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1. INTRODUCTION

- 1.1 The Jobs in the Environment Support Unit (JITESU) is a unit within Forward Scotland. Forward Scotland promotes sustainable development in Scotland through practical projects and influencing policy. The unit's focus is on social inclusion, environmental justice and environmental management.
- 1.2 JITESU was set up in July 2001. Its stated aim was to:
 - work to maximise progression into lasting jobs associated with the Environment Task Force option of the New Deal in Scotland and support the development of pathways into employment in environment related industries.
- 1.3 The formation of JITESU was an initiative of the Environment Task Force Working Group in Scotland (ETFWG) in partnership with Forward Scotland.
- 1.4 The Unit secured funding from BP for the first three years of its operations. JITESU also receives support, including office accommodation, from Forward Scotland.
- 1.5 A Steering Group oversees the Unit with membership drawn from the following sectors:
 - local authority lead providers
 - private sector providers
 - the Scottish Executive
 - Jobcentre Plus
 - BP
 - Forward Scotland.
- 1.6 JITESU commissioned yellow book to produce an overview of the natural heritage sector in Scotland, focusing on the employment potential of the sector and issues that are likely to have an impact on employment in the future.

THE BRIEF

- 1.7 The brief states that the paper should include:
 - a breakdown of current employment within the sector and the economic value of the sector to the Scottish economy
 - an overview of any legislation, UK or EU, likely to impact upon the sector in relation to skills and employment
 - jobs potential - how many people could enter employment in the sector, when and what, if any, support will be required
 - career paths, skills gaps and training availability
 - case studies of how the sector has addressed issues successfully.

WORK PROGRAMME

- 1.8 The work programme for the study included:
- desk research
 - consultations with representatives from Scottish Natural Heritage and the Scottish Wildlife Trust.

REPORT STRUCTURE

- 1.9 The report is in 6 sections:
- Section 1 introduces the study
 - Section 2 defines the natural heritage sector
 - Section 3 sets out an analysis of employment in the sector
 - Section 4 reviews some drivers of change in the sector
 - Section 5 outlines future employment prospects and associated skill requirements
 - Section 6 summarises our conclusions and recommendations
 - Annex 1 lists sources of information
 - Annex 2 contains case studies of intermediate labour market (ILM) and employment initiatives.

2. NATURAL HERITAGE SECTOR DEFINED

- 2.1 The Scottish Executive¹ defines Scotland's natural heritage as including:
- plants and animals
 - landforms and geology
 - natural beauty and amenity.
- 2.2 Natural heritage embraces the combination and interrelationship of landform, habitat, wildlife and landscape and their capacity to provide enjoyment. As such, it has important cultural and economic dimensions.
- 2.3 For the purposes of this study we needed to establish a definition of *natural heritage activities*. There is no established definition and previous studies have measured natural heritage in a variety of ways.
- 2.4 The definition adopted by SNH in 1998 includes "those activities which are directly related to the management of the natural heritage, or those that help people to understand or enjoy it." The activities encompassed by this definition include:
- environmental protection, quality maintenance & enhancement
 - environmental surveys and monitoring
 - environmental education and interpretation
 - wildlife and environmental tourism
 - environmental archaeology
 - environmental media work
 - environmental consultancy
 - environmental equipment design and production.
- 2.5 These are the *core activities* vital to the enhancement, management and protection of the natural heritage. They underpin many of the secondary economic activities outlined in later chapters.
- 2.6 Some have argued that the definition adopted by SNH is too narrow. It certainly presents problems in terms of the availability of employment and economic data which are not generally classified under any of the above activities.
- 2.7 Some of the core activities are covered by Standard Industrial Classification (SIC) codes. For example:
- **01.41 Agricultural service activities including:**
 - laying out, planting and maintenance of garden, parks and green areas

¹ Scottish Executive: National Planning Policy Guidelines. NPPG 14: National Heritage 2003.

Although these activities are pertinent to the natural heritage sector, other non-related activities are also included such as establishing crops, harvesting crops etc.

➤ **73.10 Research and experimental development on natural sciences and engineering including:**

- research in earth sciences, agriculture, biology

This code also includes medical science.

➤ **91.33 Activity of membership organisations including those involved with:**

- environmental and ecological movements
- associations for the protection of animals

This code also includes political organisations, social clubs and many others.

➤ **92.53 Operation of botanical and zoological gardens including:**

- operation of nature reserves including wildlife reserves

This code includes botanical and zoological gardens including children's zoos.

- 2.8 The lack of well-fitting data from official statistical sources, such as the Annual Employment Survey and the Labour Force Survey, means that we have to rely on other sources, including research by, among others, Scottish Natural Heritage (SNH) and Lantra.
- 2.9 Lantra, the Sector Skill Council which represents the natural heritage sector, has acknowledged the difficulty in estimating the scale of sector activity.
- 2.10 A further difficulty with measuring employment in the core natural heritage activities is the broadening of the scope of the activities now classified as 'agricultural'. Many farmers are diversifying into *agri-environmental activities* such as conservation of land which was previously used for agricultural production, but it is not clear how this shift will be captured in the official data.

CONCLUSION

- 2.11 The lack of robust statistics - or even an agreed definition of the "sector" - continues to present a barrier to understanding the scale and significance of natural heritage employment. We believe that the SNH definition is the best available, although it does not correspond to recognised statistical categories and should probably be extended to include relevant research and development.

