



Arrangements for:

HND Rural Resource Management

Group Award Code: G99Y 16

**HND Environmental Management
and Sustainability**

Group Award Code: G9C2 16

Validation date: May 2008

Date of original publication: July 2009

Version: 03 (October 2017)

Acknowledgement

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of Higher National qualifications.

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History of changes

It is anticipated that changes will take place during the life of the qualification, and this section will record these changes. This document is the latest version and incorporates the changes summarised below.

Version number	Description	Date
03	Revision of Unit: F3ST 34 Rural Land Use in Scotland (finishing 31/08/2019) has been replaced by HV9V 34 Rural Land Use (start date 01/08/2017) for HND frameworks only	09/10/17
02	Revision of Unit: DN37 34 Ecology and Ecosystems has been revised by H93A 34 and will finish on 31/07/2017.	22/05/15

1 Introduction

This is the Arrangement Document for the revised Group Award in Rural Resource Management and the new Group Award in Environmental Management and Sustainability, which were validated in May 2008. This document includes: background information on the development of the Group Awards, their aims, guidance on access, details of the Group Awards' structures, and guidance on delivery.

The development of these awards took the form of a specialist single centre development, ie collaboration between the Scottish Agricultural College (SAC) and the Scottish Qualifications Authority (SQA). The revised HND Rural Resource Management replaces the award of HND Rural Resource Management (G7FP 16). The new Environmental Management and Sustainability award replaces the awards of HND Environmental Protection (G7FR 16) and HND Sustainable Environmental Management (G7FT 16).

The awards are designed to equip candidates with the knowledge, understanding and skills necessary for success in current and future employment in the rural resource management and environmental sectors, or for progression to undergraduate level study, particularly within the SAC suite of environmental and countryside degrees: BSc Environmental Protection; BSc Sustainable Environmental Management; BSc Rural Resource Management; and BSc Countryside Management.

The HNC Countryside and Environmental Management (G91K 15) is embedded within the first year of these awards and candidates exiting after year 1 of the HND programmes may exit with this SCQF level 7 award.

2 Rationale for the development/revision of the awards

2.1 Background

The predecessor awards in Rural Resource Management, Environmental Protection and Sustainable Environmental Management were introduced in 1995, 1994 and 2004 respectively. This review of the awards has taken place to reflect the need to:

- ◆ design a suite of awards which meet the needs of the environmental and resource management industry
- ◆ update all Units as required, to reflect changes in knowledge, technology and industry practices
- ◆ include new Units as required, where gaps were identified
- ◆ provide opportunities to develop Core Skills
- ◆ offer an exit award at SCQF levels 7 and 8

The revision of the awards also reflects the changes to SQA's Design Principles for HNs.

2.2 Market research, consultation and development processes

To ensure that the revised/new qualifications are vocationally relevant and meet the needs of both industry and candidates, market research and consultation was carried out by the Qualification Design Team (QDT) set up to oversee the development.

The QDT made use of market research carried out by LANTRA, the Sector Skills Council for this sector, and by employment agencies specialising in environmental jobs such as greenjobsonline.co.uk, earthworks-job.com and environmentjob.co.uk.

An annex to the LANTRA Sector Skills Agreement¹ sets out the drivers of change in the sector and the predicted changes in employment patterns and skills. The findings included:

- ◆ Micro-businesses predominate in the sector
- ◆ All industries in the sector report difficulties in recruitment and retention

In addition, an analysis of drivers of change and main issues identified the following priority areas:

- ◆ Development of skills for sustainable development
- ◆ Management, leadership and business development skills
- ◆ New skills in environmental management
- ◆ Skills and training in environmental management, and legislative knowledge
- ◆ Embed sustainable principles into activities within the various sectors
- ◆ Skills in environmental management

LANTRA's research confirmed that employers require a diverse mix of conservation, generic and specialist skills. Candidates entering the employment market will have to have knowledge and experience across a range of areas, as well as having flexibility in attitude and application. This applies not just in the environmental conservation area, but across the environmental sector.

It was acknowledged that the Scottish Government's Environment and Rural Affairs Department (SEERAD) had also identified rural and environmental conservation industries as priority industries as they are:

- ◆ critical to sustainable rural communities and the rural economy
- ◆ key employers often in economically fragile areas
- ◆ important in urban as well as rural communities
- ◆ linked to key Scottish strategies

¹ Lantra: The Sector Skills Council for the Environmental and Land-based Sector. Sector Skills Agreement Scotland. ANNEX. (2006).

The QDT consulted with a variety of stakeholders on the development of these awards, details of which are given below:

Stakeholder	Method of Consultation
Industry/Employers	<ul style="list-style-type: none"> ◆ Questionnaires ◆ Telephone interviews ◆ Meetings
Candidates (former and current)	<ul style="list-style-type: none"> ◆ Questionnaires ◆ Student Liaison Committee Meetings
Centres	<ul style="list-style-type: none"> ◆ Staff meetings

2.3 Summary of Feedback

The feedback from industry was very supportive of the proposed changes with individuals making reference to:

- ◆ the ability to select optional Units to tailor the course
- ◆ inclusion of strong business element in the Rural Resource Management award
- ◆ flexibility of options after first year of awards to suit candidates who are unsure which route to take at outset
- ◆ the development of interpersonal skills and Core Skills within the awards

Concern was raised about:

- ◆ lack of scientific skills for candidates progressing to science degrees
- ◆ lack of specialist law Unit
- ◆ lack of work experience

The QDT responded to these concerns by explaining that the science content was appropriate as the awards related to the applied side of environmental studies. The law content and health and safety issues would be delivered within the context of the Units. The QDT acknowledged that work experience was important and that candidates would be encouraged to gain appropriate work experience. However, as some candidates found it difficult to obtain work experience placements it was agreed that this should not be a barrier to achievement and therefore was not included in the structure of the awards.

Candidates of the predecessor awards supported the changes to the awards, in particular:

- ◆ the flexibility introduced by decreasing the number of HND mandatory Units within year 1 allowing easier access to either of the HND awards
- ◆ the selection of optional Units to be completed in the first year
- ◆ the type of Graded Units within the awards
- ◆ inclusion of appropriate knowledge and skills to enable progression to degree programmes or work
- ◆ inclusion of transferable skills

2.4 Development process

The QDT took cognisance of the consultation feedback and designed awards which focus on practical and applied skills and which would enable candidates to gain employment as practitioners, managers and scientists across the environmental sector. There is a continuing and increasing demand for suitably trained and qualified candidates in this wide area, driven by the increasing awareness of the need to manage resources appropriately; manage and mitigate environmental impacts; and comply with environmental legislation.

The HND Awards are both designed to build on a broad-based foundation in first year covering environmental issues and the biological and environmental sciences. There is a small common suite of Units in the second year of the HNDs that ensure that all candidates possess more advanced skills and understanding of environmental science, issues and related areas. Candidates will, thereafter, chose the route in which they wish to specialise.

2.4.1 HND Rural Resource Management

The HND Rural Resource Management is designed to develop candidates' knowledge, understanding and skills in relevant sciences, rural environmental sectors and business management, and also develop the ability to apply these in the sustainable management and use of resources, in order to prepare candidates for employment in an assistant, technical or supervisory role in the land-based industries.

The HND Rural Resource Management will supplement the environmental and scientific aspects with a suite of Units that bring in knowledge of business management techniques as well as the necessary practical skills in running a business. This HND should produce business practitioners who are able to start, develop or run rural businesses, in an environmentally-friendly manner and in a sustainable way.

2.4.2 HND Environmental Management and Sustainability

The HND Environmental Management and Sustainability is designed to develop candidates' knowledge, understanding and skills in relevant sciences and environmental sectors and also develop the ability to apply these in the protection and sustainable use of the environment and natural resources, in order to prepare candidates for employment in an assistant, technical, or supervisory role in the environmental sector.

The HND Environmental Management and Sustainability's focus is on understanding and minimising impacts on the environment, and in managing the environment in a sustainable manner. This HND will enable candidates to pursue individual specialisations by allowing them to take one of two optional clusters — the Environmental Protection cluster or the Sustainable Environmental Management cluster. The Environmental Protection cluster focuses on understanding environmental issues and impacts and developing the necessary skills in environmental monitoring. The Sustainable Environmental Management cluster looks at the human-environment interactions, understanding the impacts and learning how to manage the environment in a sustainable manner.

2.5 The Scottish Credit and Qualifications Framework

In accordance with the new Design Principles, due cognisance has been taken of the requirements of the Scottish Credit and Qualifications Framework (SCQF) in the design of the awards. The HND awards will be broadly equivalent to the first and second years of a Scottish degree.

All Units have been allocated a SCQF level at either SCQF level 7 or SCQF level 8.

3 Aims of the awards

3.1 General aims of the awards

The general aims of both Awards are:

- 1 To provide educational and training opportunities for potential and current employees in the environment and resource management industries.
- 2 To enable an articulated progression route to higher levels of learning from National Certificate through to Honours degree.
- 3 To raise levels of awareness, skills and knowledge, and encourage a holistic approach to sustainable development and management.
- 4 To provide candidates with key transferable skills enabling them to perform and communicate effectively in the workplace.
- 5 To promote adaptability in the candidates' approach to environmental resource management.

