Group Award Specification for:

Professional Development Award in Ecological Surveying at SCQF level 7

Group Award Code: GV2Y 47

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Contents

1. Introduction

The purpose of this document is to:

- Assist centres to implement, deliver and manage the qualification.
- Provide a guide for new staff involved in offering the qualification.
- Inform course managers teaching staff, assessors, learners, employers and higher education institutes (HEIs) of the aims and purpose of the qualification.
- Provide details of the range of learners the qualification is suitable for and progression opportunities.

There were three major background factors influencing the development of this award:

1. The market shortage of competent ecological surveyors.
2. The lack of a specific ecological surveying award covering the required competencies.
3. The lack of ecological training / learning opportunities in Scotland.

The demand for ecological surveyors has increased in Scotland post devolution as new heritage related legislation has been passed. In 2004, the Nature Conservation (Scotland) Act placed a duty on all public bodies and local authorities to 'further the conservation of biodiversity' in Scotland and, more recently the Conservation (Natural Habitats &c.) Regulations were strengthened. These and other pieces of legislation are requiring more and more surveys of both national and European protected habitats and species.

This strengthening of environmental protection legislation comes at a time when the Scottish Government has indicated a desire to deliver 100,000 affordable homes over the next decade (Housing to 2040, Scottish Government 2021). While there may be some downscaling because of public spending cuts, it is still vital for Scotland's heritage that such expansion of settlements is achieved in the most sustainable way possible. The role of ecological surveyors in ensuring new developments are correctly planned and sited away from areas of heritage importance cannot be overstated. Without skilled surveyors, many areas of nature conservation and landscape importance may be lost to development for ever.

It is therefore important to the future heritage of Scotland that we equip more people in field survey skills as without them we will be unable to assess the environmental impacts of new developments, identify areas of high wildlife value for management and protection, or establish baselines from which to monitor changes to wildlife in the light of climate change. The skilled surveyors produced by this award will ultimately help provide information to planning authorities, Local Record Centres, the National Biodiversity Network and other environmental organisations.

Few bodies in Scotland currently teach specialist practical ecological surveying skills to the level needed to produce highly competent surveyors. Much provision is through short modules delivered by either Field Studies Council centres or the Charted Institute of Ecology and Environmental Management (CIEEM). Short courses are useful for those already employed by the sector as a means of refreshing existing or adding new skills, but by their nature they do not provide the necessary depth, background and consolidation of skills required by new entrants wishing to gain a qualification and a comprehensive grounding in the subject over a longer period.

Training provided by colleges is often at an introductory level. Developing field skills demands time, which is not generally available on more generic diploma and degree courses. Students at colleges are, by the nature of the timetabling unable to receive training in practical ecological surveys during the summer months which is often the prime time for undertaking these activities.

With this in mind, this specialist and unique Professional Development Award (PDA) is aimed firmly at those who are committed to pursuing a career in ecological surveying, either as a self-employed surveyor or as a consultant.

The structure of the award can be grouped into two broad themes:

1. Acquisition of background skills (for example ecology and identification skills).
2. Acquisition of survey skills including use of new technology.

These skills are required by the ecological surveyor. All units need to be successfully completed in order to achieve the award.

However, elements of the new award, particularly the new Data Management for Ecological Surveying Unit could form part of a more general college-based Countryside / Conservation Management award as keeping abreast of technological advances in Geographic information systems (GIS) could be considered a useful competency for countryside managers.

2. Qualification structure

This group award is made up of 6 SQA unit credits. It comprises a mandatory section of 48 SCQF credit points of which 40 are at SCQF level 7 and 8 at SCQF level 8. A mapping of Core Skills development opportunities is available in section 5.3.

2.1 Structure

Mandatory units:

4 code	2 code	Unit title	SQA credit	SCQF credit points	SCQF level
F3X2	34	Classification and Identification of Organisms	1	8	7
J4RA	34	Ecology and Ecosystems	1	8	7
F502	34	Geographic Information Systems	1	8	7
J4RM	35	Ecological Surveying	1	8	8
FM44	34	Data Management for Ecological Surveying	1	8	7
J4R7	34	Biodiversity Conservation	1	8	7

3. Aims of the qualification

3.1 General aims of the qualification

This award aims to address the persistent shortage of high-quality ecological surveyors in Scotland.

The aim of this PDA is to develop a high-quality specialist survey qualification which allows participants to work towards a meaningful professional award from a nationally recognised awarding body.

3.2 Specific aims of the qualification

The PDA in Ecological Surveying will:

1. develop specific up to date survey knowledge.
2. develop new survey skills including developments in data management skills.
3. meet a skills gap identified by the sector.

4. Recommended entry to the qualification

Entry to this qualification is at the discretion of the centre. The following information on prior knowledge, skills, experience or qualifications that provide suitable preparation for this qualification has been provided by the Qualification Design Team (QDT) as guidance only.

Learners would benefit from having attained the skills, knowledge and understanding required by one or more of the following or equivalent qualifications and/or experience:

- Prior knowledge and skills — Learners would benefit from a background in or some prior knowledge of ecological surveying. This could then be developed during progression through the award.
- Formal qualifications — Any formal qualification or transferable skills relevant to this award would be useful.
- This PDA will require a good level of written and analytical skills. Learners with prior report writing skills or those who can develop these skills would be better able to bridge the particular demands of this programme.