3. SECTOR SCALE AND SCOPE

- 3.1 Scotland's natural heritage is a source of direct and indirect benefits to the Scottish economy. Many key industries exploit Scotland's *rural capital* to produce, among others, food and drink products, forest products, textiles and crafts.
- 3.2 A report by Scottish Natural Heritage (SNH) confirms the wider benefits of the natural heritage sector including its ability to:
- generate income for local economies (through tourism)
 - help diversify local economies (especially rural)
 - assist with population retention and community life in remote areas
 - provide nature conservation benefits
 - enhance regional identity
 - add value to and enhance the image of Scottish products such as food, whisky and knitwear
 - attract inward investment.
- 3.3 Scotland's natural heritage plays an important role in attracting tourists to Scotland. A visitor survey in 2001 showed that 70% of visitors list wildlife and landscape as key components of their Scottish holiday². Green tourism is becoming an increasingly lucrative market, with special appeal for high income visitors and spin-off benefits for the accommodation and restaurant markets.
- 3.4 These benefits are of particular importance for Scotland's remote and rural communities. The conservation, interpretation and sustainable exploitation of natural heritage are key to the economic future of rural Scotland, and a major source of employment, business opportunity and wealth creation.

UK SECTOR EMPLOYMENT

- 3.5 The Sector Skills Council Lantra covers environmental and land-based industries in activities such as:
- land management and protection
 - animal health and welfare
 - environmental industries.
- 3.6 Lantra estimates that the *UK environmental and land-based industries sector comprises 360,000 businesses and employs around 1 million workers*. In addition, more than 400,000 people work on a regular basis as volunteers mainly in environmental conservation and animal welfare. Lantra claims that the sector contributes 5.8% of UK GDP.
- 3.7 The contribution to employment of land-based and environmental activities varies between UK countries and is significantly higher in rural and (especially) remote areas.

² Highlands Visitor Survey Interim Report May to October 2002.

3.8 The sector comprises predominately micro-businesses and sole traders. 94% of businesses in the sector employ fewer than 5 people and 50% are sole traders - with the average number of employees being 2.5³.

3.9 According to Lantra, land based and environmental businesses are characterised by a heavy reliance on local employer networks and the support of trade associations and related organisations.

Interdependence of land-based industries and conservation

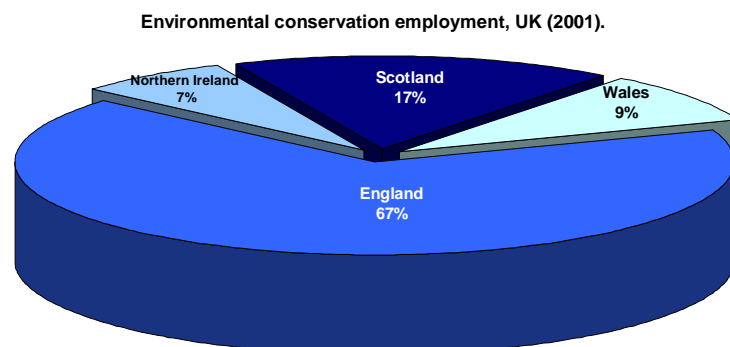
3.10 Businesses in the broader environmental sector are linked closely to land-based industries. The work of environmental conservation, for instance, impacts directly on forestry, game conservation, aquaculture, agriculture and fisheries management.

3.11 Although Lantra does not provide employment and GDP figures for all the activities encompassed by the SNH definition, it does provide estimates for the *environmental conservation* sector which includes activities such as:

- conservation of rural and urban landscapes
- flora and fauna management
- countryside recreation and interpretation, and landscape management
- maintenance and conservation of rivers, waterways and coasts.

3.12 This sector definition, although a very close fit to the SNH definition, does not include activities related to wildlife conservation. Environmental conservation contributes approximately £7 billion to the UK economy, equivalent to less than 1% of UK GDP.

3.13 Lantra estimates that as many as 56,100 people are employed in environmental conservation in the UK. Of these jobs, approximately 9,500 (17%) were based in Scotland, a disproportionately large share of the total reflecting Scotland's rurality and countryside capital.



Source: Lantra

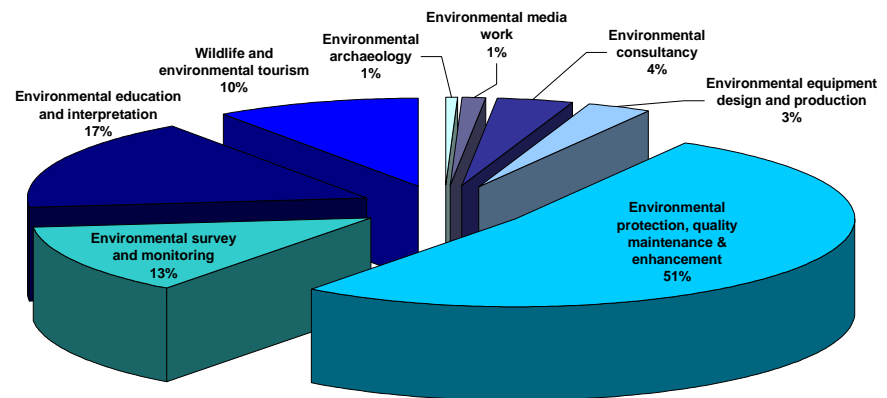
³ Lantra - Formal Expression of Interest to SSDA for a Five Year Licence

Employment in Scotland

3.14 In their 1998 report, SNH estimated that more than 8,000 people were employed in core natural heritage related jobs in Scotland. The major employing sub-sectors were:

- environmental management, protection, quality maintenance and enhancement (4,300 jobs - 51%)
- related education and interpretation activities (1,400 - 17%)
- environmental surveying and monitoring (1,000 - 13%)
- wildlife and environmental tourism (800 - 10%).