3.2 Specific aims of the awards

3.2.1 HND Rural Resource Management

The specific aims of the HND Rural Resource Management are to:

- 1 To develop the ability of candidates to operate as business practitioners in the successful management of businesses, but within a context of environmental awareness and sustainable development.
- 2 To enable candidates to develop integrated solutions through a rigorous and critical evaluation of problems associated with resource management.
- 3 To encourage a participatory approach to the development of sustainable rural communities.
- 4 To ensure that candidates have a sound appreciation of current environmental issues and how they may relate to business development and management.
- 5 To provide the opportunity for candidates to develop a range of practical abilities in rural resource management in a variety of 'real life' and simulated situations.
- 6 To produce rural resource managers with a sound understanding of relevant scientific, technical, socio-economic and business principles.
- 7 To facilitate progression to degree level education based on a firm foundation of understanding, technical expertise, Core Skills, and an understanding of the multidisciplinary nature of appropriate resource management.

3.2.2 HND Environmental Management and Sustainability

The specific aims of the HND Environment Management and Sustainability are to:

- 1 To increase candidates' awareness and understanding of key environmental issues.
- 2 To ensure that candidates have a sound understanding of the principles of sustainable development and environmental management.
- 3 To provide a sound understanding of the relevance of environmental science and management principles in addressing environmental issues.
- 4 To produce environmental managers with a sound understanding of environmental impacts and ways of managing and minimising those impacts.
- 5 To facilitate progression to degree level education based on a firm foundation of understanding, technical expertise, Core Skills, and an understanding of the multidisciplinary nature of environmental management and managing environmental impacts.

3.3 Target groups

Both awards will be suitable for a wide range of candidates including:

- ◆ School-leavers — many of whom are well-versed in certain aspects of environmental issues, and so are receptive to environmental courses.
- ◆ Mature students wishing to pursue an environmental career for a variety of reasons including: change of career direction and concern about the environment.
- ◆ Candidates wishing to study part-time due to work or family commitments.

3.4 Employment opportunities

The Awards are designed to enable candidate to access a wide range of potentially suitable jobs. This reflects the width of the environmental sector and job availability.

Candidates leaving the HND Rural Resource Management may have a number of career opportunities open to them including:

- ◆ Rural Development Assistant
- ◆ Business Manager/Assistant
- ◆ Office Manager
- ◆ National Park Officer
- ◆ Rural Business Advisor

Candidates leaving with the HND Environmental Management and Sustainability may have the following career opportunities open to them:

- ◆ Conservation advisor
- ◆ Further studies
- ◆ Environmental field centre assistant
- ◆ Environmental management assistant
- ◆ Waste and recycling assistant

4 Access to awards

As with all SQA qualifications, access to awards is at the discretion of the delivering centre. Wider access to the Group Awards is encouraged as applicants may come from a wide range of backgrounds and experiences. Access to the Group Awards is designed to encourage and support the social inclusion agenda by providing entry routes for applicants with traditional or non-traditional entry profiles. The ultimate criterion to be satisfied by any applicant seeking entry is that they should have a realistic chance of benefiting from the course.

Examples of appropriate entry requirements are given below — this is intended to provide guidance to centres. They are not exhaustive or mutually exclusive and may be considered in a variety of combinations.

4.1 Formal qualifications

Suitable formal qualifications such as SQA National Qualifications (or equivalent) are specified below.

- ◆ Two SQA Highers (SCQF level 6) together with three Standard Grade passes at SCQF level 4
- ◆ An appropriate group of National Units at SCQF level 5/6. These may include: *Trees in the Environment*, *Investigating Animal Wildlife*, *Wildlife Conservation 1* and *The Physical Landscape of Scotland*.
- ◆ Appropriate vocational qualification such as an SVQ/NVQ at level 3 in a relevant subject, for example, Countryside Skills.
- ◆ Other combinations of National Qualifications, vocational qualifications and qualifications from other awarding bodies may be acceptable at equivalent SCQF levels.

4.2 Entry to Year 2 HND Rural Resource Management/Environmental Management and Sustainability

In order to achieve the HND Rural Resource Management or HND Environmental Management and Sustainability candidates must gain 30 SQA credits. Ideally full-time candidates should be encouraged to achieve 15 credits in each year of the award. Wider access should be provided to cater for the needs of those, for example, who have achieved the HNC Countryside and Environmental Management (G91K 15) at day release or evening classes or in other centres. Candidates would therefore be expected to have a minimum of 12 credits on entry to year 2 and these would include the HNC Countryside and Environmental Management mandatory Units.

Candidates wishing to progress to the second year of either of the HNDs should include the following Units within their option choices in the first year of their programme:

Pollution and Waste Management: An Introduction (F2EE 34)
Chemistry and Physics for the Life Sciences (F21J 34)
Economic Issues: An Introduction (DE3A 34)
Scottish Rural Development (F4AK 34)

HND Rural Resource Management candidates should also take the Unit *Business Management: An Introduction (F1RJ 34)*.

Details of all optional Units are given in Section 5.

4.3 Core Skills

The recommended Core Skills entry level for the HND awards is:

Core Skill	Recommended SCQF entry level
Communication	level 5
Information Technology	level 5
Numeracy	level 4
Problem Solving	level 4
Working with Others	level 4

4.4 Work experience

Candidates with suitable work experience may be accepted for entry provided that the enrolling centre is satisfied that the candidate is able to cope with the course and is likely to benefit from undertaking the award.

4.5 English as an additional language

Where English is not the first language of a prospective candidate, it is recommended that the candidate possess English for Speakers of Other languages (ESOL) at an appropriate level. If using a test such as IELTS or equivalent, an entry score of 5.5 or above would provide a sound linguistic basis for the candidate to attempt this level of course.

5 Award(s) structure

5.1 HN Design Principles

The awards have been designed in accordance with SQA's design principles for HN Awards, ie:

- ◆ HNCs shall be designed to be at SCQF level 7 and shall comprise 96 SCQF credit points with at least 48 credit points at SCQF level 7. The HNC should include a mandatory section of at least 48 SCQF credit points and include one Graded Unit of 8 SCQF credit points at SCQF level 7.
- ◆ HNDs shall be designed to be at SCQF level 8 and shall comprise 240 SCQF credits points with at least 64 credit points at SCQF level 8. The HND should include a mandatory section of at least 96 SCQF credit points and include one Graded Unit of 8 SCQF credit points at SCQF level 7, plus 16 SCQF credit points of Graded Unit(s) at SCQF level 8.
- ◆ HNC and HND programmes shall incorporate opportunities for candidates to develop Core Skills to levels required by the occupations or progression pathways the HNs support.

5.1.1 HNC Countryside and Environmental Management

The structure of the HNC Countryside and Environmental Management award is embedded with the HNDs. This provides an exit route at SCQF level 7 after year one of the HND awards. The structure of this award is given in Appendix 1. The Units within the HNC award are shown in italics in the HND structures below.

5.1.2 HND Rural Resource Management

Unit title	code	SCQF credit points	SCQF level	SQA credit value
Mandatory section: 26 Unit credits required				
Biodiversity Conservation	F430 34	8	7	1
Biology: An Introduction	F3SJ 34	8	7	1
Ecology and Ecosystems	H93A 34*	8	7	1
Geology and Geomorphology	F3SL 34	8	7	1
Information Technology Applications Software 1	D75X 34	8	7	1
Rural Land Use in Scotland	F3ST 34	8	7	1
Environmental Awareness	F2G8 34	8	7	1
Countryside and Environmental Management: Graded Unit 1	F4BP 34	8	7	1
Pollution and Waste Management: An Introduction	F2EE 34	8	7	1
Chemistry and Physics for the Life Sciences	F21J 34	8	7	1
Economic Issues: An Introduction	F7J8 34	8	7	1
Scottish Rural Development	F4AK 34	8	7	1
Business Management: An Introduction	F1RJ 34	8	7	1
Environmental Management Systems	F6D0 35	8	8	1
Environmental Science: An Introduction	F5T5 35	8	8	1
Waste Management and Pollution Control	F55S 35	8	8	1
Data Collection and Handling Methods	F3X3 34	8	8	1
Resource Economics	F6CY 35	8	8	1
Tourism: Sustainability and Rural Communities	F566 35	8	8	1
Rural Socio-economic Development	F6BK 35	8	8	1
Financial Records for Small Business	F26G 34	8	7	1
Using Financial Accounting Statements	F93H 34	8	7	1
Planning, Budgeting and Control	F26F 35	8	8	1
Rural Business Diversification	F2EF 35	8	8	1
Rural Resource Management: Graded Unit 2	F6JG 35	8	8	1
Rural Resource Management: Graded Unit 3	F6JH 35	8	8	1

Optional section: 4 Unit credits required				
Transport: Towards a Sustainable Future	F2EH 35	8	8	1
Classification and Identification of Organisms	F3X2 34	8	7	1
Soil Management	F21V 34	8	7	1
Freshwater Environments: Management and Protection	F435 35	8	8	1
Habitat Management	F3SM 35	8	8	1
Terrestrial Ecosystems	DP4X 35	8	8	1
Education for Sustainable Development: Principles and Practice	F434 35	8	8	1
Countryside Recreation and Access	F432 34	8	7	1
Reclamation of Degraded Land	F6CS 35	8	8	1
Energy and the Environment	F6BL 35	8	8	1
Developing Skills for Personal Effectiveness	DF4E 34	8	7	1
Marine Environments: Management and Protection	F3SS 35	8	8	1
Farm Scale Renewable Energy	F2G9 35	8	8	1
Ecological Surveying	F433 35	8	8	1

It is recommended that the mandatory Units in the shaded rows are delivered in the first year of the HND along with two from the three optional Units in the shaded rows.

