Industry insight – Environment and agriculture

In a nutshell

From your toast, butter and jam in the morning to the enjoyable stroll around the park in the evening, the UK’s environment and agriculture sector is all around us. It is a broad sector encompassing 16 industries, as defined by Lantra: The Sector Skills Council for the Environmental and Land-based Sector. The main areas of work cover everything from land management and production, to animal welfare and environmental industries.

The current economic situation is affecting the UK environmental employment market and there is evidence of wage restraint, short-time working and pay review deferrals to protect long-term recruitment. Entry to the sector is becoming increasingly competitive due to the growing demand for experienced and skilled workers, although the sector also relies heavily on migrant labour and volunteers.

Opportunities exist in both the public and private sectors, although self-employment is a key feature of the sector. Micro-businesses and SMEs are also the norm. There are an increasing number of courses and qualifications available, as well as continuing professional development (CPD). With an ageing workforce, there is growing demand for young, skilled workers with business and entrepreneurial acumen as well as knowledge of technological and scientific advances.

What kind of work can I do?

Land management and production

- Agriculture - including producing and managing food crops such as cereal and root crops, non-food and industrial crops such as energy crops, crops for paper and materials like hemp as well as raising livestock such as dairy, beef, pigs, sheep and poultry. Also includes research and agribusiness - food distribution, international buying and trading of agricultural produce, agronomy (field crop production and soil management), agrichemicals, crop consultation, rural accounting and research. Jobs include farm manager, field trials officer and agricultural consultant.
- Aquaculture - breeding of fish, mainly salmon and trout. Jobs include fish farm manager.
- Floristry - selling and arranging flowers.
- Production horticulture - growing fruit, vegetables and plants. Jobs include commercial horticulturist.
• Land-based engineering - involves the manufacture, dealership, hire and maintenance of machinery used in the sector and includes design development, field engineering, environmental control, marketing and sales. Jobs include land-based engineer.
• Trees and timber - arboriculture (woodland management), forestry and timber processing. Jobs include arboriculturist and forest/woodland manager.
• Fencing - including agricultural, residential, high security and electrical fencing, plus vehicle restraint systems, automatic gates and access barriers.
• Horticulture, landscaping and sports turf (HLST) - including landscape architecture, garden design, amenity horticulture and golf-green keeping. Jobs include amenity horticulturist and landscape architect.

Animal health and welfare

• Animal care - kennels, catteries, animal welfare charities and the pet industry.
• Animal technology - the care and welfare of animals used in biomedical research.
• Equine - welfare, supervision, training and riding of horses.
• Farriery - shoeing of horses and other animals.
• Veterinary activities – including veterinary nursing and ancillary activities. Jobs include veterinary surgeon and animal nutritionist.

Environmental industries

• Environmental conservation - protection of rural and urban landscapes, habitat management, community recycling and countryside recreation. Jobs include environmental consultant, environmental manager, ecologist, nature conservation officer, water quality scientist and recycling officer.
• Fisheries management - angling, freshwater fisheries and conserving freshwater habitats. Jobs include fisheries officer.
• Game and wildlife management and gamekeeping.

Also see Lantra career finder, part of the Lantra website, for more information on the range of opportunities available.

What’s it like working in this sector?

• The majority of people work in small and medium-sized enterprises (SMEs) or micro-businesses. 94% of businesses employ fewer than ten people (Lantra Skills Assessment Report, 2010/2011).
• Self-employment is a key feature in this sector, meaning that a flexible attitude, good communication and business management skills are essential.
• The hours can be long and irregular and salary levels vary dramatically, depending on the industry you work in, whether you work in the public or private sector and whether you are an employee or self-employed.

• It’s a male-dominated sector, 68% of the workforce are men, although the gender balance is more equal in production horticulture. The balance even tips the other way, with women in the majority in the veterinary activities, animal care, equine and floristry industries (Lantra website).

• The Women’s Farm and Garden Association was set up to support women in farming and horticulture, and Women in Rural Enterprise (WiRE) supports women in rural businesses.

• Currently, there are nearly 1.2 million people working in the environmental and land-based sector, (Lantra Skills Assessment Report, 2010/2011).

• The biggest industry by number of employees is agriculture, with around 150,000 businesses (6% of all UK businesses) and 660,000 employees (Lantra website).

• Northern Ireland has the highest proportion of environment and agriculture businesses, with 21% of businesses in the country in the sector. Wales is in second place, with 14.2%, then Scotland (9.3%), and finally England (5.3%) (Lantra website).

• Predictably, most jobs are based in the rural economy. However, some industries, such as floristry, horticulture and landscaping, have a more urban focus.