Natural heritage related jobs in Scotland, 1998. Source SNH.



3.15 The estimates generated by SNH and Lantra suggest that natural heritage (however defined) accounted for perhaps 10,000 jobs in Scotland in 2001, and may now risen to around 12,000 (see Section 5). This is, of course, a modest figure, equivalent to about 0.35% of Scottish employment - although the proportion will be significantly higher in rural areas. Any discussion about future employment prospects has to be set against this low base.

EMPLOYMENT BY ORGANISATION TYPE

Public and voluntary sector employment

3.16 In their 2001 Skills Foresight report, Lantra estimated that public sector and voluntary organisations accounted for 80% of business units in the sector. Indeed in Scotland the largest employers in the natural heritage sector were (and still are) public sector bodies such as:

- Scottish Natural Heritage
- Scottish Environmental Protection Agency
- Forestry Commission Scotland.

3.17 Charities such as the Scottish Wildlife Trust also make a significant contribution, although in most cases salaried employment is outweighed by voluntary activity.

3.18 SWT and SNH reported a marked gender imbalance in field-based (as opposed to office based) employment in nature and wildlife

conservation, with males currently accounting for approximately 80% of such posts in SWT.

- 3.19 Employment in nature and wildlife conservation activities in public sector and voluntary organisations is *mostly on a full-time basis*, and many posts were on fixed term contracts. Lantra reported that 29% of employees worked part-time.
- 3.20 Employment was also subject to seasonal variations, with visitor numbers to wildlife and nature reserves influencing the number of staff required for educational activities and guided walks. Lantra found that 55% of businesses employed casual staff.
- 3.21 SWT report that jobs in the wildlife conservation sub-sector are fairly *evenly distributed throughout Scotland*, in both urban and rural areas, although they account for a larger share of jobs in rural places.

Private sector employment

- 3.22 The private sector natural heritage workforce includes:
 - environmental consultants
 - green tourism businesses
 - agri-environmental contractors
 - land managers.
- 3.23 Data are not available in terms of the number of core natural heritage sector businesses in Scotland. However, Lantra studies estimated that the number of *environmental conservation* businesses in Scotland in 2001 was about 50.
- 3.24 A search by yellow book of a Scotland wide business directory⁴ found 162 organisations classified under environmental consultancies. Although this may not be the full total, based on the average number of employees per firm in the land-based environmental sector derived from Lantra’s work (2.5 employees), there may be about 300-400 people employed by environmental consultancies in Scotland. This is broadly in line with SNH estimates.
- 3.25 A breakdown of the *geographical distribution* of private environmental consultancies by local authority area shows a higher concentration based in and around the main cities and in North East Scotland.

Aberdeen City	15	Highland	6
Aberdeenshire	14	Inverclyde	0
Angus	2	Midlothian	9
Argyll & Bute	7	Moray	0
Clackmannanshire	1	North Ayrshire	0
Dumfries & Galloway	1	North Lanarkshire	10
Dundee City	3	Orkney Islands	6
East Ayrshire	2	Perthshire & Kinross	7
East Dunbartonshire	1	Renfrewshire	5

4 Yellow Pages business directory

East Lothian	1	Scottish Borders	2
East Renfrewshire	1	Shetland Islands	0
Edinburgh, City of	20	South Ayrshire	2
Eilean Siar	0	South Lanarkshire	8
Falkirk	2	Stirling	2
Fife	6	West Dunbartonshire	1
Glasgow City	24	West Lothian	4

3.26 Unfortunately official data are not available for employment specifically in *green/nature tourism businesses*. However figures are available for related activities including within SIC 92.53: Botanical and zoological gardens which is an aggregation of employee job numbers for:

- operation of botanical and zoological gardens including children's zoos, and
- operation of nature reserves including wildlife preservation

3.27 The Annual Business Inquiry 2001 reports that 578 people were employed in these activities. However, the split between these two activities is not known.

3.28 A study by SNH⁵ reports that the private sector workforce is more strongly "rooted" in local communities, but jobs appear to be less secure, with less training and poorer promotion prospects than in the public and voluntary sectors. This is typical of small and micro-businesses, regardless of sector.

Indirect employment opportunities

3.29 A recent study by the Macaulay Land Use Research Institute⁶ provides a broader definition of natural heritage activities, encompassing not only the core activities already outlined but also businesses that are *reliant on the natural heritage*.

3.30 The latter are activities which depend on the natural heritage for their commercial viability, including:

- activities providing goods and services (such as accommodation, recreation and entertainment) to visitors drawn to an area because of its natural heritage
- activities that utilise natural attributes in the marketing of products aimed at markets outside the local area.

3.31 Reliant activities were found to generate relatively strong *multiplier effects*, especially in remote rural areas, as a result of:

- the relatively high proportion of locally sourced inputs, and
- expenditure by visitors attracted to the area and/or purchases by people living outwith the local area.

⁵ Quality of Natural Heritage Jobs, a report by RSK ERA Ltd, commissioned by SNH 2002

⁶ Local Economic Linkages and the Natural Heritage, Macaulay Land Use Research Institute with the University of Aberdeen and The Scottish Agricultural College, 2003.