5.1.3 HND Environmental Management and Sustainability

In the second year of this Award, candidates will select one of two clusters, Environmental Protection or Sustainable Environmental Management as part of the Mandatory Units, as well as selecting from the Optional Units listed. However, candidates taking either cluster can take some Units from the other cluster as options. The clusters are quite distinct and, due to the integrative nature of the Units designated together in each cluster, mean that the candidates taking either cluster gain 'added value' in that area of study. In the Sustainable Environmental Management cluster, the emphasis is on human interactions and understanding of the environment, as well as managing that environment. In the Environmental Protection cluster, the emphasis is on developing scientific, laboratory and environmental monitoring skills.

5.1.4 Sustainable Environmental Management cluster option

Unit title	code	SCQF credit points	SCQF level	SQA credit value
Mandatory section: 25 Unit credits required				
Biodiversity Conservation	F430 34	8	7	1
Biology: An Introduction	F3SJ 34	8	7	1
Ecology and Ecosystems	H93A 34*	8	7	1
Geology and Geomorphology	F3SL 34	8	7	1
Information Technology Applications Software	D75X 34	8	7	1
Rural Land Use	HV9V 34*	8	7	1
Environmental Awareness	F2G8 34	8	7	1
Countryside and Environmental Management: Graded Unit 1	F4BP 34	8	7	1
Pollution and Waste Management: An Introduction	F2EE 34	8	7	1
Chemistry and Physics for the Life Sciences	F21J 34	8	7	1
Economic Issues: An Introduction	F7J8 34	8	7	1
Scottish Rural Development	F4AK 34	8	7	1
Environmental Management Systems	F6D0 35	8	8	1
Environmental Science: An Introduction	F5T5 35	8	8	1
Waste Management and Pollution Control	F55S 35	8	8	1
Data Collection and Handling Methods	F3X3 34	8	8	1
Resource Economics	F6CY 35	8	8	1
Freshwater Environments: Management and Protection	F435 35	8	8	1
Environmental Management and Sustainability: Graded Unit 2	F6V9 35	8	8	1
Environmental Management and Sustainability: Graded Unit 3	F6VA 35	8	8	1

Sustainable Environmental Management — Optional mandatory cluster				
Habitat Management	F3SM 35	8	8	1
Terrestrial Ecosystems	DP4X 35	8	8	1
Education for Sustainable Development: Principles and Practice	F434 35	8	8	1
<i>Countryside Recreation and Access</i>	<i>F432 34</i>	8	7	1
Tourism: Sustainability and Rural Communities	F566 35	8	8	1

Optional section: 5 Unit credits required				
Transport: Towards a Sustainable Future	F2EH 35	8	8	1
Business Management: An Introduction	F1RJ 34	8	7	1
Classification and Identification of Organisms	F3X2 34	8	7	1
Soil Management	F21V 34	8	7	1
Energy and the Environment	F6BL 35	8	8	1
Reclamation of Degraded Land	F6CS 35	8	8	1
Monitoring and Analytical Methods in Environmental Science	F5T6 35	8	8	1
Rural Socio-economic Development	F6BK 35	8	8	1
Developing Skills for Personal Effectiveness	DF4E 34	8	7	1
Marine Environments: Management and Protection	F3SS 35	8	8	1
Farm Scale Renewable Energy	F2G9 35	8	8	1
Ecological Surveying	F433 35	8	8	1

It is recommended that the mandatory Units in the shaded rows are delivered in the first year of the HND along with three from the four optional Units in the shaded rows.

5.1.5 Environmental Protection cluster option

Unit title	code	SCQF credit points	SCQF level	SQA credit value
Mandatory section: 25 Unit credits required				
Biodiversity Conservation	F430 34	8	7	1
Biology: An Introduction	F3SJ 34	8	7	1
Ecology and Ecosystems	H93A 34*	8	7	1
Geology and Geomorphology	F3SL 34	8	7	1
Information Technology Applications Software	D75X 34	8	7	1
Rural Land Use in Scotland	F3ST 34	8	7	1
Environmental Awareness	F2G8 34	8	7	1
Countryside and Environmental Management: Graded Unit 1	F4BP 34	8	7	1
Pollution and Waste Management: An Introduction	F2EE 34	8	7	1
Chemistry and Physics for the Life Sciences	F21J 34	8	7	1
Economic Issues: An Introduction	DE3A 34	8	7	1
Scottish Rural Development	F4AK 34	8	7	1
Environmental Management Systems	F6D0 35	8	8	1
Environmental Science: An Introduction	F5T5 35	8	8	1
Waste Management and Pollution Control	F55S 35	8	8	1
Data Collection and Handling Methods	F3X3 34	8	8	1
Resource Economics	F6CY 35	8	8	1
Freshwater Environments: Management and Protection	F435 35	8	8	1
Environmental Management and Sustainability: Graded Unit 2	F6V9 35	8	8	1
Environmental Management and Sustainability: Graded Unit 3	F6VA 35	8	8	1
Environmental Protection — Optional mandatory cluster				
Quality and Health and Safety Systems in Science Industries	DF82 34	8	7	1
Monitoring and Analytical Methods for Environmental Science	F5T6 35	8	8	1
Noise and Radioactivity	F6JK 35	8	8	1
Reclamation of Degraded Land	F6CS 35	8	8	1
Energy and the Environment	F6BL 35	8	8	1

Optional section: 5 Unit credits required				
Transport: Towards a Sustainable Future	F2EH 35	8	8	1
Business Management: An Introduction	F1RJ 34	8	7	1
Classification and Identification of Organisms	<i>F3X2 34</i>	8	7	<i>1</i>
Soil Management	F21V 34	8	7	1
Tourism: Sustainability and Rural Communities	F566 35	8	8	1
Habitat Management	F3SM 35	8	8	1
Terrestrial Ecosystems	DP4X 35	8	8	1
Education for Sustainable Development: Principles and Practice	F434 35	8	8	1
Countryside Recreation and Access	F432 34	8	7	1
Rural Socio-economic Development	F6BK 35	8	8	1
Developing Skills for Personal Effectiveness	DF4E 34	8	7	1
Marine Environments: Management and Protection	F3SS 35	8	8	1
Farm Scale Renewable Energy	F2G9 35	8	8	1
Ecological Surveying	F433 35	8	8	1

It is recommended that the mandatory Units in the shaded rows are delivered in the first year of the HND along with three from the four optional Units in the shaded rows.

5.1.6 Graded Units

The purpose of the Graded Units is to assess the candidate's ability to integrate and apply the knowledge and/or skills gained in the individual Units, to demonstrate that they have achieved the principal aims of the Group Award, and to grade the candidate achievement. The Graded Units will be assessed and a grade of A, B or C will be awarded.

The consultation process confirmed strong support for the types of Graded Units included in the awards. Graded Unit 1 is project-based and takes the form of an investigation. In the second year of both HND awards there is one project-based Graded Unit and one examination-based Graded Unit. The project Graded Unit will develop the candidates' planning, practical, scientific, research and reporting skills. The examination-based Graded Unit will help prepare candidates for degree-level studies.

5.1.7 Core Skills

The importance of Core Skills has been recognised and these are developed throughout the awards. Recommended entry and exit levels for the Core Skills, together with carrier Units for embedded Core Skills, are given below.

Core Skill	Recommended SCQF Entry level	Recommended SCQF Exit level 1 st year HND	Recommended SCQF Exit level HND
Communication	5	5	6
Information Technology	5	6	6
Numeracy	4	5	6
Problem Solving	4	5	6
Working with Others	4	5	6

Core Skill	Carrier Unit(s)	SCQF level
Information Technology	Information Technology Applications Software 1	6
Numeracy	Data Collection and Handling Methods	6

Opportunities for developing the Core Skills have been signposted within the Units — full details are given in Appendix 2.

5.2 Mapping information

An indication of how the mandatory Units map to the aims of the awards is given in Appendix 3.

Appendix 4 shows how the Units have been mapped to broad cognate groups. This shows the areas in which candidates will gain knowledge and skills.