• Land-based qualifications, particularly agricultural or environmental degrees, are often transferable within Europe and the rest of the world. For more information see the opportunities abroad section.

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**Entry and progression**

**How do I find a job?**

• See the typical employers section for a list of large companies with graduate training schemes.

• Speculative applications are a common way in to the sector. Advertised vacancies usually target experienced people as they are harder to recruit. Networking will increase your chances as many jobs are filled by word-of-mouth.

• Other positions are filled by internal recruitment. Getting a foot in the door by starting in a junior or administrative role can lead to future opportunities. Voluntary work or work experience can also get you noticed and help when applying for vacancies.

• Professional associations also advertise vacancies. See, for example, the [British Association of Landscape Industries (BALI)](https://www.bali.org.uk), [The Landscape Institute (LI)](https://www.landscapeinstitute.org), [National Farmers’ Union (NFU)](https://www.nfu.org.uk), [Institute of Chartered Foresters (ICF)](https://www.icf.org.uk) and [Chartered Institute of Water and Environmental Management (CIWEM)](https://www.ciwem.org).

• Relevant newspapers and journals with vacancies include the [Farmers Guardian](https://www.farmersguardian.com), [Farmers Weekly](https://www.farmersweekly.com), [The Grocer](https://www.thegrocer.co.uk), [Fresh Info](https://www.fresh-info.com) and [Horse & Hound](https://www.horseandhound.co.uk).

• Directories of companies or of member organisations can be useful for speculative applications, e.g. the [ENDS Environmental Consultancy Directory](https://www.ends.com), [Fresh Produce Consortium](https://www.freshproduceconsortium.com) and [Horticultural Trades Association (HTA)](https://www.HTA.org.uk).

• Specialist recruitment agencies include [Noble Futures](https://www.noblefutures.com) for animal health, equestrian and agricultural jobs and [MorePeople](https://www.morepeople.co.uk) and [Horticruitment](https://www.horticruitment.com) for horticultural roles.

• The careers sites of agricultural or land-based colleges also advertise vacancies.

• [Lantra Jobs](https://www.lantrajobs.co.uk) is a good place to find a sector-wide range of jobs, including trainee and entry-level roles.

**What skills do I need?**

Practical skills specific to your area of interest are vital. The sector is becoming increasingly technical and there is a shortage of suitably skilled managers. A relevant degree and work experience, either paid or voluntary, will make you more attractive to employers.

Other key skills include:

- problem solving and creative planning;
- teamwork;
- time management and the ability to work to deadlines;
- customer service;
- management and leadership - knowledge of business strategies, business law, financial management, risk management and global trading are increasingly sought after;
- an understanding of environmental issues, particularly auditing, sustainable development and waste management, health and safety and EU legislation.

See [Lantra career finder](https://www.lantrajobs.co.uk/career-finder), part of the [Lantra: The Sector Skills Council for the Environmental and Land-based Sector](https://www.lantra.org.uk) website, for details of skills requirements for specific roles. Also, utilise Lantra’s [National Student Database](https://www.nationalstudentdatabase.com) to help guide your decision-making, record your achievements, and ultimately make you more marketable when it comes to finding a job.
Where can I find work experience?

Work experience, through a graduate placement scheme or internship, summer vacation work, a gap year or voluntary work, is essential for getting in to most jobs within this sector. Be prepared to be flexible. Speculative applications are often effective, particularly for voluntary work. You might also obtain work experience by networking with people who already have contacts in the industry.

Organisations offering work placement schemes include:

- Change Agents UK, together with the Environmental Association for Universities and Colleges, operate the College & University Sustainability Placements (CUSP).
- large companies are likely to have work placement schemes. Visit individual company websites for more information.

Organisations offering environment-related voluntary work include:

- The Conservation Volunteers (TCV);
- Groundwork;
- Natural England;
- The Wildlife Trusts.

See the opportunities abroad section for more ideas for work experience overseas.

Is postgraduate study useful?

Postgraduate study is not usually necessary for entry and some employers will prefer relevant work experience. However, competition for environmental jobs means that a relevant postgraduate qualification may enhance your employment opportunities.

As much of the workforce is self-employed or working in small to medium-sized companies (SMEs), further study often depends on the motivation and career development needs of the individual.

Some government or research posts may expect accreditation. Self-employed workers may find accreditation a useful promotional tool.

See Find a Masters for details of postgraduate courses. Many professional bodies also list relevant postgraduate courses and/or training on their websites.

How can my career develop?

- As most graduates work in SMEs or are self-employed, career progression depends on networking, geographical mobility and taking a proactive approach to job seeking/business expansion.
• It is vital to maintain and update practical skills in order to take advantage of career opportunities.
• You can expect a more structured training scheme and career progression with the larger graduate recruiters.