Tourism, recreation and sport

- 3.32 The growth of wildlife tourism and recreation activities over the last decade has created opportunities for the diversification of traditional land-based industries, and helped with the process of structural adjustment.
- 3.33 SERAD estimates that natural heritage dependant activities such as hiking and hill walking created about 9,400 - mostly indirect - jobs (SERAD, 1999).
- 3.34 About 20% of all sport and recreational activity in Scotland takes place in the countryside. Up to 1.25 million tourists from other parts of the UK visit Scotland to participate in mountaineering, climbing or hill walking each year, generating £275 million annually and supporting almost 10,000 jobs. 25% of all holidays taken in Scotland are activity based.
- 3.35 A recent study by Scottish Natural Heritage⁷ illustrated the growing significance of the natural heritage for Scottish residents and tourists. Trends show significant increases in the last decade in visits to the countryside, participation in outdoor activities, recreation in woodlands, uplands and the coast, and traffic on footpath networks.
- 3.36 A report produced by Forest Enterprise highlighted the number of recreational facilities within forests in Scotland, all of which have provided employment opportunities in their construction, and continue to require ongoing maintenance. A proportion of these facilities are manned either full time or on a seasonal basis.

Recreation Facilities	Scotland
Car parks	236
Cycle trails	94
Forest classrooms	3
Forest drives	5
Forest walks	361
Horse riding	55
Orienteering courses	14
Picnic sites	110
Play areas	2
Toilets	25
Viewpoints	32
Visitor centres	9
Wildlife hides	7
X-country ski routes	7
Total	960

⁷ Natural Heritage Trends - Access and recreation: an overview, February 2001. Scottish National Heritage Information and Advisory Note.

Agri-environmental employment in Scotland

- 3.37 The Scottish Executive's Agri-Environment Programme allows farmers and crofters to claim payments for adopting environmentally-friendly land management practices in areas designated as Environmentally Sensitive Areas (ESAs). As many as *3,000 farmers* are involved in ESA agreements helping to protect and improve biodiversity in some of Scotland's most sensitive environmental areas.
- 3.38 A survey of farmers⁸ undertaken by the Scottish Agricultural College indicated that conservation project work such as dyke-building, fencing, hedge-laying and planting trees had created additional employment for private sector contractors (delivering the majority of the total man-hours involved in the projects), farm workers and advisors. However the report's authors recognised that some of this work will be replacing agriculture related tasks. Such schemes may therefore help to protect employment rather than create net additional jobs.

CONCLUSION

- 3.39 This review of published research on employment in the natural heritage sector has shown that:
- the available data are incomplete and unreliable
 - the level of direct employment in core natural heritage occupations is modest at around 9-12,000
 - however, countryside capital creates a much larger (but unquantifiable) number of indirect jobs in sectors such as tourism, agriculture, forest products and food and drink.

⁸ Scottish Agricultural College, *Agri-environmental employment in Scotland*, 2001.

4. DRIVERS OF CHANGE

4.1 The Scottish Executives's natural heritage objectives are to conserve, safeguard and enhance:

- the overall populations and natural ranges of native species and the quality and range of wildlife habitats and ecosystems
- geological and physiological features
- the natural beauty and amenity of the countryside and the natural heritage of urban areas, and
- opportunities for enjoying and learning about the natural environment.

Regulatory environment

4.2 The need to protect and enhance these various elements is the subject of much legislation and regulation, by the EU and UK/Scottish Governments.

4.3 Nature conservation is a central pillar of the European Union's environment policy. Over 250 million ECU of Community co-financing has gone towards hundreds of nature conservation projects throughout the Member States⁹.

4.4 The following designations are used to safeguard Scotland's natural heritage:

- National Scenic Areas (NSAs) - areas which are nationally important for their scenic quality
- Sites of Special Scientific Interest (SSSIs) - areas of land or water which are of special interest by reason of their flora, fauna or geological or physiological features
- National Nature Reserves (NNRs) - areas of national importance for their nature conservation interest which are managed as nature reserves
- National Parks - Scotland's first two national parks have been created: Loch Lomond and the Trossachs and the Cairngorms
- Environmentally Sensitive Areas - designated as part of the Agri-Environment Programme in order to allow farmers and crofters to access payments for adopting environmentally-friendly land management practices
- The Ramsar Convention on Wetlands of International Importance, especially as waterfowl habitats
- Special Protection Areas (SPAs) - designated under The Birds Directive (1979) - protecting all wild bird species and their habitats, especially migratory birds
- Special Areas of Conservation (SACs) designated under The Habitats Directive (1972) - these sites are deemed to be important for the protection of species and habitats covered by the Directive
- together the SPAs and SACs make up the Natura 2000 network.

⁹ European Commission, *Natura 2000: Managing our Heritage*

- 4.5 The protection and enhancement of sites designated under these categories is central to the regulatory function of agencies such as SNH and SEPA, and a major source of employment opportunity in the public sector. Regulation will continue to be a key driver in the natural heritage sector.

Tourism

- 4.6 Green tourism is one of the key planks of Scottish tourism strategy. Tourism is one of Scotland's most important industry sectors, and green tourism has been identified as a fast-growing market within a mature industry.
- 4.7 Surveys have shown that UK and overseas tourists associate Scotland with attributes such as:
- beautiful scenery
 - wild landscapes/wilderness
 - an unspoilt environment
 - nature and wildlife.
- 4.8 VisitScotland's product portfolio includes two themes - Freedom of Scotland and Active Scotland - which depend crucially (though not exclusively) on Scotland's countryside capital. VisitScotland has also joined forces with the Enterprise networks and SNH to create the Tourism and the Environment Forum, which champions green tourism initiatives, including the Green Tourism Business Scheme (GTBS).
- 4.9 GTBS is a grading scheme for accommodation, cafes, restaurants and tourist attractions, and now has 420 businesses in membership.
- 4.10 Tourism is almost certainly the major beneficiary in terms of natural heritage related employment opportunities. The successful positioning of Scotland as a green tourism destination, and the branding of green tourism businesses should be the major driver for employment growth in the coming decade.