5.2.1 Links to National Occupational Standards

The Group Awards contain some of the underpinning knowledge and understanding for some components of S/NVQs which are based on National Occupational Standards (NOS). If candidates gaining HN qualifications wish to undertake SVQs in the workplace then some of the underpinning knowledge and skills for some elements of the SVQs may have been covered in the HN awards, although they are not likely to be certified. Links to relevant SVQs, from Levels 2 to 4, are shown on the next page:

Environmental Conservation (level 2)

- ◆ Monitor and Maintain Health and Safety
- ◆ Maintain Environmental Good Practice at Work
- ◆ Survey and Report on the Condition of the Environment
- ◆ Collect, Sort and Process Recyclable Materials
- ◆ Contribute to Restoring Polluted Environments to Acceptable Conditions
- ◆ Establish Habitats

Waste Management Operations (level 2)

- ◆ Contribute to the Protection of the Environment
- ◆ Carry Out Environmental Monitoring and Testing on Waste Management Facilities
- ◆ Advise and Inform Colleagues on Facility Environmental Protection Matters

Environmental Conservation (level 3)

- ◆ Implement Environmental Good Practice at Work
- ◆ Organise Environmental Projects
- ◆ Encourage and involve people in Community Recycling
- ◆ Monitor and Report on Environmental Change
- ◆ Prepare, Conduct and Report on Field Surveys
- ◆ Produce Site Management Plans
- ◆ Protect the Environment Through Legal Enforcement

Waste Management Operations Managing Landfill Hazardous Waste (level 4)

- ◆ Control Improvements to Waste Management Operations
- ◆ Provide Information to Support Decision Making on a Waste Management Site
- ◆ Develop Schemes for the Restoration and Aftercare of Landfill Sites

Business and Administration (level 2)

- ◆ Process customer financial transactions
- ◆ Operate credit control procedures

Business and Administration (level 4)

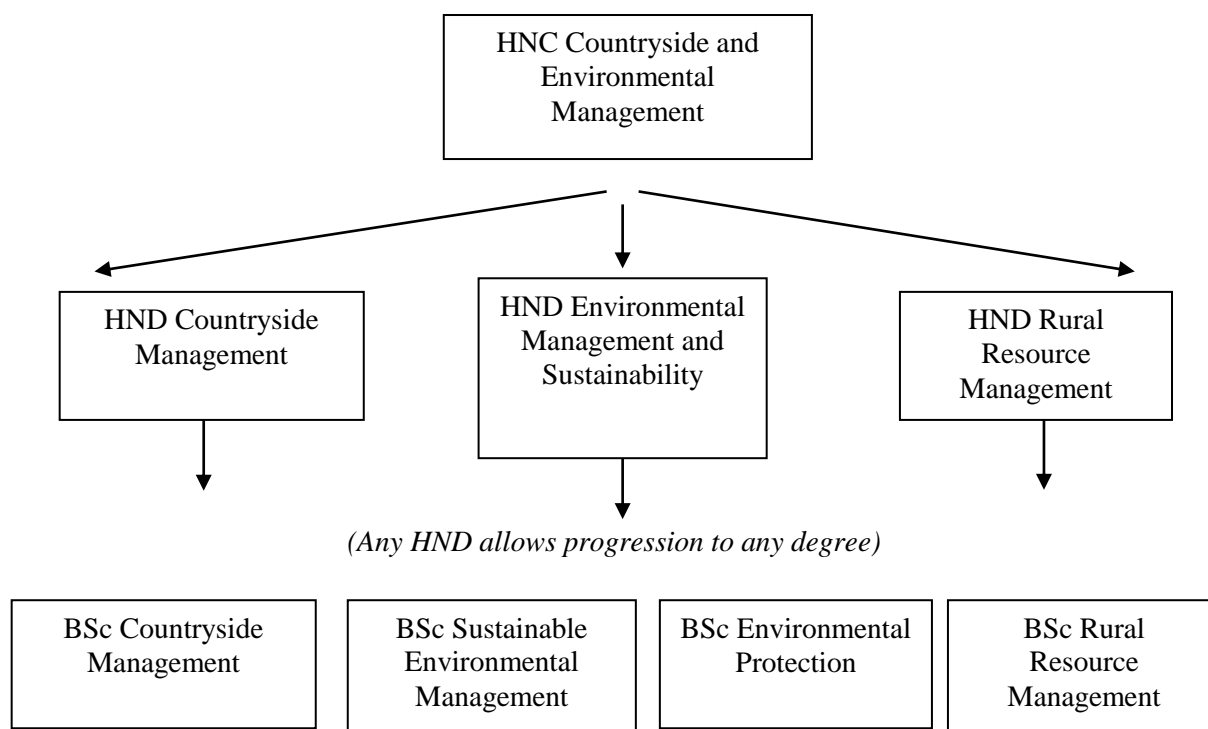
- ◆ Inform and facilitate corporate decision making
- ◆ Negotiate and agree budgets
- ◆ Promote innovation and change

Appendix 5 shows how the Units are mapped to the National Occupational Standards.

5.3 Articulation, professional recognition and credit transfer

5.3.1 Articulation

On completion of either HND it is possible for candidates to progress to any of SAC's suite of environmental or countryside BSc courses. The diagram below shows the articulation routes.



Should candidates wish to progress to a degree course at another HE institute they should be advised to liaise directly with the HE establishments prior to each year's intake of candidates as Unit credits that count towards entry requirements can vary and applications will be considered on an individual basis.

5.3.2 Links to professional bodies

Candidates should be encouraged to become Student Members of appropriate bodies, in particular the Institute for Ecology and Environmental Management and/or the Institute for Environmental Management and Assessment.

5.3.3 Credit transfer

Candidates wishing to transfer from an HNC or first part of an HND developed under the 1988 design rules into an HND validated using the 2003 design principles in the same subject area need only achieve (within the 240 SCQF credit points required for the revised HND) Graded Units of 16 SCQF credit points at SCQF level 8 (instead of Graded Units of 8 SCQF credit points at SCQF level 7 and 16 SCQF credit points at SCQF level 8). Candidates are still required to meet the conditions of the revised HND Rural Resource Management or new HND Environmental Management and Sustainability awards by achieving:

- ◆ the mandatory Units (either by credit transfer or normal study)
- ◆ a Graded Unit or Graded Units of 16 SCQF credit points at SCQF level 8
- ◆ the correct number of credits at the correct SCQF level
- ◆ development of the Core Skills required by the end-users of the Group Award

Candidates who have started the predecessor awards of HND Environmental Protection, HND Rural Resource Management or HND Sustainable Environmental Management should be encouraged to complete the award. However, should any candidate wish to transfer into one of the new HNDs, after completing all or part of the HNC Environmental Studies, or year one of the predecessor HNDs, they may be given credit transfer between the predecessor Units and the revised HN Units. Credit transfer can be given where there is broad equivalence between the subject related content of the Unit or combination of Units.

A table listing where full or partial credit transfer can be given from the predecessor Units to the revised Units is given in Appendix 6.

6 Approaches to delivery and assessment

6.1 Content and context

These Group Awards provide candidates with the appropriate knowledge, skills and experience for employment or further study in the environmental sector. Both awards are based on a sound foundation of theoretical knowledge, which is illustrated and supplemented by the applied nature of the Units studied and the overall awards. Both awards build on a common first year and some common second year Units, which taken overall result in candidates having, and developing, a wide knowledge over a range of relevant issues. Such issues include land use options, environmental issues and impacts, sustainability and environmental management, relevant legislation, policy and health and safety issues. These issues are explored both in a classroom context but also through the use of real-life case studies and frequent site visits. This range of knowledge builds a strong theoretical and applied foundation, and enables candidates to take a flexible and holistic approach to issues.

The **HND Rural Resource Management** is designed to develop candidates' knowledge, understanding and skills in relevant sciences, rural environmental sectors and business management, along with the ability to apply these in sustainable management and use of resources. Where possible the Units should use relevant real-life examples through business case studies and appropriate site visits, for example to rural businesses or resource management industries. Such visits give candidates exposure to relevant industry examples and real-life workplaces, and build up their knowledge of the industry and working situations.

The **HND Environmental Management and Sustainability** is designed to develop candidates' knowledge, understanding and skills in relevant sciences and environmental sectors along with the ability to apply these in the protection and sustainable use of the environment and natural resources. Candidates develop knowledge in a range of areas vital to the environment, and learn how to monitor and manage the environment in a holistic and sustainable manner. The two clusters within this HND allow specialisation in one of two areas:

- ◆ Sustainable Environmental Management cluster emphasises human interactions with, and human understanding of, the environment.
- ◆ Environmental Protection cluster focuses on developing the necessary scientific skills for monitoring, evaluation and remediation of environmental impacts.

In both cluster options, the HND combines theoretical knowledge with practical and applied skills, which are mainly delivered through site visits, for example to nature reserves, environmental monitoring sites, and industrial sites. These site visits allow candidates to see appropriate techniques and practices in action, and add to their knowledge and awareness of actual workplace situations and the industry overall.

6.2 Delivery and assessment

The awards will provide candidates with the essential skills and knowledge required to pursue a career in the environmental and resource management sectors.

Although centres can choose the order in which to deliver the Units within the awards, it is envisaged that the primary elements of the mandatory Units in each HND can be delivered prior to delivering the Graded Unit(s). It is important that the mandatory Units be delivered before the Graded Units are assessed, and this should be considered when timetabling. The mandatory Units are detailed in the award structures given in Section 5 of this document. Through timetabling restrictions, it may be necessary at times for individual mandatory Units to be delivered later than desired, in which case extra tutorial support in these areas should be provided to aid completion of the Graded Units. Centres may also wish to look at the order of Units delivered in relation to the subject matter. For example, it may be useful to deliver the Data Collection and Handling Unit early within the programme so that these skills can be used in other Units.

It is recommended that the Graded Units be co-ordinated by one lecturer who ensures that subject input is given by all appropriate staff. Graded Units will require clear planning before the delivery of any Units commences, in order to clarify how all Units fit together and to develop a timetable for assessment finalisation, and signpost appropriate events within the candidate's timetable. All lecturers should be aware of the requirements of the Graded Units, and how the individual Units contribute to the Graded Units. Co-ordination in this manner should ensure that appropriate information for both individual Units and the Graded Units are passed on to candidates, and that the candidates clearly see the relevance of individual Units to the Graded Units.

