from the Hants and Isle of Wight Trust for Maritime Archaeology. The operation of this project will be in collaboration with Wittering Divers, West Sussex County Council, South East Wildlife Trust and the Marine Conservation Society.

- EcoEnhance – brings together eight partners from the south coast of England, France and Ireland to value the coastline (funded by Countryside Agency, Southern Tourist Board, European Regional Development Fund) – Pagham Harbour was a pilot site.

104. The EcoEnhance project gave rise to a research and consultation exercise concerning the Manhood Peninsula. This was jointly led by West Sussex County Council and a Dutch consultancy, NIROV, and looked at options for managed retreat around Selsey. The resulting report considers the opportunities for green tourism, future transport initiatives and housing that would be produced by each of the options. One of the recommendations from the report was to set up a forum/partnership, to look at ways all the recommendations can be progressed. This has been created with members including representatives from West Sussex CC, Chichester DC, two members of the

public (who are project leaders), Chichester Harbour Conservancy, two parish councils, Sussex Wildlife Trust, English Nature, GOSE, Environment Agency and a representative of the business community. One of the recommendations is t consider European funding options, therefore they are looking at European Interreg III funding (working with European partners in spatial planning).

Barriers to Environment-led Regeneration

105. Despite the number of partnerships in the Portsmouth-Chichester Coastal Strip, there are many barriers to progress. These appear to stem from landownership, development pressures, and lack of understanding of the potential effects of actions, and the value of the environmental resources the area has at its disposal:

- Coastal defences are currently old and hard, being products of the military presence. English Nature is trying to encourage soft defences for nature conservation, and are keen to promote the value of mudflats (e.g. the internationally important populations of dark bellied Brent goose feed on the algae on mudflats, and on the grassland of open spaces such as golf courses during quieter periods, which has helped protect many of the open spaces under threat of development in the area). On the other hand, there are proposals to barrage and tide lock the port area of Portsmouth to create an area for recreational water use, and there is a shortage of land for housing in Portsmouth, which may place pressure on green space.

- The Strategic Defence Review has significant implications for the coastal strip, because of the amount of land in MOD ownership – that which is surplus to defence needs may be sold and redeveloped, usually to the higher bidder. Much of this land is in prime locations, and can therefore be sold at considerable profit for development, particularly housing.

- Provision of land for compensation (PPG9 and Habitats Directive regulations) is also becoming a critical issue, where environmental considerations may be downplayed if there are no viable alternatives or where it is argued that development is in the over-riding interest of the public. Urban areas in the locality, particularly Portsmouth, are running out of spaces to develop. Coastal land that is not designated or already allocated in local plans is in short supply. Much of the ex-MOD land is contaminated, and landfill sites in the area are already compromising nature conservation. Suitable land for compensation is therefore very difficult for local authorities to find. Local authorities are therefore turning to land-banking to retain any outstanding land and the options on land.

- Marina developments attract high prices but can be particularly problematic for the sensitive environment. - marina housing development allows scenic views over the water and are therefore highly desirable. A development in an area of only reasonable views over the water, for example, recently sold penthouses for £700k. English Nature is working to encourage developers to make provision for environmental factors, but market forces are strong and house prices very high.

- The perception of the area in comparison with other stretches of coastline (e.g. Dorset) was also raised as a possible barrier to encouraging visitors. It was stated that those living outside the area were not aware that the stretch of coastline is of great natural beauty (despite its designations to the contrary). This lack of awareness is exacerbated by its lack of accessibility. Initiatives to improve awareness/accessibility, such as the Broadmarsh Interpretation Centre, suffer from lack of resources, and find it difficult to compete with commercial market interests.

Potential Opportunities for Environment-led Regeneration

106. Ironically, the main barriers to progress of the Environmental Economy, may in fact be the seeds of its success. The regeneration that has taken place at Portsmouth Harbour has shown what can be achieved when the heritage and natural assets of the area are used as the foundations for development, rather than constraints.

107. The main challenge for the future appears to be the 'softer' coastal line, which is considerable important in landscape and wildlife terms, together with those areas under MOD ownership which may be sold for development. To build on the achievements of the historic heritage-led regeneration requires:

- Enhanced knowledge and awareness of environmental assets.
- Stronger partnerships to achieve more integrated solutions.
- Increase awareness and uptake of existing funding sources.
- Increased involvement of key players in the private sector.

108. There is widespread agreement that knowledge and awareness of natural environmental assets needs to be enhanced, and that the one avenue to achieve this is through on site educational and informative facilities. Currently the provision of interpretive facilities is limited to sporadic information boards and a visitor centre at Dell's Quay (for Chichester Harbour AONB). The concept of an Interpretation Centre at Langstone Harbour has been raised, but is as yet unrealised. It is generally considered that this is vital to achieving local understanding of the value of the natural coastal environment.

109. However, this on its own will not be enough. Whilst the area appears to have capitalised upon historic/built environment-led regeneration through Renaissance of Portsmouth Harbour and associated projects, the natural environment is still seen as a constraint to development. It does not feature to any significant degree in economic development initiatives. Much stronger links therefore need to be developed between Portsmouth and the eastern part of the coastal strip, so that they are seen and understood as part of a continuum characterised primarily by history in the west and nature in the east.

110. Key to success will be accessibility. This requires physical links (e.g. LRT), and most importantly sustainable access provision (e.g. coastal walks, cycling). It also requires accessibility in more subtle terms. In the heavily populated South East, there is a desperate need for tranquillity, and spiritual nourishment (e.g. communing with nature). Few locations offer such a package of natural attractions as this part of the South East coast, and this needs to be fully appreciated by those responsible for

economic development and environmental protection. It needs to be promoted, and made much easier to experience than is currently the case.

111. It also requires stronger links between the economic partnerships and environment-focused ones. There is a basic level of understanding within economic departments that the environment is important, but a limited understanding of the processes and the environment's place in the wider economic picture currently hinders the belief in an integrated and holistic vision. Likewise, environmental groups are beginning to appreciate that economic activity can be beneficial to the environment, but there is still considerable cynicism, which is often well founded when inappropriate development takes place. The result is conflict (e.g. as appears to be happening in Broadmarsh development debate where a public inquiry is imminent), where greater appreciation of the benefits of the right type of development for both the economy and the environment need to be understood by all parties.