Typical employers

Big players

Private sector

Large companies with graduate recruitment schemes in environmental or agricultural management or consultancy, landscape architecture or fresh food production include:

• British Sugar
• Gardline Marine Sciences
• Jacobs
• Lend Lease
• Magnox
• Mouchel
• MWH
• Parsons Brinckerhoff
• WRc Group

Many companies are developing in-house environmental teams and creating opportunities for employment.

Consultancies

Details of leading environmental and agricultural consultancies can be found in the ENDS Environmental Consultancy Directory.

Central and local government

The Department for Environment, Food and Rural Affairs (DEFRA), together with the Scottish Government, the Northern Ireland Assembly and the National Assembly for Wales are responsible for regulating environmental protection and agriculture in the UK. Key delivery departments include:

• Countryside Council for Wales (CCW);
• Forestry Commission;
• Natural England;
• Northern Ireland Environment Agency (NIEA);
• Scottish Environment Protection Agency (SEPA);
• Scottish Natural Heritage.

DEFRA employs graduates as scientific officers, plant health and seeds inspectors, statisticians, economists and information officers, covering topics such as policy formulation and implementation, food commodities, environmental protection, plant/animal health and land utilisation. There is also a fast stream route.

The Environment Agency (EA), an executive non-departmental public body, is the largest employer of environmental professionals in the UK, with nearly 13,000 people (EA, 2012).

Non-governmental organisations (NGOs)

The following NGOs are responsible for managing land for wildlife conservation:

• National Trust and the National Trust for Scotland;
• The Wildlife Trusts;
• The Woodland Trust.

Large campaigning organisations, such as Friends of the Earth and the World Wide Fund for Nature (WWF), also employ graduates.

Small to medium-sized enterprises (SMEs)

SMEs are organisations with fewer than 250 employees and an annual turnover of no more than £26million. Working for a smaller company can be rewarding because you are more likely to forge a path for yourself within the company, although opportunities to try other departments may be limited.

SMEs are unlikely to use the testing and assessment techniques of larger companies, or follow lengthy recruitment procedures. SMEs are more likely to advertise their vacancies through the local press, local graduate vacancy listings, jobcentres, and word of mouth, rather than rely on their reputation and a presence at graduate recruitment fairs. Your university careers service should have listings of jobs with small firms. See also the Department for Business, Innovation and Skills (BIS).

94% of businesses in this sector employ fewer than ten people (Lantra Skills Assessment Report, 2010/2011). Due to the high proportion of those working in SMEs and in self-employment, employers require a wide mix of skills, which might include technical skills and the ability to operate machinery. Skills such as teamwork, problem solving and communication are seen as increasingly important. Management skills in areas such as finance and marketing are also important for SME employers, who increasingly expect their employees to multitask.
Self-employment

Self-employment is a key feature of employment in this industry with around 46% of workers self-employed (Lantra Skills Assessment Report, 2010/2011).

Opportunities abroad

The environmental and agriculture sector is a global industry with job opportunities throughout the world. In agriculture, in particular, expanding global markets have led to new business and logistics challenges and the development of new technologies and competitive products. This, in turn, has led to new opportunities for qualified people.

People with agricultural and environmental skills are also needed on overseas projects to provide clean drinking water and sustainable farming techniques.

There are a number of large companies with overseas branches that recruit graduates. These include:

- Bayer and its sub-group Bayer CropScience.
- Monsanto - US-based company with international opportunities in agribusiness.
- MWH - global engineering and environmental services with opportunities for engineering and environmental graduates in Europe, Africa and the Middle East.
- Peter Brett Associates - consultancy for sustainable development projects in contaminated land, conservation and waste management worldwide.
- WYG Group - environmental posts in UK, Ireland and overseas, recruiting from a wide range of disciplines.

Placements are possible in overseas branches of UK companies, particularly in environmental services and horticulture, for example:

- G’s - management schemes for horticultural production, growing/harvesting and related commercial areas in Spain.
- Management Development Services (MDS) - secondments overseas for graduates of all disciplines interested in the fresh food and produce industry.

Non-governmental organisations (NGOs) often have overseas connections. The Wildfowl and Wetlands Trust (WWT), for example, works worldwide and has Wetland Link International (WLI) education centres based around the world.

The following are examples of organisations with voluntary opportunities abroad, useful either for a gap year or during the summer vacation:
• **AgriVenture** - run by the International Agricultural Exchange Association (IAEA). Farm work placements in Australia, New Zealand, Canada, USA and Japan.

• **Concordia** - agricultural and environmental projects overseas.

• **Earthwatch** - conservation expeditions and research opportunities worldwide.

• **Experience International** - opportunities in agriculture, forestry, fisheries and natural resource management in the USA and Ecuador.