The assessment strategy of the SQA Design Principles to encourage a more holistic approach to assessment has been adopted throughout the awards. The new HN Unit specification places the emphasis on reducing the assessment load for both candidates and centres by devising assessments that assess the entire Unit or integrate the assessments of Outcomes together. *It is strongly recommended that Centres endeavour to integrate assessments wherever possible and encourage the flexible use of evidence in order to enhance the streamlining of assessment.*

There may also be the opportunity to integrate some assessments across Units. The exact places where assessments may be integrated will depend on the individual blend/mix of Units being undertaken, so there are only recommendations within individual Unit specifications as to where integrated assessment may be possible. The logistics of this will also depend on timetabling flexibility.

Unit specifications detail the exact Evidence Requirements and assessment conditions for each assessment event. Should centres wish to use different modes of assessment from the recommendation they should seek prior verification from SQA. Exemplar Assessments will be produced for mandatory Units indicating the national standard of achievement at the appropriate SCQF level.

Centres delivering the Awards should ensure that they have the staff expertise to cover the very wide range of subjects taught in these awards. There will be greater or lesser requirements for laboratory work, field work, and appropriate site visits depending on the award or mix of Units offered.

6.3 Open learning

Open learning may be feasible for some Units in these awards. Predecessor awards in this area were offered on a distance learning basis and it is envisaged that the revised awards may also be offered on this basis. Practical and hands-on activities give candidates valuable experience and should be built in wherever possible but experience has shown that these can be incorporated, to a large extent, within a flexible mode of delivery and emphasised at study weekends. A blended approach to learning, including on-line learning, offers many opportunities to both lecturing staff and candidates and this enables part-time study by those in work.

Information regarding open/flexible learning delivery is contained within each Unit specification.

7 General information for centres

Disabled candidates and/or those with additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

Internal and external verification

All instruments of assessment used within this/these Group Award(s) should be internally verified, using the appropriate policy within the centre and the guidelines set by SQA.

External verification will be carried out by SQA to ensure that internal assessment is within the national guidelines for these qualifications.

Further information on internal and external verification can be found in *SQA's Guide to Assessment and Quality Assurance for Colleges of Further Education* (www.sqa.org.uk).

8 General information for candidates

8.1 HND Rural Resource Management

The HND Rural Resource Management is designed to develop your knowledge, understanding and skills in relevant sciences, rural environmental sectors and business management, along with the ability to apply these in the sustainable management and use of resources, in order to prepare you for employment in an assistant, technical or supervisory role in the land-based industries.

The structure of the HND covers areas such as business requirements, resource management, land use options, environmental issues and impacts, sustainability and environmental management, relevant legislation, policy and health and safety issues. These topics will be explored both in a classroom context but also through the use of real-life case studies and frequent site visits. This range of knowledge builds a strong theoretical and applied foundation, and enables you to take a flexible and holistic approach to issues.

Conditions of Award of HND Rural Resource Management

You will be awarded the HND Rural Resource Management on successful completion of the 30 HN Unit credits (240 SCQF Credit Points) — 26 mandatory Unit credits plus 4 optional Unit credits.

The course normally extends over two years of full-time study, but can be taken on a part-time basis. It will be delivered by means of lectures, practical and laboratory classes, tutorials, and industrial visits. After a first year foundation programme, covering a range of environmental science and resource management issues, you will further develop your knowledge and skills in the area of environmental issues, impacts and management, as well as in business management and practices. Throughout the course you will have the opportunity to further develop your awareness of rural resource management issues and practices. You will also have the opportunity to develop the Core Skills of *Communication, Numeracy, Information Technology, Problem Solving and Working with Others*. The inclusion of a broad range of options from across the environmental and management spectrum allows the development of abilities and interests leading to preferred progression or career paths.

Assessment Strategy

Assessments may take the form of tests, practical assessments, assignments, reports and projects. The overall assessment strategy is to encourage a holistic approach to assessment which means that the assessment of some Outcomes within Units, or some Units, may be combined.

Graded Units

There are three Graded Units within the HND Group Award. Graded Unit 1 is undertaken in the first year of the HND. This will take the form of an investigation in which you apply the knowledge, understanding and practical skills that you have developed throughout the first year Units. This Graded Unit is at SCQF level 7 and is worth one HN credit. It is designed to assess and grade your ability to undertake planning, research, evaluation and report writing in the field of countryside and environmental management.

In the second year of the HND you will undertake two Graded Units at SCQF level 8, each worth one HN credit. One will be a three hour examination, to assess and grade your ability to retain and integrate your knowledge and understanding. The other will be an investigation which will assess your ability to apply your knowledge, understanding and practical skills to research a particular topic.

Employment Opportunities

The HND Rural Resource Management may enable you to enter employment pathways such as:

- ◆ Rural development assistant
- ◆ Business manager/assistant
- ◆ Office manager
- ◆ Rural business advisor

Progression Routes to Higher Education

The HND Rural Resource Management is designed to articulate primarily with year 3 of the BSc Rural Resource Management. However, articulation also occurs with BSc Sustainable Environmental Management or BSc Environmental Protection programmes. These articulation routes may enable you to enter a much wider range of possible career pathways, such as:

- ◆ Research assistant
- ◆ Further studies (MSc, PhD)
- ◆ Local Authority development officer
- ◆ Rural Business Planner/Advisor
- ◆ Farm Business Assessor
- ◆ Environmental Officer
- ◆ Energy Auditor
- ◆ Environmental Recruitment Advisor

There are other progression routes to environmental and resource management courses at other Higher Education establishments which further broaden possible career pathways. You are advised to liaise directly with the HE establishments prior to each year's intake of candidates as Unit credits that count towards entry requirements can vary and applications will be considered on an individual basis.

8.2 HND Environmental Management and Sustainability

The HND Environmental Management and Sustainability is designed to develop your knowledge, understanding and skills in relevant sciences and environmental sectors along with the ability to apply these in the protection and sustainable use of the environment and natural resources, in order to prepare you for employment in an assistant, technical, or supervisory role in the environmental sector.

The structure of the HND covers areas such as land use options, environmental issues and impacts, sustainability and environmental management, relevant legislation, policy and health and safety issues. These issues are explored both in a classroom context but also through the use of real-life case studies and frequent site visits. This range of knowledge builds a strong theoretical and applied foundation, and enables you to take a flexible and holistic approach to issues.

This HND can be taken by candidates following one of two optional clusters, which enable candidates to pursue individual specialisations. The Environmental Protection cluster focuses on understanding environmental issues and impacts and developing the necessary skills in environmental monitoring. The Sustainable Environmental Management cluster looks at the human-environment interactions, understanding the impacts and learning how to manage the environment in a sustainable manner.

Conditions of Award of HND Environmental Management and Sustainability

You will be awarded the HND Environmental Management and Sustainability on successful completion 30 HN Unit credits (240 SCQF Credit Points) — 25 mandatory Unit credits plus 5 optional Unit credits.

The course normally extends over two years of full-time study, but can be taken on a part-time basis. It will be delivered by means of lectures, practical and laboratory classes, tutorials, and industrial visits. After a first year foundation covering a range of environmental science and resource management issues, you will further develop your knowledge and skills in the area of environmental issues, impacts and management, focusing on the practical understanding and management or mitigation of such impacts. Throughout the course you will have the opportunity to further develop your awareness of environmental management issues and practices. You will also have the opportunity to develop the Core Skills of *Communication, Numeracy, Information Technology, Problem Solving and Working with Others*. The inclusion of a broad range of options from across the environmental and management spectrum allows the development of abilities and interests leading to preferred progression or career paths.

Assessment Strategy

Assessments may take the form of tests, practical assessments, assignments, reports and projects. The overall assessment strategy is to encourage a holistic approach to assessment which means that the assessment of some Outcomes within Units, or some Units, may be combined.

Graded Units

There are three Graded Units within the HND Group Award. Graded Unit 1 is undertaken in the first year of the HND. This will take the form of an investigation in which you will apply the knowledge, understanding and practical skills that you have developed throughout the first year Units. This Graded Unit is at SCQF level 7 and is worth 1 HN credit. It is designed to assess and grade your ability to undertake planning, research, evaluation and report writing in the field of countryside and environmental management.

In the second year of the HND you will undertake two Graded Units at SCQF level 8, each worth one HN credit. One will be a three hour examination, to assess and grade your ability to retain and integrate your knowledge and understanding. The other will be an investigation which will assess your ability to apply your knowledge, understanding and practical skills to research a particular topic.

Employment Opportunities

The HND Environmental Management and Sustainability may enable you to enter employment pathways such as:

- ◆ Conservation advisor
- ◆ Environmental field centre assistant
- ◆ Environmental management assistant
- ◆ Waste and recycling assistant

Progression Routes to Higher Education

The HND Environmental Management and Sustainability is designed to articulate primarily with year 3 of either BSc Sustainable Environmental Management or BSc Environmental Protection. However, articulation also occurs with BSc Rural Resource Management. These articulation routes may enable you to enter a much wider range of possible career pathways, such as:

- ◆ Research assistant
- ◆ Environmental Officer
- ◆ Energy Auditor
- ◆ Environmental Recruitment Advisor
- ◆ Local Authority development officer
- ◆ Rural Business Planner/Advisor
- ◆ Farm Business Assessor
- ◆ Further studies (MSc, PhD)

There are other progression routes to environmental and resource management courses at other Higher Education establishments which further broaden possible career pathways. You are advised to liaise directly with the HE establishments prior to each year's intake of candidates as Unit credits that count towards entry requirements can vary and applications will be considered on an individual basis.