112. It was commented that it would be helpful if local authorities became more involved in provision of educational information related to the natural environment reserves etc. The main benefits of which would increase the resources available to both push projects forward and secure funding. As Langstone Harbour Board commented, there is scope to make more of funding. However limited resources on part of nature conservation agencies has impeded to make the most of these opportunities.

113. In the future, two of immediate challenges will be climate change, and the disposal of MOD land. Climate change will have an increasingly significant influence on the coast, including erosion and increased flood risk. It is increasingly recognised that the building of hard defences is no longer an option for much of the coastline, and that a more flexible approach is required. This has implications for landowners and managers, particularly those involved in agriculture, which will need careful planning and resourcing to ensure that those affected are properly resourced.

114. The large amount of surplus land to be disposed of by the MOD is a considerable opportunity, but it must be dealt with intelligently. Selling such land to the highest bidder will not always be the most appropriate course of action. Such land needs to be valued in wider terms than just its selling price. Much of its is strategically located, and there are opportunities for the local authorities, SEEDA and other partners to consider within the wider context of sustainability to consider how this land should be best used in the future. If utilised sensitively, then it should prove a real asset to the area that will help to define its image and attractiveness to residents, visitors and business alike. This may include a package of housing, economic development, the creation of greenspace and community facilities, with room for nature and history. The partners should seek to ensure that any decisions over this land are taken within its environmental, economic and social context, and the value it will bring to the quality of life of residents of the coastal strip in the future.

APPENDIX 7

CASE STUDY: ENVIRONMENT-LED ECONOMIC DEVELOPMENT - THE CHILTERNS

ENVIRONMENT-LED ECONOMIC DEVELOPMENT - THE CHILTERNS

Introduction

1. The Chilterns is largely an area of outstanding environmental quality and with comparatively low deprivation compared to other parts of the region. The Chiltern Hills are defined by the physical landform and, in terms of the boundary established by the Area of Outstanding Natural Beauty, extends across the boundaries of four county, one unitary and ten district authorities. The southern part of the Chilterns lies in the South East region (Buckinghamshire and Oxfordshire) and the northern part lies in the East of England (Bedfordshire, Luton and Hertfordshire).

2. This case study seeks to investigate the Environmental Economy of the Chilterns, and in particular addresses the following:

   - The role and contribution of the environmental sector to the economy of the Chilterns as a whole.
   - Contribution of the Chilterns to the regional Environmental Economy.
   - The influence of sub-regional trends on the Environmental Economy of the Chilterns.
   - Rural development opportunities linked to tourism and environmental enhancement.
   - The relative value of developing the Chilterns Environmental Economy compared with other economic development opportunities.

3. The Centre for Spatial and Real Estate Economics at Reading University are also carrying out a study in the Chilterns for English Nature, examining the links between biodiversity and socio-economic drivers. The two pieces of work are complementary and our study draws on the early findings of the Reading study.

Environmental Characteristics

4. The Chiltern Hills are designated as an Area of Outstanding Natural Beauty. Agricultural and woodland land uses occupy over 90% of its area. The AONB encompasses the chalk escarpment with its characteristic open downland and the rolling farmland of the dipslope, interspersed with extensive woodlands and picturesque villages and historic buildings. The area contains a rich mosaic of habitats including many sites formally designated for their importance at the national or local level. Key habitats include:

   - The chalk grasslands of the scarp.
   - Downland and valleys.
   - The acid grasslands and heaths of the plateau.

- Scrub and woodlands.
- Wetlands, particularly chalk streams and their floodplains.
- The more modified but locally important habitats found within farmland and along roadsides.

5. There are three National Nature Reserves within the AONB, all located along the scarp and comprising valuable remnants of chalk downland, together with woodland and scrub habitats. The majority of the 60 or so SSSIs are also clustered around the scarp, comprising other valuable remnants of chalk downland and woodland. There are 14 Local Nature Reserves within the AONB.

6. The Chilterns area is also important archaeologically and historically and there are many archaeological remains, historic buildings and ancient pathways in the area[81]. There is evidence of occupation in the Chilterns dating back to prehistory. An important historic trackway, the Icknield Way, runs along the edge of the Chiltern Hills and provided the basis of a major communications and trading network stretching from East Anglia to Wessex. The most impressive of the archaeological sites are the Iron Age hill forts, which were constructed along the summits of the scarp and along the Thames Valley.

7. The Romans left a wealth of evidence of their period of occupation, although today little can be seen of these sites as they lie beneath the topsoil or have been destroyed by recent development, and agricultural activity.

8. During the Saxon period the growth of royal power and the widespread adoption of Christianity manifested in the establishment of royal estate centres and associated minster churches. The main centres of population at this time were around the edges of the Chilterns.

9. During the medieval period a pattern of dispersed farms and hamlets and small villages evolved. A substantial number of buildings survive from this period including churches and chapels and timber-framed barns, manor houses and farmhouses. Extensive piecemeal enclosure of the common fields was well under way by the later medieval period and the common fields soon became fragmented. Woodland was an important resource throughout the medieval period for timber, grazing and hunting. Overall the historic landscape of the Chilterns has not been dominated by the legacies of the major landscape revolutions, and it retains characteristics from a distant past.

10. The attraction of the Chilterns as a country retreat within a reasonable distance of London, led to the development of numerous country houses and parks, reaching a peak of around 600 parks in 1820. The older examples include West Wycombe Park House, with its nationally important parkland landscape, owned by the National Trust. In total the National Trust owns approximately seven properties in the Chilterns, others include Hughenden Manor, the home of the Victorian prime minister, Disraeli, and Dorneywood Garden, which was given to the Trust as an official residence for either a Secretary State or Minister of the Crown (only the garden is open to the

---

[81] The historic character of the Chilterns is summarised from the Chilterns Area of Outstanding Natural Beauty: Management Plan. Consultation draft July 2001

public). The Trust also owns six countryside properties, including the Ashridge Estate, which runs along the main ridge of the Chiltern Hills, and is a varied estate of woodlands, commons and chalk downland. The Chilterns has strong links with parliamentary figures, as evidenced by the presence of Hughenden Manor and Dorneywood Garden, and Chequers, a 16th century house, which is the official country residence of the British Prime Minister, is also located in the Chilterns.