National Parks

- 4.11 The creation of National Parks for Loch Lomond and the Trossachs and the Cairngorms is intended to:
- conserve and enhance the natural and cultural heritage
 - promote the sustainable use of the natural resources of the area
 - promote understanding and enjoyment of the special qualities of the area by the public; and
 - promote sustainable social and economic development of the communities of the area.
- 4.12 The two National Parks should help to create a focus for appropriate tourism, as well as promoting sustainable and environmentally responsible development.

Other drivers of change

- 4.13 Lantra and others have identified a range of other drivers helping to shape attitudes to natural heritage. These include:
- a renewed policy focus on rural regeneration through diversification, innovation and brand identity
 - changing patterns of land use and land management
 - increasing environmental awareness, with a growing demand for sustainable production and distinctive local products
 - continuing growth in activity/interest-based tourism and leisure markets, and a growing demand for “authentic” experiences
 - the changing nature of the rural economy resulting in (i) a growing convergence between urban areas and the accessible countryside, and (ii) continuing exclusion in lagging remote areas
 - rapid demographic change and a growing proportion of retired people, including migrants
 - the potential of information and communications technologies (ICTs) to transform rural communities
 - projected increases in household income and personal mobility
 - the implications of a “cash rich - time poor” society.

CONCLUSION

- 4.14 Despite the fragmented and unsatisfactory nature of the available data, we can reasonably infer that a combination of regulation, market opportunity and changing socio-economic conditions will create conditions in which the protection, sustainable exploitation and promotion of natural heritage will produce significant added value.
- 4.15 More research is required to define, isolate and quantify these effects, but our conclusion is that in a number of markets - and especially tourism, agriculture and food and drink - awareness and understanding of natural heritage will be a pre-requisite for success.

5. FUTURE JOB OPPORTUNITIES

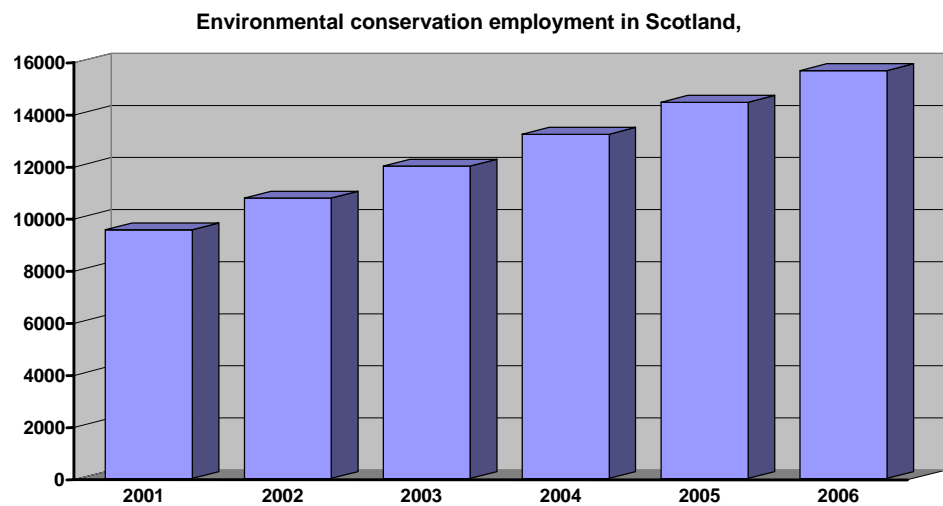
5.1 In the following paragraphs we review the available evidence on future demand for employment in core natural heritage occupations.

Forecast employment demand

5.2 Due to the highly specialised nature of the activities performed under the natural heritage banner, and the difficulties already mentioned in sourcing employment data from official statistics, employment forecasts from sources such as Futureskills Scotland are not available for the sector.

5.3 In their 2001 Skills Foresight report, Lantra forecast employment trends in the environmental conservation sector to 2006. They forecast a modest net increase of 11,750 employees in the UK during this period, at a rate of about 2,200 additional employees each year. In the same period, turnover will create a further 5,000 jobs per year.

5.4 Aggregate annual demand of around 7,200 staff per annum in the UK would result in a demand in Scotland of around 1,200 assuming that it continues to account for 17% of jobs in the sector.



Source: yellow book, Lantra 2001 Skills Foresight forecasts.

5.5 On this basis, employment in the sector would rise from its present level of around 12,000 (based on Lantra estimates) to 15,000 in 2006.

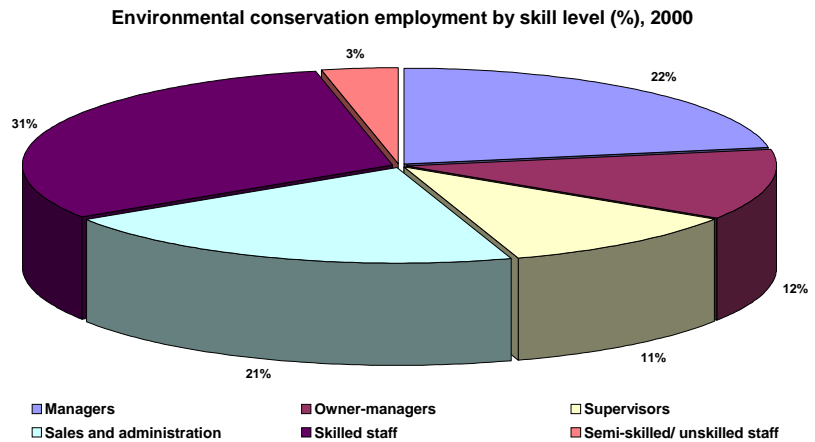
5.6 These forecasts are, of course, subject to the usual health warnings. Our consultations with SNH and SWT showed that the former did not expect to recruit net additional staff in the near future, while SWT had been forced to halve their staff over the past 3 years because of the effects of Foot and Mouth Disease (FMD) and the 9/11 terrorist attacks.