9 Glossary of terms

SCQF: This stands for the Scottish Credit and Qualification Framework, which is a new way of speaking about qualifications and how they inter-relate. We use SCQF terminology throughout this guide to refer to credits and levels. For further information on the SCQF visit the SCQF website at www.scqf.org.uk

SCQF credit points: One HN credit is equivalent to 8 SCQF credit points. This applies to all HN Units, irrespective of their level.

SCQF levels: The SCQF covers 12 levels of learning. HN Units will normally be at levels 6-9. Graded Units will be at level 7 and 8.

Subject Unit: Subject Units contain vocational/subject content and are designed to test a specific set of knowledge and skills.

Graded Unit: Graded Units assess candidates' ability to integrate what they have learned while working towards the Units of the Group Award. Their purpose is to add value to the Group Award, making it more than the sum of its parts, and to encourage candidates to retain and adapt their skills and knowledge.

Dedicated Unit to cover Core Skills: This is a non-subject Unit that is written to cover one or more particular Core Skills.

Embedded Core Skills: This is where the development of a Core Skill is incorporated into the Unit and where the Unit assessment also covers the requirements of Core Skill assessment at a particular level.

Signposted Core Skills: This refers to the opportunities to develop a particular Core Skill at a specified level that lie out-with automatic certification.

Qualification Design Team: The QDT works in conjunction with a Qualification Manager/Development Manager to steer the development of the HNC/HND from its inception/revision through to validation. The group is made up of key stakeholders representing the interests of centres, employers, universities and other relevant organisations.

Consortium-devised HNCs and HNDs are those developments or revisions undertaken by a group of centres in partnership with SQA.

Specialist single centre and specialist collaborative devised HNCs and HNDs are those developments or revisions led by a single centre or small group of centres who provide knowledge and skills in a specialist area. Like consortium-devised HNCs and HNDs, these developments or revisions will also be supported by SQA.

10 Appendices

- Appendix 1: HNC Countryside and Environmental Management Award Structure
- Appendix 2: Core Skills Signposting
- Appendix 3: Mapping of Units to Aims of Awards
- Appendix 4: Mapping of Units to Cognate Areas
- Appendix 5: Links with National Occupational Standards
- Appendix 6: Credit Transfer Arrangements

Appendix 1: HNC Countryside and Environmental Management — Award Structure

HNC Countryside and Environmental Management				
Unit title	code	SCQF credit points	SCQF level	SQA credit value
Mandatory section: 8 Unit credits required				
Biodiversity Conservation	F430 34	8	7	1
Biology: An Introduction	F3SJ 34	8	7	1
Ecology and Ecosystems	H93A 34*	8	7	1
Geology and Geomorphology	F3SL 34	8	7	1
Information Technology Applications Software	D75X 34	8	7	1
Rural Land Use in Scotland	F3ST 34	8	7	1
Environmental Awareness	F2G8 34	8	7	1
Countryside and Environmental Management: Graded Unit 1	F4BP 34	8	7	1
Optional section: 4 Unit credits required				
Countryside Recreation and Access	F432 34	8	7	1
Classification and Identification of Organisms	F3X2 34	8	7	1
Interpretation: An Introduction	F3SP 34	8	7	1
Leadership of Countryside Activities	F437 34	8	7	1
Pollution and Waste Management: An Introduction	F2EE 34	8	7	1
Chemistry and Physics for the Life Sciences	F21J 34	8	7	1
Economic Issues: An Introduction	DE3A 34	8	7	1
Scottish Rural Development	F4AK 34	8	7	1

Appendix 2: Core Skills Signposting

Unit title	Communication			Numeracy		ICT	Problem Solving			Working with Others
	Reading	Writing	Oral	Using number	Using graphical information		Critical thinking	Planning and organising	Reviewing and evaluating	
YEAR 1										
Biodiversity Conservation	6	6	6				6	6	6	
Biology: An Introduction	6	6	6			6				6
Ecology and Ecosystems	6	6	6			6				
Geology and Geomorphology	6	6	6							5
Information Technology Applications Software 1						6				
Rural Land Use in Scotland	6	6	6			6	6	6	6	
Environmental Awareness	6	6	6							
Countryside and Environmental Management: Graded Unit 1	5	5	5	5	5	6	5	5	5	
Pollution and Waste Management: An Introduction		6					6		6	6
Chemistry and Physics for the Life Sciences	6	6	6	6					6	
Economic Issues: An Introduction	6	6		6	6	6	6	6	6	
Scottish Rural Development	6	6	6						6	6

Appendix 2: Core Skills Signposting (cont)

Unit title	Communication			Numeracy		ICT	Problem Solving			Working with Others
	Reading	Writing	Oral	Using number	Using graphical information		Critical thinking	Planning and organising	Reviewing and evaluating	
Classification of Living Organisms	6	6	6							
Business Management: An Introduction	6	6	6	5				5		
Soil Management	6	6	6	6	6		6	6	6	
Transport: Towards a Sustainable Future	6	6	6							6
YEAR 2										
Environmental Management Systems	6	6	6				6			
Environmental Science: An Introduction	6	6	6	6	6					
Waste Management and Pollution Control	6	6	6				6			6
Data Collection and Handling Methods				6	6		6	6	6	
Resource Economics	6	6	6				6	6	6	
Rural Socio-economic Development	6	6	6							6
Financial Records for Small Business				6	6		6	6	6	
Using Financial Accounting Statements	6	6	6							
Planning, Budgeting and Control		6		6	6	6				
Rural Business Diversification		6		6		6				

Appendix 2: Core Skills Signposting (cont)

Unit title	Communication			Numeracy		ICT	Problem Solving			Working with Others
	Reading	Writing	Oral	Using number	Using graphical information		Critical thinking	Planning and organising	Reviewing and evaluating	
Tourism: Sustainability and Rural Communities	6	6	6			5				
Freshwater Environments: Management and Protection		6								
Habitat Management	6	6	6				6	6	6	
Terrestrial Ecosystems	6	6	6							6
Ecological Surveying		5	5					5		
Education for Sustainable Development: Principles and Practice	6	6	6							6
Countryside Recreation and Access	5	5	5			5	5	5	5	5
Quality and Health and Safety Systems	5	5	5							4
Monitoring and Analytical Methods for Environmental Science	6	6	6	6	6		6	6	6	
Noise and Radioactivity		6		6			6			
Reclamation of Degraded Land	6	6	6				6	6	6	
Energy and the Environment	6	6	6	6	6					
Developing Skills for Personal Effectiveness							5	5	5	
Marine Environments: Management and Protection		6								

Appendix 2: Core Skills Signposting (cont)

Unit title	Communication			Numeracy		ICT	Problem Solving			Working with Others
	Reading	Writing	Oral	Using number	Using graphical information		Critical thinking	Planning and organising	Reviewing and evaluating	
Farm Scale Renewable Energy	6	6	6	6	6					
Rural Resource Management: Graded Unit 2										
Rural Resource Management: Graded Unit 3										
Environmental Management and Sustainability: Graded Unit 2										
Environmental Management and Sustainability: Graded Unit 3										

Appendix 3: Mapping of Units to Aims of Awards

HND Rural Resource Management

Unit code	Unit title	General aims					Specific aims						
		1	2	3	4	5	1	2	3	4	5	6	7
F430 34	Biodiversity Conservation	✓	✓	✓		✓				✓		✓	✓
F3SJ 34	Biology: An Introduction	✓	✓									✓	✓
DN37 34	Ecology and Ecosystems	✓	✓									✓	✓
F3SL 34	Geology and Geomorphology	✓	✓									✓	✓
D75X 34	Information Technology: Applications Software 1	✓	✓		✓								✓
F3ST 34	Rural Land Use in Scotland	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓
F2G8 34	Environmental Awareness	✓	✓	✓		✓	✓		✓	✓		✓	✓
F4BP 34	Countryside and Environmental Management: Graded Unit 1	✓	✓	✓	✓	✓			✓				✓
F2EE 34	Pollution and Waste Management: An Introduction	✓	✓	✓				✓		✓		✓	✓
F21J 34	Chemistry and Physics for the Life Sciences	✓	✓									✓	✓
DE3A 34	Economic Issues: An Introduction	✓	✓	✓				✓				✓	✓
F4AK 34	Scottish Rural Development	✓	✓	✓		✓			✓			✓	✓
F1RJ 34	Business Management: An Introduction	✓	✓			✓	✓				✓	✓	✓
F6D0 35	Environmental Management Systems	✓	✓	✓		✓	✓	✓			✓	✓	✓
F5T5 35	Environmental Science: An Introduction	✓	✓	✓						✓		✓	✓
F55S 35	Waste Management and Pollution Control	✓	✓	✓						✓		✓	✓
F3X3 34	Data Collection and Handling Methods	✓	✓		✓								✓
F6CY 35	Resource Economics	✓	✓	✓		✓				✓		✓	✓

Appendix 3: Mapping of Units to Aims of Awards (cont)

HND Rural Resource Management (cont)