Economic Characteristics

11. The economy of the Chilterns area is buoyant and prosperous. Unemployment levels are low: for example, 1.6% in Wycombe district and 1.3% in Chiltern district in February 2002[82]. Generally, Luton and Bedfordshire have unemployment levels above the surrounding areas, although still lower than the UK average rate, for example, 2% in South Beds in January 2002[83]. However, there are areas of deprivation that must not be forgotten, such as inner areas of Luton and within the rural areas. For example, in Oxfordshire almost 1 in 5 people in rural areas live on low incomes, with these areas also suffering from an increasing 'poverty gap'. There is a problem of lack of affordable housing throughout the Chilterns.

Economic Activity within the Chilterns

12. Historically the economy of the Chilterns has been associated with agriculture and timber production. The landscape of the Chilterns is heavily wooded, which reflects the traditional woodland economic activities that have historically been an important source of income. In the late 17th and 18th centuries timber was used as a local building material and as a source of fuel for the local area and London, which resulted in extensive coppiced woodland. The composition of woodland changed with the widespread adoption of beech coppice. In the 18th, 19th and early 20th centuries high demand for furniture shaped the woodlands. Throughout the 20th century there has been a decline in overall usage of local timber. In terms of decline in agriculture, it is estimated that at least 1,000 agricultural jobs may have been lost in the AONB since 1991, mostly on medium and small farms, which account for well over half of the holdings in the AONB.

13. Today the main centres of employment in the Chilterns are the larger towns of High Wycombe, Dunstable, Luton, Reading and Wallingford (although these are not within the area defined by the AONB boundary of the Chilterns, they are all in close proximity), each with their own employment base, which typically reflect national trends. For example, many new jobs have been created in the Chilterns area in the service sector, particularly in financial and professional businesses. Such economic activities do not have direct links with the environment of the Chilterns, although as discussed further below they may have chosen the location in part due to the quality of the environment.

14. The furniture industry has traditionally been an important economic activity in the Chilterns, especially in High Wycombe, although this has seen a significant decline. However, there are still a number of small companies throughout the Chilterns using

[82] www.buckscc.gov.uk: Labour Market Bulletin – February 2002
[83] www.bedfordshire.gov.uk: Unemployment Quarterly - January 2002

local wood. There is also a small brick production industry within the Chilterns. There are three companies producing bricks using local clay, which is extracted on a small scale from the dip slope[84]. This is considered to be a sustainable activity as it has little transport impact, and the bricks can then be used locally to achieve a traditional style of building. The AONB Board is encouraging this industry, and the use of local building materials e.g. through a Chilterns Building Design Guide, which has been adopted as SPG by a number of district councils. Agriculture also employs some people, but it is not a large source of employment.

15. Overall there is limited employment within the Chilterns AONB area itself (which excludes the main towns, such as Luton and High Wycombe), and the majority of people commute out of the area, either to local towns or to London, which is very accessible. The Buckinghamshire Joint Economic Development Strategy[85] notes that proximity to London and good communications make the area popular to people who work in London and around Heathrow airport. An economic development officer at Bedfordshire County Council similarly noted the importance of the proximity to London for commuting, although there are no figures available on the level of out-commuting. The planning officer at the AONB board noted that the Chilterns is a very expensive place to live due to the high quality environment and good transport links, and pointed out that lack of affordable housing is a big problem.

Economic Activity in the Wider Area Surrounding the Chilterns

16. The following section provides a summary of economic activity in the counties that cover the Chilterns:

- **Buckinghamshire**. Four out of five jobs are in service industries, but the County still has a strong manufacturing sector (17.8%), although this is declining, and the future is uncertain[86]. The market town of Aylesbury is the administrative centre for Buckinghamshire and home to multi-national companies like Rothmans and Sony and the headquarters of Equitable Life. High Wycombe is the most important industrial centre where traditional industries – furniture and papermaking – have been joined by successful high-tech and service industries such as Dun and Bradstreet, Xerox and Janssen-Cilag Ltd. Amersham Plc, a bioscience company, at Amersham is another important company. The last 20 years has seen a decline in furniture manufacture, the printing and publishing sector and engineering.

- **Oxfordshire** as a whole is recognised as an educational, scientific and technological centre. The two leading sectors in terms of employment are education and research and development, followed closely by health and social care.

- **Bedfordshire**. Over the last 20 years the economy in Bedfordshire has seen a move away from manufacturing to the service industries, but it still has a heavy reliance on manufacturing, particularly engineering and automotives, although the scheduled closure of Vauxhall at Luton will lead to the demise of the automotive

[84] Pers comm. with Colin White, Planning Officer, AONB Board
[85] Buckinghamshire Joint Economic Development Strategy 1998-2001
[86] Pers comm. with Pat Ward, Economic Development Officer, Buckinghamshire County Council

industry in the county. The service sector is growing, and tourism linked to the AONB is important. South Bedfordshire largely relies on Luton for employment.

- **Hertfordshire**. There are several emerging clusters in Hertfordshire, which include pharmaceuticals and life sciences, for example Glaxo Welcome at Stevenage and Ware; production of medical scientific instruments; defence aerospace, which has declined since the 1980's, but is still a significant employer, for example, BAE in Stevenage which is taking on staff; financial business services e.g. accountancy in Watford, Stevenage and St Albans; and film and media. In the northwestern part of the county, near the Chilterns, ICT is an important sector, which is centred on Hemel Hempstead, and defence aerospace is also important.

17. With a few notable exceptions (e.g. Amersham plc), most of the major companies are not actually located within the Chilterns AONB, but in adjacent towns.

Summary of Environmental Economy

18. The data from the top-down analysis on the Environmental Economy in the Chilterns area is based on the districts that fall within the Chilterns area, and includes the towns within the districts (which are excluded from the AONB boundary). It is not possible to generate meaningful data using SIC codes on a more localised scale.

19. The Environmental Economy in terms of Definition 1 (those activities directly dependent on the environment) employs 19,600 people. Agriculture is the largest employer within Definition 1, with an estimated 7,700 employees, accounting for approximately 40% of employment in the Environmental Economy of the Chilterns, under this definition. The strong farming focus in the area supports this estimate. Activities capitalising on a high quality environment (i.e. tourism and recreation) are also a significant element of the Environmental Economy, employing an estimated 7,300 employees, accounting for 37.5% of employment in the Environmental Economy.

20. Employment in activities dependent upon a high quality environment is predominately in tourism and accounts for 7,300 employees (99.8% of the Environmental Economy under this definition).