5.7 It may be prudent to assume that natural heritage employment in the public and voluntary sectors will remain at around the

present level in the next 5 years, but that (based on Lantra’s research) there will be steady growth in demand from private sector employers.

Sector skills level requirements

5.8 Lantra’s analysis of the environmental conservation sector showed that the most jobs in the sector demanded high skill levels. The chart shows that a third of those working in the sector are managers (22%) or owner-managers (12%); 31% are described as skilled staff, with only 3% semi-skilled or unskilled.



5.9 Lantra forecasts that skills requirements will continue at their present high level, with “a continuing need for staff who have a graduate level of understanding coupled with practical management abilities”.

NATURAL HERITAGE OCCUPATIONS

5.10 Lantra have identified some key occupations in the natural heritage sector including:

- Countryside and Conservation Officers
- Countryside Rangers and Wardens
- Landscape Managers
- Forestry workers
- Arboricultural workers
- Arboriculturists.

5.11 **Countryside and Conservation Officers**

- main tasks include devising projects to preserve and protect the environment or species within it.
- a degree or BTEC / SQA Higher National Diploma is normally required.
- experience either on a paid or voluntary level in conservation or as a ranger/warden is essential

- competition for the few vacancies that are available is keen, so applicants with postgraduate diplomas may have the advantage
- in public sector organisations with a career structure, advancement to senior scientific or administrative grades may be possible.
- experienced officers may move into advisory work with organisations such as the National Trust.

5.12 Countryside Rangers and Wardens

- main tasks involve managing, protecting and looking after the countryside on a day-to-day basis
- formal academic qualifications are not necessarily essential
- relevant qualifications such as BTEC/SVQ, GNVQs
- NVQs/SVQs or degrees in countryside management or related subjects may be preferred. a degree in an earth or life sciences, including geography or biology may also be useful
- experience paid or voluntary is essential
- there are few paid opportunities and many applicants for each job vacancy
- promotion to head warden or district ranger is possible with larger organisations such as local authorities or the National Trust
- advancement to countryside manager or conservation officer usually involves taking higher qualifications, an advanced diploma or master's degree

5.13 Landscape Manager

- advise on land use strategies and technical issues
- requires a first degree accredited by the Landscape Institute or a postgraduate qualification
- mature candidates may be able to enter a degree course without the usual entry qualifications by taking an access course
- potential employers include: local government, government departments and companies involved in building, civil engineering, mining, power supply and land reclamation; landscape managers are employed by organisations such as The National Trust, National Trust for Scotland and English Nature; many work in private consultancy practices
- promotion can be to a senior or management role, and there are opportunities for self-employment.

5.14 Forestry workers

- manual jobs in the forest, including fencing, draining, pruning, felling, nursery work, ground preparation, planting and weeding
- there are no formal entry requirements for most training courses, although some colleges might require some GCSE/S grade passes for entry on to particular courses.
- there is no age limit for forest workers, provided that they are fit and healthy; preference will be given to those with relevant experience, and opportunities for mature workers are limited as the competition is very keen
- forestry is becoming increasingly mechanised, so opportunities in this type of work are reducing
- for those with relevant experience and qualifications, promotion to supervisory and management positions is possible.

5.15 Arboricultural workers

- the care of trees grown for amenity purposes
- there are no set minimum entry requirements for either craft workers or operatives, although a reasonable standard of literacy and numeracy is essential.
- academic qualifications are not required for many college courses; the BTEC National Diploma requires four GCSE (A-C)/S grades (1-3) or equivalent; applicants for full-time courses may need relevant experience
- there is no upper age limit, but the physically hard nature of the work may make it unsuitable for older workers
- arboriculture is an expanding industry which attracts government support: the main employers are specialist contractors who work for local authorities, public bodies, utilities and commercial enterprises
- there are good opportunities overseas for trained craftspeople, especially tree surgeons, particularly in New Zealand, Australia, America and Germany
- progression to supervisory and managerial levels is possible
- many experienced arboricultural workers start their own businesses.

5.16 Arboriculturist

- arboriculturists are involved in the production, planting, maintenance and management of trees and woodlands which are grown for amenity purposes
- entry requirements vary; some start their careers as technical managers or supervisors after obtaining a relevant qualification

- it is possible to enter craft level courses without academic qualifications, although some practical experience may be required
- there is open access to the Arboricultural Association's Technician Certificate, but it is most suitable for those with relevant experience who wish to obtain a formal qualification
- many people in the industry have joined as mature entrants, although opportunities are better for those under 30
- arboriculturists are employed by local authorities, public bodies, utilities, and commercial enterprises
- many British trained arboriculturists find employment abroad, where the availability of trained and qualified staff is low
- There are occasionally prospects of promotion from technical, management or supervisory posts to director level
- many experienced arboriculturists become self-employed, running their own firms.