F566 35	Tourism: Sustainability and Rural Communities	✓	✓	✓		✓		✓	✓	✓		✓	✓
F6BK 35	Rural Socio-economic Development	✓	✓	✓		✓	✓	✓	✓			✓	✓
F26G 34	Financial Records for Small Business	✓	✓				✓				✓	✓	✓
F137 34	Using Financial Accounting Statements	✓	✓				✓				✓	✓	✓
F26F 35	Planning, Budgeting and Control	✓	✓				✓				✓	✓	✓
F2EF 35	Rural Business Diversification	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓
F6JG 35	Rural Resource Management: Graded Unit 2	✓	✓		✓								✓
F6JH 35	Rural Resource Management: Graded Unit 3	✓	✓		✓								✓

Appendix 3: Mapping of Units to Aims of Awards (cont)

HND Environmental Management and Sustainability

Unit code	Unit title	General aims					Specific aims				
		1	2	3	4	5	1	2	3	4	5
F430 34	Biodiversity Conservation	✓	✓	✓		✓	✓			✓	✓
F3SJ 34	Biology: An Introduction	✓	✓						✓		✓
DN37 34	Ecology and Ecosystems	✓	✓						✓		✓
F3SL 34	Geology and Geomorphology	✓	✓					✓	✓		✓
D75X 34	Information Technology: Applications Software 1	✓	✓		✓						✓
F3ST 34	Rural Land Use in Scotland	✓	✓	✓		✓	✓		✓		✓
F2G8 34	Environmental Awareness	✓	✓	✓		✓	✓	✓		✓	✓
F4BP 34	Countryside and Environmental Management: Graded Unit 1	✓	✓	✓	✓	✓					✓
F2EE 34	Pollution and Waste Management: An Introduction	✓	✓	✓			✓		✓	✓	✓
F21J 34	Chemistry and Physics for the Life Sciences	✓	✓						✓		✓
DE3A 34	Economic Issues: An Introduction	✓	✓	✓				✓			✓
F4AK 34	Scottish Rural Development	✓	✓	✓		✓		✓			✓
F6D0 35	Environmental Management Systems	✓	✓			✓		✓	✓		✓
F5T5 35	Environmental Science: An Introduction	✓	✓	✓		✓	✓		✓	✓	✓
F55S 35	Waste Management and Pollution Control	✓	✓	✓			✓	✓	✓	✓	✓
F3X3 34	Data Collection and Handling	✓	✓	✓							✓
F6CY 35	Resource Economics	✓	✓		✓			✓	✓		✓
F435 35	Freshwater Environments: Management and Protection	✓	✓	✓		✓	✓		✓	✓	✓
F6V9 35	Environmental Management and Sustainability: Graded Unit 2	✓	✓		✓						✓
F6VA 35	Environmental Management and Sustainability: Graded Unit 3	✓	✓		✓						✓

Appendix 4: Mapping to Cognate Areas

Optional Units are shown in italics.

HND Rural Resource Management		
Cognate area	SCQF level 7	SCQF level 8
Business & Policy	<ul style="list-style-type: none"> ◆ Economic Issues: An Introduction ◆ Business Management: An Introduction 	<ul style="list-style-type: none"> ◆ Resource Economics ◆ Financial Records for Small Business ◆ Using Financial Accounting Statements ◆ Planning, Budgeting & Control ◆ Rural Business Diversification ◆ Rural Socio-economic Development
Environmental Issues and Management	<ul style="list-style-type: none"> ◆ Pollution and Waste Management: An Introduction ◆ Scottish Rural Development 	<ul style="list-style-type: none"> ◆ Environmental Management Systems ◆ Waste Management and Pollution Control ◆ <i>Freshwater Environment: Management and Protection</i> ◆ <i>Marine Environments: Management and Protection</i> ◆ <i>Energy and the Environment</i> ◆ <i>Farm Scale Renewable Energy</i> ◆ <i>Transport: Towards a Sustainable Future</i>
Human Aspects	<ul style="list-style-type: none"> ◆ Environmental Awareness ◆ <i>Countryside Recreation and Access</i> 	<ul style="list-style-type: none"> ◆ Tourism: Sustainability and Rural Communities ◆ <i>Education for Sustainable Development: Principles and Practice</i>
Science	<ul style="list-style-type: none"> ◆ Biology: An Introduction ◆ Chemistry and Physics for the Life Sciences 	<ul style="list-style-type: none"> ◆ Environmental Science: An Introduction
Conservation, Ecology, and Management	<ul style="list-style-type: none"> ◆ Biodiversity Conservation ◆ Ecology and Ecosystems ◆ <i>Classification and Identification of Organisms</i> 	<ul style="list-style-type: none"> ◆ <i>Habitat Management</i> ◆ <i>Terrestrial Ecosystems</i> ◆ <i>Ecological Surveying</i>

Appendix 4: Mapping to Cognate Areas (cont)

HND Rural Resource Management (cont)		
Cognate area	SCQF level 7	SCQF level 8
Soils and Land	<ul style="list-style-type: none"> ◆ Rural Land Use in Scotland ◆ Geology and Geomorphology ◆ <i>Soil Management</i> 	<ul style="list-style-type: none"> ◆ <i>Reclamation of Degraded Land</i>
Transferable Skills and Integrative Units	<ul style="list-style-type: none"> ◆ Information Technology: Applications Software 1 	<ul style="list-style-type: none"> ◆ Data Collection and Handling Methods
	<ul style="list-style-type: none"> ◆ Countryside and Environmental Management: Graded Unit 1 	<ul style="list-style-type: none"> ◆ Rural Resource Management: Graded Unit 2
	<ul style="list-style-type: none"> ◆ <i>Developing Skills for Personal Effectiveness</i> 	<ul style="list-style-type: none"> ◆ Rural Resource Management: Graded Unit 3
HND Environmental Management and Sustainability — Environmental Protection Cluster		
Cognate area	SCQF level 7	SCQF level 8
Science	<ul style="list-style-type: none"> ◆ Biology: An Introduction ◆ Chemistry and Physics for the Life Sciences ◆ Quality and Health and Safety Systems in Science Industries 	<ul style="list-style-type: none"> ◆ Environmental Science: An Introduction ◆ Monitoring and Analytical Methods in Environmental Science
Environmental Issues and Management	<ul style="list-style-type: none"> ◆ Pollution and Waste Management: An Introduction ◆ Scottish Rural Development 	<ul style="list-style-type: none"> ◆ Environmental Management Systems ◆ Waste Management and Pollution Control ◆ Freshwater Environment: Management and Protection ◆ <i>Marine Environments: Management and Protection</i> ◆ <i>Farm Scale Renewable Energy</i> ◆ Noise and Radiation ◆ Energy and the Environment ◆ <i>Transport: Towards a Sustainable Future</i>

Appendix 4: Mapping to Cognate Areas (cont)

HND Environmental Management and Sustainability — Environmental Protection Cluster (cont)		
Cognate area	SCQF level 7	SCQF level 8
Human Aspects	<ul style="list-style-type: none"> ◆ Environmental Awareness ◆ <i>Countryside Recreation and Access</i> 	<ul style="list-style-type: none"> ◆ <i>Tourism: Sustainability and Rural Communities</i> ◆ <i>Education for Sustainable Development: Principles and Practice</i>
Conservation, Ecology, and Management	<ul style="list-style-type: none"> ◆ Biodiversity Conservation ◆ Ecology and Ecosystems ◆ <i>Classification and Identification of Organisms</i> 	<ul style="list-style-type: none"> ◆ <i>Habitat Management</i> ◆ <i>Terrestrial Ecosystems</i> ◆ <i>Ecological Surveying</i>
Soils and Land	<ul style="list-style-type: none"> ◆ Rural Land Use in Scotland ◆ Geology and Geomorphology ◆ <i>Soil Management</i> 	<ul style="list-style-type: none"> ◆ Reclamation of Degraded Land
Business & Policy	<ul style="list-style-type: none"> ◆ Economic Issues: An Introduction ◆ <i>Business Management: An Introduction</i> 	<ul style="list-style-type: none"> ◆ Resource Economics ◆ <i>Rural Socio-economic Development</i>
Transferable Skills and Integrative Units	<ul style="list-style-type: none"> ◆ Information Technology: Applications Software 1 ◆ Countryside and Environmental Management: Graded Unit 1 ◆ <i>Development Skills for Personal Effectiveness</i> 	<ul style="list-style-type: none"> ◆ Data Collection and Handling Methods ◆ Environmental Management and Sustainability: Graded Unit 2 ◆ Environmental Management and Sustainability: Graded Unit 3

Appendix 4: Mapping to Cognate Areas (cont)

HND Environmental Management and Sustainability — Sustainable Environmental Management Cluster		
Cognate area	SCQF level 7	SCQF level 8
Environmental Issues and Management	<ul style="list-style-type: none"> ◆ Pollution and Waste Management: An Introduction ◆ Scottish Rural Development 	<ul style="list-style-type: none"> ◆ Environmental Management Systems ◆ Waste Management and Pollution Control ◆ Freshwater Environments: Management and Protection ◆ <i>Marine Environments: Management and Protection</i> ◆ <i>Farm Scale Renewable Energy</i> ◆ <i>Energy and the Environment</i> ◆ <i>Transport: Towards a Sustainable Future</i>
Human Aspects	<ul style="list-style-type: none"> ◆ Environmental Awareness 	<ul style="list-style-type: none"> ◆ Tourism: Sustainability and Rural Communities ◆ Education for Sustainable Development: Principles and Practice ◆ Countryside Recreation and Access
Conservation, Ecology, and Management	<ul style="list-style-type: none"> ◆ Biodiversity Conservation ◆ Ecology and Ecosystems ◆ <i>Classification and Identification of Organisms</i> 	<ul style="list-style-type: none"> ◆ Habitat Management ◆ Terrestrial Ecosystems ◆ <i>Ecological Surveying</i>
Soils and Land	<ul style="list-style-type: none"> ◆ Rural Land Use in Scotland ◆ Geology and Geomorphology ◆ <i>Soil Management</i> 	<ul style="list-style-type: none"> ◆ <i>Reclamation of Degraded Land</i>
Science	<ul style="list-style-type: none"> ◆ Biology: An Introduction ◆ Chemistry and Physics for the Life Sciences 	<ul style="list-style-type: none"> ◆ Environmental Science: An Introduction ◆ <i>Monitoring and Analytical Methods in Environmental Science</i>
Environmental Policy & Business	<ul style="list-style-type: none"> ◆ Economic Issues: An Introduction ◆ <i>Business Management: An Introduction</i> 	<ul style="list-style-type: none"> ◆ Resource Economics ◆ <i>Rural Socio-economic Development</i>