21. Employment in activities that contribute to a high quality environment is dominated by business and management services that may be providing environmental advice (e.g. environmental consultancies, and environmental sections of accountancy and law firms), which employ 9,400 people, which accounts for 70% of the employment in this definition of the Environmental Economy. Leisure and tourism only accounts for 4.1% of the Environmental Economy under this definition (600 jobs). Manufacturing of environmental technology accounts for 4.2% (600 jobs) and agriculture for only 2.1% (400 jobs). The figure for agriculture is very low, which indicates that currently agriculture is not contributing significantly to the quality of the Chilterns e.g. through schemes such as Countryside Stewardship.

22. Table 1 below summarises employment within each of the three definitions, both past and future. Employment in Definition 1 is projected to decline whilst employment in Definitions 2 and 3 should remain relatively stable. Compared to the South East as a

whole, the Chilterns appear to have lower employment as a proportion of all employment across all three definitions, particularly for Definition 1 activities.

Table 1: Top-down Analysis of Employment Estimates in the Chilterns by Definition (as Percentage of Total Employment)

	Actual				Predicted			
	1995		2000		2005		2010	
	Chiltern Districts	South East	Chiltern Districts	South East	Chiltern Districts	South East	Chiltern Districts	South East
Definition 1: Activities directly dependent upon the environment	3.7	4.2	2.9	3.7	2.6	3.3	2.5	3.2
Definition 2: Activities dependent upon a high quality environment	1.0	1.3	1.1	1.2	1.1	1.1	1.0	1.1
Definition 3: Activities contributing to a high quality environment	2.1	2.4	2.0	2.1	2.0	2.1	2.0	2.1

23. Although the Environmental Economy of the Chilterns appears to be less than the South East average in proportion terms, there is still considerable activity taking place. The economic development officer at Hertfordshire County Council (which is in the East of England), for example, pointed to two recent studies which have highlighted the emergence of green sectors in the economy, particularly to the south of the county, which is outside the boundary of the Chilterns[87]. It is estimated that there are around 8,000 'environmental' jobs, in sectors such as environmental consultancy, waste management and geo-technology. The economic development officer felt that there is great scope for further growth in this sector of the economy. The economic development strategy for Hertfordshire[88] clearly recognises the importance of the Environmental Economy, and sets out a 'Bright Green Strategy' for future economic development in the County. It proposes the development of a knowledge economy within a sustainable environment, and recognises that '*high-value jobs are being created in the development and application of environmentally sustainable technologies'*. The action plan sets out an action to benchmark current and future performance of the Environment Sector of Hertfordshire's economy.

24. However, it is notable that many of these environment-economy linkages in the Chilterns are not directly related to the environment of the locality, and indeed many similar attempts to develop environmental industries are being made throughout the UK. The direct links between the environment of the Chilterns and the economy are considered in detail in the remainder of this case study.

---

[87] Pers comm. with John Pryor Economic Development Officer at Hertfordshire County Council

[88] Prosperity in Hertfordshire: An economic development strategy for Hertfordshire 2000-2005 prepared by the Hertfordshire Partnership for Prosperity Forum

Environment-led Economic Activity

25. This section explores the linkages that exist between the environment and economy in the Chilterns area. The extent of environment-led economic activity is considered under the following headings:

- Investment, living and working.
- The visitor economy.
- Agriculture and forestry, including markets for local produce.
- Conservation activities.

Investment, Living and Working

26. The counties' economic development strategies clearly recognise that the quality of the environment is a very important reason for people choosing to live and work in the area. For example, the Buckinghamshire Joint Economic Development Strategy notes that '*the beauty of Buckinghamshire's countryside makes it a desirable place to live. Proximity to London, good communications and an agreeable physical environment are attractive to people who work in London and around Heathrow Airport'*. Thames and Chilterns Estate Agents, based in Marlow, indicated that high property values in the Chilterns reflect the good transport links – proximity to the M4 and M40, the quality of the environment – the Thames and the AONB, and the good schools in the area. The contact estimated that a comparable 3-bed property in a popular part of the Chilterns as compared to Luton would cost around £50,000 more. The Reading study notes that the hedonic pricing method has shown that land values can be 5% to 20% higher in proximity to attractive natural resources.

27. An economic development officer at Bedfordshire County Council[89] suggested that much industry is now so footloose that it does not have strong ties to its location. Bedfordshire is promoting the quality of life in the County (environment, education, leisure, etc.) as well as the good links to Cambridge, Oxford, Birmingham and London and the proximity to markets (28 million people live within 2 hours drive) to attract inward investors. However, he noted that the quality of the environment is a 'double-edged sword', since investors typically want greenfield sites, which the County cannot provide. Similarly the economic development officer at Buckinghamshire County Council noted that whilst one reason for companies locating in the area is the high quality environment (in combination with good transport links and proximity to Heathrow), the AONB creates problems for companies looking to expand their activities due to regulatory control and due to recruitment problems because of the high cost of housing.

28. Similarly the economic development strategy for Hertfordshire[90] recognises the importance of the quality of the environment to the economy. It states that

---

[89] Telephone conversation with David Nicholls, Economic Development Officer, Bedfordshire County Council 02.04.02.

[90] Prosperity in Hertfordshire: An economic development strategy for Hertfordshire 2000-2005 prepared by the Hertfordshire Partnership for Prosperity Forum

‘*maintaining the attractiveness of the county as a place to live and work is a key factor in attracting inward investment and ensuring a robust local economy’*.

29. The Economic Development Action Plan 2000/2001 prepared by Buckinghamshire County Council raises an interesting issue with respect to the environment and economy of the Chilterns. It notes that whilst business chooses to locate in Buckinghamshire because of the high quality of the environment and the quality of life for people who live in Buckinghamshire, many of the people who live in the County work outside it. This can lead to tensions, as out-commuters are not always sympathetic with those who contribute to the economic well-being of the County. In response to this the action plan sets out a number of measures, such as introducing a county-wide green business award. Home working is promoted by the Chilterns Society and also in the AONB Management Plan. This offers a mechanism for creating employment opportunities in rural areas, and an opportunity for expanding the employment base within the Chilterns and reducing out-commuting.

30. Generally the counties’ economic development strategies set out sustainable development aims and measures for greening business and minimising the impacts of economic development e.g. avoiding designated sites such as SSSIs and using brownfield land.