• **International Exchange Program UK (IEPUK)** - environment and land-based placements overseas.

• **Voluntary Service Overseas (VSO)** - operates in over 30 of the most disadvantaged countries. Opportunities are available in areas relating to animals and natural resources. Relevant experience in usually required to take part in projects.

• **World-Wide Opportunities on Organic Farms (WWOOF)** - voluntary work on organic farms and the opportunity to learn about sustainable ways of living.

**Will my qualifications be recognised?**

• UK environmental and agricultural graduate skills are highly transferable worldwide, and non-UK companies generally look positively on applications from UK graduates.

• Some countries favour graduates who hold at least a Masters qualification.

• Although English may be useful and acceptable at the outset, host country language skills are regarded as being essential for effective communication with colleagues from varied backgrounds. For vacation work, English may well be sufficient.

• The internet allows increased access to learning so study and CPD (continuing professional development) can be carried out by distance learning from anywhere.

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**Future trends**

**Environmental issues**

There is an increasing need for environmental conservation skills and knowledge throughout the land-based industries. Environmental consultancy is a growth area with particular demands for environmental management, engineering, auditing and assessment and eco-design.

Local government departments need more environmentalists due to changes in EU legislation relating to sustainable development, rural and urban regeneration and access to the countryside.

The UK is improving on its former ranking as one of the poorest waste managers in Europe, and has measures in place following EU directives on waste and recycling. Therefore, waste disposal and recycling are likely to remain important issues for both
householders and businesses for the foreseeable future. This may lead to increased opportunities for those in waste management advisory roles.

**Growth in agribusiness**

The trade in food and related agricultural products is enormous. A rising population, climate change and the lack of adequate water supplies in some parts of the world has put pressure on the agriculture industry to provide enough food without damage to the environment. This means there is a growing need for managers with specialist knowledge of international buying and trading of agricultural produce, agrichemicals, machinery and animal feeds, as well as more general business, marketing and communication skills.

**Animal health and welfare**

Throughout the UK, the Animal Welfare Act and the Animal Health and Welfare Act has meant a greater duty of care towards domestic and captive animals, with owners obliged to care for their pet properly. Higher professional standards will be required for those in the animal care and equine industries.

**Securing UK food supplies**

The UK is currently around 60% self-sufficient for food production (DEFRA, Agricultural in the UK report, 2011). Due to the rising population, diminishing natural resources and climate change, it is becoming vital to secure future food supplies. Producing sustainable food at home is an important part of this, which will require graduates with technical skills as well as those with skills in scientific research and business management.

**Ageing workforce**

A quarter of the workforce in the environment and agriculture sector is currently aged 55+ years, which is much older than the UK workforce as a whole. It is predicted that, due to their retirement over the coming decade, there will be a high replacement demand with around 242,000 new entrants needed (Lantra UK Skills Assessment Report, 2010/2011). Efforts are being made to raise the appeal of the sector to young people, as well as ensuring a well-defined curriculum and qualifications are available for those interested in a career in diverse industries within the sector.

**Energy and fuel security**

The sustainability of fuel and energy sources is vital to the industry as operating costs are affected by prices. The industry can also help find a solution to the problem by providing renewable energy through producing energy crops, conventional forest management and biodegradable waste (including food and farm waste).
Jargon buster

- **Agribusiness** - businesses involved in food production, including farming, seed supply, agrichemicals, farm machinery, wholesale and distribution, processing, marketing and retail sales.
- **Agronomy** - the science of using plants for food, fuel and feeds. Includes field crop production and soil management.
- **Amenity horticulture** - the design and maintenance of planting schemes for parks, gardens, golf courses and other landscapes.
- **Aquaculture** - farming of freshwater and saltwater fish and shellfish.
- **Arboriculture** - cultivation of trees and shrubs, woodland management.
- **Biodiversity** - variation of life forms in a given ecosystem.
- **Biofuel** - fuel derived from living matter, most commonly plants.
- **Carbon footprint** - total emissions of greenhouse gases from source being measured, e.g. an individual or organisation.
- **Carbon offsetting** - the act of reducing carbon dioxide emissions to compensate for an emission somewhere else.
- **Commercial (or production) horticulture** - large-scale production and selling of plants for food or gardens.
- **CRC** - Commission for Rural Communities. Independent body that promotes awareness of the social and economic needs of people working in rural areas.
- **Equine** - relating to horses.
- **Farriery** - shoeing of horses and other animals.
- **Micro-business** - company with fewer than ten employees.
- **NGO** - non-governmental organisation. Sometimes funded by governments, but excludes government representatives from membership.
- **Sustainability** - investment in a way of living that preserves natural ecosystems.