Appendix 4: Mapping to Cognate Areas (cont)

HND Environmental Management and Sustainability — Sustainable Environmental Management Cluster (cont)		
Cognate area	SCQF level 7	SCQF level 8
Transferable Skills and Integrative Units	<ul style="list-style-type: none"> ◆ Information Technology: Applications Software 1 ◆ Countryside and Environmental Management: Graded Unit 1 ◆ <i>Developing Skills for Personal Effectiveness</i> 	<ul style="list-style-type: none"> ◆ Data Collection and Handling Methods ◆ Environmental Management and Sustainability: Graded Unit 2 ◆ Environmental Management and Sustainability: Graded Unit 3

Appendix 5: Links to National Occupational Standards

HND Rural Resource Management HND Environmental Management and Sustainability

In all examples below, codes brackets refer to specific national Occupational Standards Units. Refer to <http://www.ukstandards.org/> or to the relevant Sector Skills Council for more details.

Unit title	Relevant Occupational Standards/SVQ Units
1st year Units	
Biodiversity Conservation	
Biology: An Introduction	
Ecology and Ecosystems	Survey and report on the condition of the environment (EC2) Prepare, conduct and report on field surveys (EC23)
Geology and Geomorphology	
Rural Land Use in Scotland	Negotiate improvements in land use (EC28) Assess the characteristics of site (LBMCU91)
Information Technology: Applications Software 1	Operate a computer level 2 (OPU2) Presentation Software level 2 (PS2) Spreadsheet Software level 3 (SS3) Word Processing Software level 3 (WP3) Use IT to Exchange Information level 2 (UEI3) Use IT Systems level 3 (UIT3) Email level 2 (MAIL2) Use IT Systems and Software (CIC34)
Environmental Awareness	Implement environmental good practice at work (EC19)
Optional Units	
Countryside Recreation and Access	
Classification and Identification of Organisms	
Interpretation: An Introduction	
Leadership of Countryside Activities	
Pollution and Waste Management: An Introduction	Implement environmental good practice at work (EC19)
Chemistry and Physics for the Life Sciences	Provide operational monitoring assistance (ND418) Assess ionising radiation risks (RP4) Radiation protection — Identify and quantify radiation hazards in the workplace (No ID available)
Economic Issues: An Introduction	
Scottish Rural Development	

Appendix 5: Links to National Occupational Standards (cont)

HND Rural Resource Management HND Environmental Management and Sustainability

2 nd year Units	
Environmental Management	
Environmental Science: An Introduction	
Waste Management and Pollution Control	Contribute to Restoring Polluted Environments to Acceptable Conditions Control Improvements to Waste Management Operations
Data Collection and Handling Methods	Manage and store information (O8NSAS4)
Resource Economics	
Managing the Freshwater Environment	
Habitat Management	
Terrestrial Ecosystems	Prepare, conduct and report on field surveys (EC23)
Education for Sustainable Development: Principles and Practice	Encourage and involve people in community recycling
Countryside Recreation and Access	
Sustainable Tourism	
Analytical Methods for Environmental Science	
Noise and Radioactivity	Monitor and Maintain Health and Safety
Reclamation of Degraded Land	Contribute to Restoring Polluted Environments to Acceptable Conditions
Energy and the Environment	
Quality and Health and Safety Systems in Science	Monitor and Maintain Health and Safety
Transport: Towards a Sustainable Future	
Classification and Identification of Organisms	
Soil Management	
Developing Skills for Personal Effectiveness	
Marine Environments: Management and Protection	
Farm Scale Renewable Energy	
Ecological Survey	Survey and report on the condition of the environment (EC2) Monitor and report on environmental change (EC22) Prepare, conduct and report on field surveys (EC23)
Business Management: An Introduction	Inform and facilitate corporate decision making
Rural Socio-economic Development	
Financial Records for Small Business	Process customer financial transactions
Using Financial Accounting Statements	
Planning, Budgeting and Control	Negotiate and agree budgets
Rural Business Diversification	Promote innovation and change
Tourism: Sustainability and Rural Communities	

Appendix 6: Credit Transfer Arrangements

Credit transfer for SCQF level 7 Units.

Revised/New Unit		Predecessor Unit		Credit transfer conditions
Unit Code	Unit Title	Unit Code	Unit Title	
F430 34	Biodiversity Conservation	DF2A 04	Biodiversity Conservation: An Introduction	Full transfer
F3SJ 34	Biology: An Introduction	DF8J 04	Biology: An Introduction	Full transfer
DN37 34	Ecology and Ecosystems	DC9E 04	Ecology: An Introduction	Full transfer
F3SL 34	Geology and Geomorphology	D5DN 04	Earth Science: An Introduction	Full transfer
F2G8 34	Environmental Awareness	DF7K 04	Environmental Awareness	Full transfer
F3ST 34	Rural Land Use in Scotland	D7TV 04	Land Use Systems	Full transfer
D75X 34	Information Technology: Applications Software 1	DG0T 04	Practical Use of Software Application Packages	Full transfer
F4AK 34	Scottish Rural Development	DF85 04	Planning: An Introduction	Full transfer
F2EE 34	Pollution and Waste Management: An Introduction	D7V6 04	Pollution and Waste Management: an Intro	Full transfer
F21J 24	Chemistry and Physics for the Life Sciences	DF8R 04	Chemistry and Physics for the Life Sciences	Full transfer
DE3A 34	Economic Issues: An Introduction	DG5J 04	Economic Principles for Business	Full transfer
F1RJ 34	Business Management: An Introduction	DF8J 04	Business Management: an Introduction	Full transfer
F3X2 34	Classification and Identification of Organisms	DF8M 04	Identification Skills for the Living World	Full transfer
F21V 34	Soil Management	DF7T 04	Soil Management	Full transfer
F137 34	Using Financial Accounting Statements	DF7E 04	Financial Business Analysis	Full transfer
DF4E 34	Developing Skills for Personal Effectiveness	DG0V 04	Developing Personal Effectiveness	Full transfer
F26G 34	Financial Records for Small Business	DF8G 04	Records for Business	Full transfer
DF82 34	Quality and Health & Safety Systems	D7V7 04	Quality Assurance in the Laboratory	Full transfer
F432 34	Countryside Recreation and Access	DF27 04	Environmental and Countryside Regulations	Full transfer

Appendix 6: Credit Transfer Arrangements (cont)

Credit transfer for SCQF level 8 units.

Revised/New Unit at level 8		Predecessor Unit		Credit transfer conditions
Unit Code	Unit Title	Unit Code	Unit Title	
F2EH 35	Transport: Towards a Sustainable Future	DF1E 04	Transport: Towards a Sustainable Future	Full transfer
F6D0 35	Environmental Management Systems	DF7L 04	Environmental Management	Full transfer
F5T5 35	Environmental Science: An Introduction	DF1V 04	Environmental Science	Full transfer
F55S 35	Waste Management and Pollution Control	DF7V 04	Waste Management and Pollution Control	Full transfer
F3X3 34	Data Collection and Handling Methods	DG0X 04	Information Handling and Presentation	Full transfer
F6CY 35	Resource Economics	DF8E 04	Resource Economics	Full transfer
F435 35	Freshwater Environments: Management & Protection	DF1K 04	Managing the Aquatic Environment	Full transfer
F3SM 35	Habitat Management	F3SM 35	Habitat Management	Full transfer
DP4X35	Terrestrial Ecosystems	DF25 04	Ecology: Principles and Practice	Full transfer
F434 35	Education for Sustainable Development: Principles and Practice	F434 35	Education for Sustainable Development: Principles and Practice	Full transfer
F566 35	Tourism: Sustainability and Rural Communities	DF1D 04	Sustainable Tourism	Full transfer
F6JK 35	Noise and Radioactivity	DF8N 04	Noise and Radiation	Full transfer
F6CS 35	Reclamation of Degraded Land	D5CD 04	Reclamation of Degraded Land	Full transfer
F6BL 35	Energy and the Environment	D5C5 04	Energy Resource Management	Full transfer
F6BK 35	Rural Socio-economic Development	DF81 04	Rural Socio-economic Development	Full transfer
F26F 35	Planning, Budgeting and Control	DF7F 04	Planning, Budgeting and Control	Full transfer
F2EF 35	Rural Business Diversification	DF83 04	Rural Enterprise Diversification	Full transfer

The Graded Units are not shown in the above tables as they have no previous analogous Units.