31. As discussed above these Environmental Economy linkages are not directly related to the environment of the locality, and many similar attempts to ‘green’ business are being made throughout the UK. The following sections investigate the direct linkages between the environment and economy of the Chilterns, for example in terms of industries using local materials – bricks and timber, local branding of food stuffs, sustainable agriculture, and the visitor economy.

The Visitor Economy

32. The Chilterns is an attractive and accessible area and is therefore popular for recreation. It is estimated that nearly 52 million leisure visits are made to and within the Chilterns AONB annually[91]. The area surrounding the Chilterns is extremely densely populated in parts; the main centres of population in close proximity are London, Reading, Luton and High Wycombe. Three quarters of leisure visits are made by the 1.5 million residents living within the AONB, or in the districts immediately adjacent to it (local visitors). The majority of visitors to the Chilterns are day visitors – 74% are local day visitors, 18% are non-local day visitors, whilst only 1% stay overnight within the AONB and 7% stay outside the AONB. These figures highlight the importance of the Chilterns as a local residential recreational resource. It is estimated that total direct expenditure by leisure visitors to the Chilterns is in the order of £190 million per annum (as estimated in 1997). The catering sector benefits most from visitor expenditure (48%), whilst 20% is spent in the retail sector, 5% at attractions and entertainment facilities and 4% in accommodation establishments. The remaining 23% is spent in the travel and transport sector.

33. Walking is the most common activity undertaken in the Chilterns (accounting for 42% of visits). An additional 25% of visits are by people walking dogs. 11% of visits are

[91] Chilterns visitor survey 1997 by the Southern Tourist Board

to participate in other outdoor sports or special interests, such as mountain biking or birdwatching. Ten percent of visits are to a specific visitor attraction, place of interest or town/village. The remaining visits are for other purposes, including relaxing, picnicking, visiting relatives, etc. The Ridgeway National Trail, which runs the length of the Chilterns, represents an important green tourism resource. Over a six month survey period the total use was 87,000 user days, with users spending in excess of £515,000[92].

34. Two major attractions in, or near, the Chilterns are Woburn Safari Park (just outside the AONB) and Whipsnade Wild Animal Park (within the AONB), both located near Dunstable in Bedfordshire. Both attractions are heavily dependent on the quality of the environment. Woburn Safari Park is located on the Woburn Estate, home to Woburn Abbey, which is a heritage site and, since 1955, a visitor attraction noted for its fine art, porcelain and silver collections. The grounds include a landscaped Deer Park, and the Estate has strong links with the historic village of Woburn. Whipsnade Wild Animal Park, one of Europe's largest wildlife conservation parks, is set in 600 acres of parkland on the Chiltern Hills.

35. However, it should be noted that generally a high proportion of tourism income leaks out of the local economy, according to the study being carried out by Reading University. It notes that to overcome this problem, structural changes in the local economy would have to be made to make it more self-sufficient. In order to ensure that rural areas benefit from expenditure, stronger and complementary linkages between economic activities are needed.

36. The AONB management plan raises concerns about the effectiveness with which the Chilterns is marketed as a location to visit. It argues that the picture of the Chilterns presented to visitors is '*patchy, inconsistent and confusing*', and it states that the implementation of an interpretation strategy is a priority, and a seasonal Visitor Guide could be produced to complement this.

37. A contact at the AONB Conservation Board[93] noted that since a large proportion of visitors are local, there is scope to increase tourism by attracting visitors from further afield. However, he noted that this must be done in a sustainable way, and indicated that the Board is involved in developing integrated access arrangements, to promote the use of transport alternatives instead of the private car.

38. The Buckinghamshire Joint Economic Development Strategy states an aim to '*build on existing leisure/tourism base to ensure that the County gains an increased share of the growing tourism market through agreed Tourism Strategies and Action Plans'*. Projects include promoting Buckinghamshire as a tourist destination, which includes promoting the AONB. The county's rural strategy also seeks to develop tourism opportunities, and favours 'green tourism', which do not degrade the environment and which can be easily accessed by public transport. The economic development officer at Hertfordshire, in comparison, did not consider that the Chilterns is a particularly significant attraction, in terms of tourist attractions in the county as a whole. For

---

[92] The Ridgeway National Trail: Summer visitor survey April 1st – September 30th 1996

[93] Telephone conversation with Simon Fisher, Countryside Officer, AONB Conservation Board

example, he pointed to Knebworth House, Hatfield House and St Albans as important elements of the County's appeal to visitors.

Future Opportunities for the Visitor Economy

39. If a strategy of increasing the visitor economy of the Chilterns is adopted this must be carefully managed, with areas likely to or already experiencing visitor pressure being protected. For example, it is evident that some archaeological sites along the Ridgeway are experiencing tension in terms of public access pressures. Similarly popular downland sites, such as Ivinghoe Beacon and Dunstable Downs, are suffering from disturbance and erosion[94].

40. It is also notable that 77% of all visits to the Chilterns involve a car, which has implications for the sustainability of promoting further tourism in the area. Promotion of sustainable access to the Chilterns should be a key element of any initiatives to increase tourism in the area. For example, safe cycle routes to and through the Chilterns could be promoted to improve sustainable access.

Agriculture and Forestry

41. Agriculture and forestry occupy a large land area in the Chilterns; therefore management practices are a very important influence on the nature conservation and landscape value of the area. Agriculture and forestry also have an important role to play in the Environmental Economy of the Chilterns.

42. The Chilterns Society argues that the area relies too heavily on commuters and visitors and that it should possess a more diverse and sustainable economy. Their website suggests that the Foot and Mouth crisis has helped to focus attention on issues such as the interdependence of local businesses and the importance of local products.

43. This part of the case study therefore looks at the current role played by agriculture and forestry in the Environmental Economy of the Chilterns, and explores opportunities for developing sustainable agriculture and forestry in the future. The role of promoting local produce is addressed in a separate sub-section, given the growing importance of this enterprise in the Chilterns area.