SKILLS CHALLENGES

- 5.17 According to Lantra, in 2001 there were 52 sub-degree level qualifications available in environmental conservation, as well as numerous first and higher degrees.
- 5.18 Their Skills Foresight report found that environmental conservation is unique among the land-based industries because it has an *over-supply of people qualified to level 4 and above*. This has been corroborated by our consultations with SNH and SWT.
- 5.19 By contrast, there is a *shortage of qualified people at NVQ/SVQ level 2-3*, ie, at craft level. In addition, Lantra report a growing demand (in line with employers across the occupational spectrum) for skills in:
- project and people management
 - communication
 - information and communication technology.
- 5.20 20% of employers reported skills gaps in these areas.
- 5.21 Public and voluntary sector employers also reported a requirement for people with skills in fund-raising, securing grants and managing project funding.
- 5.22 Lantra argue that the best way to improve opportunities for young people in the sector may be to provide local training for local jobs, and to help people take advantage of new self-employment opportunities in countryside management, footpaths, and National Parks.

CONCLUSION

- 5.23 This admittedly incomplete survey suggests that, while there is little or no demand for unskilled labour, the natural heritage sector provides significant opportunities for people educated to sub-degree level, including vocational qualifications. The key occupational areas for this group are supervisory and skilled craft jobs, sales and administration, which together account for more than 60% of employment in the sector.
- 5.24 The evidence suggests that occupations in the sector are popular, and Lantra have shown that the supply of graduates in related disciplines exceeds the demand for labour at that level. Some of this surplus is accounted for by growth in private sector consultancies, while others will be migrating into related occupations in agri-business and tourism.
- 5.25 By contrast, too few people are completing the vocational qualifications that are the passport for entry into skilled manual and supervisory occupations.
- 5.26 With the qualification that the core natural heritage sector remains small, the evidence suggests that there is a realistic route of entry to the sector for people who are prepared to acquire the relevant skills and experience.
- 5.27 Intermediate labour market projects such as those described in the annex may have a useful role to play in this respect, but only if they provide relevant experience and proper training. They must also establish strong links with local employers and training providers in the sector.

6. CONCLUSIONS

- 6.1 The lack of robust statistics - or even an agreed definition of the "sector" - continues to present a *barrier to understanding the scale and significance of natural heritage employment*. We believe that the SHM definition is the best available, although it does not correspond to recognised statistical categories and should probably be extended to include relevant research and development.
- 6.2 Our review of published research on employment in the natural heritage sector has shown that:
- the available data are incomplete and unreliable
 - the level of direct employment in core natural heritage occupations is very modest at *around 9-12,000 jobs in Scotland*
 - however, countryside capital creates *a much larger number of indirect jobs* in sectors such as tourism, agriculture, forest products and food and drink.
- 6.3 Despite the fragmented and unsatisfactory nature of the available data, we can reasonably infer that a combination of regulation, market opportunity and changing socio-economic conditions will create conditions in which *the protection, sustainable exploitation and promotion of natural heritage will produce significant added value and employment opportunities*.
- 6.4 More research is required to define, isolate and quantify these effects, but our conclusion is that in a number of markets - and especially tourism, agriculture and food and drink - *awareness and understanding of natural heritage will be a pre-requisite for success*.
- 6.5 This admittedly incomplete survey suggests that, while there is little or no demand for unskilled labour, the natural heritage sector provides *significant opportunities for people educated to sub-degree level, including vocational qualifications*. The key occupational areas for this group are supervisory and skilled craft jobs, sales and administration, which together account for more than 60% of employment in the sector.
- 6.6 The evidence suggests that *occupations in the sector are popular*, and Lantra have shown that the supply of graduates in related disciplines exceeds the demand for labour at that level. Some of this surplus is accounted for by growth in private sector consultancies, while others will be migrating into related occupations in agri-business and tourism.
- 6.7 By contrast, *too few people are completing the vocational qualifications* that are the passport for entry into skilled manual and supervisory occupations.
- 6.8 With the qualification that the core natural heritage sector remains small, the evidence suggests that there is *a realistic*

route of entry to the sector for people who are prepared to acquire the relevant skills and experience.

- 6.9 *Intermediate labour market projects may have a useful role to play in this respect, but only if they provide relevant experience and proper training. They must also establish strong links with local employers and training providers in the sector.*
- 6.10 Compiling this report has been a difficult and frustrating experience. A lack of data and a lack of clarity about the natural heritage “sector” conspire to create a fragmented and incomplete picture. In our discussions with Lantra and SNH it has been clear that even these specialist bodies are frustrated by a lack of hard information and the lack of research.
- 6.11 JITESU’s particular interest in the projects stems from the three linked propositions that:
- natural heritage is likely to be the source of increased employment in Scotland over the next decade
 - the sector provides entry-level opportunities for people who have been out of work for some time, or who have few skills and qualifications
 - this makes the sector a suitable vehicle for New Deal/Welfare to Work interventions.
- 6.12 In broad terms, our review substantiates these propositions, albeit with some important qualifications:
- employment in core natural heritage occupations will continue to grow: it will still account for only a very small proportion of jobs in Scotland, but a larger share of rural employment
 - natural heritage is a key source of competitive advantage in tourism, agriculture, forest products and food and drink: people with skills and experience in natural heritage occupations are likely to be in demand
 - there will be continuing availability of outdoor jobs in manual occupations - especially, but not exclusively, in rural areas; many of these jobs can be accessed without formal entry requirements, but experience is vital and in future employees will be expected to acquire qualifications
 - it would therefore be a mistake to think of the sector as a source of unskilled jobs, but it will continue to provide some entry level opportunities for people with the aptitude and aspiration to complete further training
 - ILM projects that provide quality training and strong links to employers therefore have an important role to play
 - environmental projects may also have a useful role to play in building the confidence and developing core skills of the very long-term unemployed.