Agriculture

44. Farming in the Chilterns varies according to the physical influences of soil capability and relief. At the south-western end, open chalk land is traditionally under a mixed system of arable and sheep, although a decline in lamb prices has led to the replacement of sheep by pigs. The number of outdoor pig units is continuing to rise. On the heavier and deeper soils at the foot of the scarp, the general farming practice centres around corn, beef and sheep. The acreage of traditional fruit has declined in response to cheaper imports from abroad. The central plateau farms are typically small and often part-time. Farms tend to be 'mixed' although there has been a tendency away from intensive dairying; cereals are the main crop. In the geographically discrete northern part of the AONB, with its rolling downland

---

[94] Chilterns Area of Outstanding Natural Beauty: Management Plan. Consultation draft July 2001

character, farms are typically large cereal units, with some livestock and dairying enterprises. The Chilterns Society website[95] also lists nine vineyards in the Chilterns.

45. Government incentives are provided through the Countryside Stewardship scheme. In terms of eligible habitats, the Chilterns has achieved target status. A strong case for ESA status was prepared for the Chilterns, but it was not accepted. The AONB management plan notes that the ESA scheme is to be replaced nationally, and that every effort should be made to ensure that any new scheme is applicable to the Chilterns. The plan reports that Countryside Stewardship payments for managing and recreating chalk grassland and landscape features such as hedgerows has begun to make a real impact in some parts of the Chilterns.

46. Foot and mouth disease (FMD) was not actually present in the Chilterns, however it has still impacted on the Environmental Economy of the Chilterns. A contact at English Nature[96] noted that before FMD it was already hard to encourage farmers to go back into sheep farming, but in the aftermath of FMD this is now even more difficult. FMD also led to the closure of footpaths which inevitably impacted on tourism in the area.

47. Oxfordshire's Economic Development Strategy[97] states that advice and assistance is available to rural businesses, particularly farmers through Business Link's Farm Business Advice Service. However, it points out that rural businesses are often not aware that assistance is available and the services are often not well co-ordinated.

48. The AONB management plan claims that environmentally sensitive farming alone will not be enough to support farm incomes. Therefore support for diversification activities is very important. It also notes that development of informal recreational and educational opportunities could be an important means of supplementing incomes.

Promotion of Local Produce

49. Extensive efforts are being made to promote local produce within the Chilterns. The Chilterns Conference, Countryside Agency and English Nature recently commissioned a report on the potential for a local branding initiative in the Chilterns[98]. This study assessed the feasibility of operating a meat-marketing scheme linked to conservation grazing in the Chilterns AONB, which would include grazing densities. The reaction from livestock farmers was enthusiastic, with around 80% indicating that they would be likely to join the scheme. The responses of specialist food service outlets and specialist butchers were similarly favourable, although the supermarket buyers expressed doubt as to whether 'regionality' was a sufficiently attractive proposition to consumers in the meat sector. According to the AONB Conservation Board[99] this scheme is now being taken forward. Work is taking place to develop a brand identity and to determine appropriate environmental standards, with a view to trailing the initiative in autumn 2002. The initiative is being led by the Countryside Agency, and

[95] www.chilternsociety.org.uk
[96] Pers comm. with Graham Stevens, English Nature Conservation Officer for the Chilterns Region
[97] Economic Development Strategy Oxfordshire 2001-2005 by the Oxfordshire Economic Partnership
[98] Potential for a local branding initiative in the Chilterns (2001) by GFA-RACE Partners Limited for the Chilterns Conference, Countryside Agency and English Nature
[99] Pers comm. with Simon Fisher, Countryside Officer, AONB Conservation Board

is funded by English Nature and the AONB Office. Bids have also been submitted for HLF and Rural Enterprise Scheme grants.

50. The report also lists several other branding initiatives in the Chilterns:

- A Taste of the South East (ToSE) has recruited members in the Buckinghamshire area, although the products branded in this way are not necessarily produced in the South East.
- The Chairman of Berks, Bucks and Oxon NFU is also trying to establish a Chilterns food brand, initially covering meat and then expanding into other products.
- The owner of Hardwick House Estate is focussing on adding value to produce from his woodlands. He is looking at the development of a Chiltern Group brand in association with 10 farmers in the Henley area. The initial thinking includes setting up a cutting plant on the estate.

51. The Chilterns Society sees local branding as an important way forward for the rural economy. Their website lists fifteen farmers markets which are run either weekly, fortnightly or monthly, which are an important means of promoting local produce.

52. The Bucks & Milton Keynes Food Group is a partnership comprising Buckinghamshire County Council, Aylesbury Vale District Council, Chiltern District Council, Milton Keynes Council, Wycombe District Council, the South-East Food Group Partnership and Business Link. The group has been formed to promote and raise awareness of locally produced food, develop local supply chains and encourage people to buy locally. It has produced a Food Directory. The Oxfordshire Economic Development Strategy makes a commitment to developing a plan for local food in Oxfordshire to help sustain the agricultural economy. In 2001 the County Council published 'Promoting Local Food in Oxfordshire' which evaluated the potential for agricultural diversification in this area. Oxfordshire County Council's local food strategy has led to the development, in partnership with the district councils, of popular farmers' markets in the major towns in the county and the publication of the immensely successful Oxfordshire Food Directory (2001)[100].

Woodland and Forestry

53. The Chilterns landscape is one of the most heavily wooded in England. In particular the mature beech-woods are an important element of the landscape. Lack of appropriate woodland management is a severe problem. It has been estimated that approximately one-third of the woodland cover is inadequately managed. The AONB management plan notes that the tax regime discourages investment in woodlands or management of existing woodlands. The demise of traditional markets, such as the furniture industry, has increased the difficulties of achieving good financial returns from woodland. The AONB plan, however, states that woodland owners with sound management practices should be able to market good quality timber, although returns on small woodlands are often marginal at best.

---

[100] Pers comm with Liz Moore, Environmental Management Officer, Oxfordshire County Council

54. There is support available to promote sustainable forestry, for example through the Chilterns Woodland Project (set up by the Chilterns Society to provide forestry advice) and the Trans-national Woodland Industries Group (TWIG). TWIG was established, using European and Countryside Agency funding, as a pilot project to look at ways of stimulating economic use of Chilterns timber[101]. TWIG is now reaching the end of its life and has established various initiatives such as the Chiltern Wood Festival, which are now self-sustaining (the 'wood festival' has been taken over by the private sector). TWIG has also commissioned research on the quality and type of timber available, in order to market it, and research on policy measures, which is feeding into the Forestry Commission's review of grant policies.

55. A key area of work for TWIG is stimulating local supply chains, for example through an 'industry liaison group'. The contact at TWIG noted a 'catch-22' situation where there is potential demand for timber products, but companies are unable to supply the goods due to a perceived lack of demand. He noted that local authorities and NGO's could stimulate demand through utilising local timber for outdoor furniture, and that there is also demand for timber for fuel, construction, wood pulp and veneer quality products. He also stated that there is an increasing number of micro-furniture businesses within the Chilterns area, and TWIG is working with them to encourage use of local timber.

56. A key constraint to increasing sustainable management of woodlands for economic use is the lack of capital funding. For example, one forester who is interested in charcoal production cannot pursue this due to a lack of funds for investing in capital equipment. The contact emphasised that it is far more effective to fund measures to stimulate markets for timber to achieve sustainable woodland management, rather than providing grant aid for woodland management *per se*.

Future Opportunities for Agriculture and Forestry

57. Farming and forestry occupy a large land area in the Chilterns, therefore management practices are a very important influence on the nature conservation and landscape value of the area. In terms of sustainable agriculture, the AONB management plan notes that more comprehensive and higher incentives schemes are required to sustain the progress made by the Countryside Stewardship initiative. The Planning Coordinator at the Chilterns Society[102] stated that the Society supports the loosening of planning constraints in order to facilitate farm diversification, in line with the Rural White Paper. The Chilterns Society is establishing a Farming Liaison Committee to explore the issues facing agriculture and potential means of addressing the issues.

58. Lack of appropriate woodland management is a major issue. The AONB management plan therefore argues that improved financial, fiscal and other incentives, as well as a rigorous campaign to persuade owners of the benefits of proper management are vital.

59. The contact at TWIG highlighted two key elements required to revive timber markets and, in the process, woodland management:

---

[101] Information on TWIG elicited through pers comm. with Mike Furness of TWIG (employed by the Chilterns Woodland Project, and funded through European and Countryside Agency funding)
[102] Pers comm. Geoffrey Legge, Chilterns Society Planning Coordinator

- Supply chain development.
- Grants for investment in equipment for foresters to produce marketable woodland products, for example as is provided in the south west through 'Working Woodlands' and Objective 1 funding in some areas of the UK.

60. The contact at TWIG described a project which is currently being set up, which provides an example of the types of projects which he thinks SEEDA ought to be involved in supporting, funding and promoting. *Chiltern Woodworks* is being established as a not-for-profit organisation, which will provide a retail outlet for Chilterns timber, to industries such as furniture makers, and for flooring, kitchens, etc.

61. The Planning Coordinator at the Chilterns Society noted that in order to move away from a dependency on visitors and out-commuting, the market towns in the Chilterns, such as Amersham, Chesham and Princes Risborough, also need to be kept alive. He noted that smaller industry needs to be encouraged, which could include industries using local timber. Interestingly, he noted that a brownfield audit has identified a number of sites that could be used for development, in preference to greenfield sites.

62. Reading University's report notes that the Chilterns has a high level of cultural, economic and social capital, a rapidly increasing population within it and in the surrounding region; above average household income; good transport links and a high local visit rate to places of interest. It argues that these characteristics are conducive to expanding existing markets and creating new ones for goods and services produced and/or sold in the area, many of which are likely to be associated with or arise from environmental improvements. This suggests that there is a strong future for promoting locally branded foodstuffs and wood products, for example.

63. Similarly, the social and recreational benefits of the landscapes and access routes provided by the agriculture and forestry in the Chilterns should not be underestimated, although these are difficult to quantify.

Conservation Activities

64. In the Chilterns, conservation priorities include managing chalk grassland and streams, managing woodland and protecting red kites. There are several key conservation organisations working in the Chilterns to achieve these aims:

- Chilterns AONB Conservation Board. This body takes a lead role in the conservation of the Chilterns and coordinates much work going on in the area. Approximately eight members of staff work directly for the Chilterns Conservation Board, or for projects supported or managed by the Board. The Board carries out a wide range of work with the aim of conserving and enhancing the natural beauty of the AONB. Current projects include the 'Chilterns Chalk Streams Project' and 'Red Kites in the Chilterns', a project funded with support from the Countryside Agency, which promotes enhanced understanding of this bird of prey.
- Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust. This group manages ten reserves within the Chilterns. It employs two Reserve Officers, for Oxfordshire and Buckinghamshire, and uses volunteers to carry out much work.

- RSPB. The RSPB does not own any reserves, but it is working on a farmland bird project in the Chilterns, and supports other projects in the AONB. For example, it employs a Red Kites in the Chilterns Project Officer on the AONB Conservation Board.

- English Nature directly manages three National Nature Reserves in the Chilterns (Aston Rowant, Barton Hills and Knocking Hoe). It also administers SSSIs and is involved in initiatives in a wider context, such as advising woodland managers on appropriate management techniques. In the Chilterns area, English Nature employs two Reserve Officers and a Conservation Officer.

- Chilterns Conservation Volunteers Group (part of the Chilterns Society). This group operates mainly in the central and southern Chilterns on a voluntary basis. It has 30 regular volunteers.

- Butterfly Conservation. This is a national charity that plays an important role in the Chilterns given the extensive butterfly populations present.

65. The red kites project is of interest, because it offers an opportunity to compare the Chilterns with other locations in the UK where red kites have been introduced. There are now 150 well-established pairs in the Chilterns, which are concentrated in the South Buckinghamshire/North Oxfordshire area of the Chilterns. In other parts of the UK, for example in Scotland, bird watching opportunities are promoted as part of wider tourism marketing strategies. However, in the Chilterns there is less publicity. The England Project co-ordinator[103] noted that some people are aware of red kites through magazine articles, etc. and do go to see them. In the East Midlands a CCTV camera was set up at a kite nest, with a screen at a Forestry Commission office, where visitors could watch the nest. However, in the Chilterns a key reason for the lack of publicity is the lack of an obvious location for a visitor centre or sites with adequate parking. A similar CCTV project was considered in the Chilterns, but for these reasons was abandoned. The project co-ordinator felt that there may be scope for developing the visitor economy opportunities posed by red kites further, although felt that residents are unlikely to support such a project.