RECOMMENDATIONS

- 6.13 Our key recommendations relate to *research*. We believe that a combination of statistical studies, original and secondary research is required in order to:
- agree definitions of the core natural heritage sector (direct employment)
 - identify sectors that are influenced by natural heritage, and to quantify the influence of the latter (indirect employment)
 - generate robust estimates of direct and indirect employment analysed by employment type, gender, location and employer type
 - track change over time and develop a robust and authoritative view of future prospects
 - identify the occupational profile of the sector, analysed by supply and demand, wage levels and entry requirements.

ACKNOWLEDGEMENTS

- 6.14 We would like to thank Cathy Marshall, Head of Personnel (SNH), Archie Prentice, Senior Economic Advisor (SNH) and Lisa Haines, Human Resource Co-ordinator (SWT) for their advice and contributions to this report.

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November 2003

ANNEX 1: SOURCES OF INFORMATION

Scottish Natural Heritage www.snh.gov.uk

Scottish Natural Heritage is a non-departmental public body answerable to the responsible minister and the First Minister and through them to the Scottish Parliament.

SNH's mission is to work with Scotland's people to care for the natural heritage. Its main aims are:

- to safeguard and enhance Scotland's natural heritage, particularly its natural, genetic and scenic diversity
- to foster awareness and understanding of the natural heritage
- to promote enjoyment of, and responsible public access to, the natural heritage in ways which do not damage it
- to encourage public support and voluntary effort for the benefit of the environment
- to promote improvement of the natural heritage in and around towns and cities, and
- to encourage environmental sustainability in all forms of economic activity.

Forestry Commission Scotland www.forestry.gov.uk

Forestry Commission Scotland serves as the forestry department of the Scottish Executive, advising on and implementing forestry policy. Its mission is to protect and expand Scotland's forests and woodlands and increase their value to society and the environment. It came into being on 1st April 2003 as a result of the Forestry Devolution Review, the recommendations of which have been agreed by Forestry Ministers in Scotland, England and Wales.

Scottish Environment Protection Agency www.sepa.org.uk

SEPA is the body responsible for environmental protection in Scotland. Its main aim is to:

“provide an efficient and integrated environmental protection system for Scotland that will improve the environment and contribute to the government's goal of sustainable development.”

SEPA was established by the Environment Act 1995. It became operational on 1 April 1996. The sets out SEPA's powers and responsibilities. SEPA also works with many other organisations to help protect and improve the environment.

Lantra www.lantra.co.uk

Lantra is the sector skills council for land-based and environmental industries. Lantra contributes to public policy development in areas as diverse as animal health and welfare, environmental enhancement, rural regeneration, protection of historic and natural heritage.

Rural regeneration and issues associated with sustainable development form a major part of Lantra's work.

Strategies are taken forward regionally; they aim to ensure a prosperous farming industry that will support a sustainable rural economy leading to the prosperity of all rural communities and a protected and enhanced environment.

Scottish Wildlife Trust www.swt.gov.uk

The Scottish Wildlife Trust is a leading wildlife conservation organisation with over 23,000 members. It manages over 126 wildlife reserves and is a partner in the Wildlife Trusts network across the UK. SWT is committed to campaigning as a voice of wildlife and to ensuring that Scotland provides habitats where wildlife can live and flourish.

Groundwork UK www.groundwork.org.uk

Groundwork, an environmental regeneration charity, is a federation of Trusts each working with partners in disadvantaged areas to improve the quality of the local environment, the lives of local people and the success of local businesses. There are now nearly 50 Trusts in the UK in England, Wales and Northern Ireland.

The Trust delivers community based employment initiatives based on environmental protection and improvement. The focus is on intermediate labour market (ILM) projects targeted at those furthest from the labour market.

The Trust receives funding from the European Union, the National Lottery, the landfill tax credit scheme, private sponsors and charitable foundations.

There are now a number of Groundwork projects in Eastern Europe. The Groundwork approach has also been adopted in Japan and the USA where the National Park Service is supporting a growing number of Trusts.

ANNEX 2: CASE STUDIES

INTERMEDIATE LABOUR MARKET PROJECTS IN THE NATURAL HERITAGE SECTOR

Groundwork Trust Black Country Timber Products

This scheme recruits local unemployed people to learn woodland management skills within the Black Country Urban Forest. Trainees produce a range of forest products for landscaping and environmental regeneration programmes. All proceeds are used to support the ongoing woodland management programme. The project also has its own sawmill complete with solar panel, a wind turbine and an industrial drying kiln.

Central Scotland Forest

The Central Scotland Forest Trust promotes and develops the Central Scotland Forest which will, over time, transform the landscape of lowland Scotland between Glasgow and Edinburgh.

The Trust's staff oversee environmental improvement projects throughout Central Scotland with many of the projects offering work experience and training for local unemployed people.

Much of the project work involves the construction and upgrading of footpaths, cycle paths, watercourses, seating areas etc.

The Coach House Trust

The Coach House Trust, Glasgow provides training and support for adults with disabilities, learning difficulties, mental health and other problems. The project is based on community recycling and improving the local environment.

Trainees are taught new skills in environmental work, recycling materials, composting, and landscaping. They are trained by qualified, experienced craftsmen. Over the next five years, the Trust intends to concentrate further on:

- recycling
- providing gardening services
- restoring metal and stone
- manufacturing craft items
- training workshops, classes for the community and visits by school groups.