66. An aim of the study being carried out by Reading University is to consider the socio-economic benefits of meeting bio-diversity targets as set out in BAPs, which the above organisations will evidently contribute to. It concludes that, with the exception of woodland management and sensitive grazing of grassland (e.g. to enable branding of meat products), the other priority habitat targets would be unlikely to have a direct effect on economic development. For example, chalk-rivers and existing chalk grassland are identified by visitors as being important features of the Chilterns, but it is unlikely that improvements in their quality would produce market-based benefits.

67. In the long-term, achievement of BAP targets will contribute to maintenance and enhancement of the Chilterns as a ‘package’: as a quality environment in terms of landscape, nature conservation, history and tranquillity, which as highlighted by this case-study is very important in a number of ways, for example, for the visitor economy and for attracting firms to the wider area.

[103] Pers comm. Ian Carter, England project co-ordinator

68. Whilst in total, conservation organisations do not contribute significantly to the employment base in the Chilterns in direct terms, their contribution in indirect terms is much greater. They provide the management of the Chilterns natural and heritage resources that provide the backbone to the visitor economy, and the quality of life of residents. Evidence of this is provided by the downturn in visitor and informal recreational activities that occurred during the access restrictions brought about by the on-set of FMD.

69. There are therefore wide-ranging market-based benefits that are likely to accrue in the Chilterns, apart from those directly related to BAPs, such as:

- Expenditure incurred to achieve the biodiversity targets and the multiplier effects in economy (see Reading University study).
- Benefits only measurable in non-monetary terms, such as improved quality of life
- Other intangible benefits, such as the value of wildlife and natural habitats.

Conclusions

The Role and Contribution of the Environmental Sector to the Economy of the Chilterns as a Whole

70. The top down analysis based on SIC codes suggest that the environmental sector accounts for between approximately 3% and 4% of total employment in the Chilterns. Agriculture and tourism are the key activities dependent on the environment, whilst tourism is the main sector dependent on a high quality environment. Environmental related advisory services is the key sector contributing to the quality of the environment.

Contribution of the Chilterns to the Regional Environmental Economy

71. The Chilterns contributes to the regional Environmental Economy of the South East. In terms of the three definitions of the Environmental Economy, the Chilterns accounts for 13% of economic activity in the South East dependent on the environment, 15% of economic activity dependent on a high quality environment, and 16% of economic activity contributing to a high quality environment.

The Influence of Sub-regional Trends on the Environmental Economy

72. The Reading University report notes that the Chilterns has a high level of cultural, economic and social capital, a rapidly increasing population within it and in the surrounding region; above average household income; good transport links and a high local visit rate to places of interest. It argues that these characteristics are conducive to expanding existing markets and creating new ones for goods and services produced and/or sold in the area, many of which are likely to be associated with or arise from environmental improvements.

73. In this respect, however, the Chilterns shares many similarities with other parts of the South East. It also raises issues. For example, the Chilterns has a high commuter population, particularly to London, but also to neighbouring towns. This, coupled

with planning restrictions in the Chilterns AONB, has meant that dwellings sell at a considerable premium, with house prices well above the national average. Many of the jobs created in the Environmental Economy (e.g. agriculture, forestry, tourism, conservation management, etc.) are low paid, seasonal and part-time, which means that people working in these industries are likely to find it increasingly difficult to live close to where they work. Although not traditionally thought of as 'key workers' (a term more usually applied to doctors, nurses and the police), they have an essential role to play in managing the Chilterns environment, which is of such importance to the visitor economy, residents, etc. Affordable housing is likely to become increasingly a critical issue in the future.

Rural Development Opportunities Linked to Tourism and Environmental Enhancement

74. Our research has identified opportunities to:

- Further promote sustainable agriculture.
- Encourage sustainable woodland management.
- Continue with local branding initiatives as a form of diversification.
- Promotion of innovative projects (e.g. the introduction of the red kite).
- Improve accessibility and recreational opportunities, particularly without the need to use a car.
- Increase the number of staying trips, aimed particularly at Londoners, who have a tendency to bypass the attractive landscapes on their doorstep to travel further afield (e.g. to the West Country) often through lack of awareness of the resource that is available to them.

75. On the other side of the equation, some landowners and residents of the Chilterns need to be made more aware of the importance of attracting activity to support the local economy, and the essential services it provides.

76. Most importantly, an integrated approach is required. Landownership and land management, conservation activity, the visitor economy, agriculture and forestry, all need to be planned for in an integrated manner. This requires a much better understanding and appreciation of how they relate to, and are dependent upon, each another. A Chilterns 'brand' that captures a range of products, including food and forestry products, visitor experience, etc., would help to establish an image of the Chilterns as a place that is unique and special. This will require co-operation of partners across local authority and regional boundaries to embrace the whole of the Chilterns area.

The Relative Value of Developing the Chilterns Environmental Economy Compared with other Economic Development Opportunities

77. This case study has not been able to determine the relative value of developing the Environmental Economy compared with other economic development opportunities,

since it is akin to comparing 'apples and pears'. The definition of the 'Environmental Economy' is very loose and captures a range of activities from business services to mineral extraction, and from tourism to the manufacture of clean technology. It is not recognised as a standard industry in national statistics, and it is debateable how much of the Environmental Economy is 'sustainable' in the long-term (the aim, as with all industrial sectors, it is to encourage a step-change in the sector to more sustainable practices). A good example is the poor management state of much of the woodland in the Chilterns, as a result of the demise of the furniture industry.

78. The outputs of most industries can be measured in pounds and pence – the cost of goods and services created and supplied. However, for the Environmental Economy, many of the benefits cannot be quantified – they are subjective (e.g. a stunning view, peace and tranquillity, or the sound of bird song, or the smell of hay). Furthermore, the benefits are often captured by another industry. For example, the economic value of a decision of an entrepreneur to locate a business near the Chilterns because of the high quality living environment it affords will be captured within the industry sector within which the business falls. No financial benefit will accrue to its environmental context at all, despite this being an important factor in the locational decision.

79. Perhaps one of the best indicators of the value of the Environmental Economy of the Chilterns is house prices. People (particularly commuters) are willing to pay a substantial premium to live in the Chilterns, and this premium aggregated across the Chilterns as a whole would give an indication of the value that people are willing to pay for the experience of living in the Chilterns.

80. As a result it is easy to undervalue the importance of the Environmental Economy. It may not have the headline impact of a major inward investment proposal, but the contribution of all the small-scale activities that go towards making the Chilterns such a beautiful resource are equally important, albeit not in an easily quantifiable way.