4.1 Core Skills entry profile

The Core Skill entry profile provides a summary of the associated assessment activities that exemplify why a particular level has been recommended for this qualification. The information would be used to identify if additional learning support needs to be put in place for learners whose Core Skills profile is below the recommended entry level or whether learners should be encouraged to do an alternative level or learning programme.

Core Skill	Recommended SCQF entry profile	Associated assessment activities
Communication	6	Report writing, communication with colleagues.
Numeracy	6	Surveying, data management, GIS.
Information and Communication Technology (ICT)	6	Surveying, data management, GIS.
Problem Solving	6	Surveying, data management, GIS.
Working with Others=	6	Working with colleagues and stakeholders.

5. Additional benefits of the qualification in meeting employer needs

This qualification was designed to meet a specific purpose and what follows are details on how that purpose has been met through mapping of the units to the aims of the qualification. Through meeting the aims, additional value has been achieved by linking the unit standards with those defined in national occupational standards and / or trade/professional body requirements. In addition, significant opportunities exist for learners to develop the more generic skill, known as Core Skills through doing this qualification.

5.1 Mapping of qualification aims to units

Specific aims:

Code	Unit title	Aim 1	Aim 2	Aim 3
F3X2 34	Classification and Identification of Organisms	X		X
J4RA 34	Ecology and Ecosystems	X		X
F502 34	Geographic Information Systems	X	X	X
J4RM 35	Ecological Surveying	X	X	X
FM44 34	Data Management for Ecological Surveying	X	X	X
J4R7 34	Biodiversity Conservation			X

5.2 Mapping of National Occupational Standards (NOS) and/or trade body standards

LANEnC4: Conduct field surveys
LANEnC5: Analyse data from field surveys and report findings.
LANEnC7: Use geospatial data in environmental surveys.
LANEnC8: Identify species.
LANEnC33: Apply species identification skills.
LANEnC35: Produce a research report.

Code	Unit title	National Occupational Standards (NOS)
F3X2 34	Classification and Identification of Organisms	LANEnC8: Identify species LANEnC33: Apply species identification skills
J4RA 34	Ecology and Ecosystems	LANEnC4: Conduct field surveys LANEnC5: Analyse data from field surveys and report findings LANEnC8: Identify species
F502 34	Geographic Information Systems	LANEnC7: Use geospatial data in environmental surveys
J4RM 35	Ecological Surveying	LANEnC4: Conduct field surveys LANEnC5: Analyse data from field surveys and report findings LANEnC8: Identify species LANEnC33: Apply species identification skills LANEnC35: Produce a research report

Code	Unit title	National Occupational Standards (NOS)
FM44 34	Data Management for Ecological Surveying	LANEnC4: Conduct field surveys LANEnC5: Analyse data from field surveys and report findings LANEnC7: Use geospatial data in environmental surveys LANEnC8: Identify species LANEnC33: Apply species identification skills LANEnC35: Produce a research report
J4R7 34	Biodiversity Conservation	LANEnC35: Produce a research report

5.3 Mapping of Core Skills development opportunities across the qualifications

Communication

Unit code	Unit title	Written (Reading)	Written (Writing)	Oral
F3X2 34	Classification and Identification of Organisms	X	X	
J4RA 34	Ecology and Ecosystems	X	X	X
F502 34	Geographic Information Systems	X	X	
J4RM 35	Ecological Surveying	X	X	X
FM44 34	Data Management for Ecological Surveying	X	X	
J4R7 34	Biodiversity Conservation	X	X	

Numeracy

Unit code	Unit title	Using Number	Using Graphical Information
F3X2 34	Classification and Identification of Organisms	X	X
J4RA 34	Ecology and Ecosystems	X	X
F502 34	Geographic Information Systems	X	X
J4RM 35	Ecological Surveying	X	X
FM44 34	Data Management for Ecological Surveying	X	X
J4R7 34	Biodiversity Conservation	X	X

Information and Communication Technology (ICT)

Unit code	Unit title	Accessing Information	Providing/Creating Information
F3X2 34	Classification and Identification of Organisms	X	X
J4RA 34	Ecology and Ecosystems	X	X
F502 34	Geographic Information Systems	X	X
J4RM 35	Ecological Surveying	X	X
FM44 34	Data Management for Ecological Surveying	X	X
J4R7 34	Biodiversity Conservation	X	X

Problem Solving

Unit code	Unit title	Critical Thinking	Planning and Organising	Reviewing and Evaluating
F3X2 34	Classification and Identification of Organisms	X	X	X
J4RA 34	Ecology and Ecosystems	X	X	X
F502 34	Geographic Information Systems	X	X	X
J4RM 35	Ecological Surveying	X	X	X
FM44 34	Data Management for Ecological Surveying	X	X	X
J4R7 34	Biodiversity Conservation	X		X

Working with Others

Unit code	Unit title	Working Co-operatively with Others	Reviewing Co-operative Contribution
F3X2 34	Classification and Identification of Organisms	X	
J4RA 34	Ecology and Ecosystems	X	X
F502 34	Geographic Information Systems	X	
J4RM 35	Ecological Surveying	X	X
FM44 34	Data Management for Ecological Surveying	X	
J4R7 34	Biodiversity Conservation	X	X

5.4   Assessment strategy for the qualifications

Unit	Assessment: Outcome 1	Assessment: Outcome 2	Assessment: Outcome 3	Assessment: Outcome 4
Classification and Identification of Organisms	Short answer and multiple choice questions.	Identification exercise	Not applicable	Not applicable
Ecology and Ecosystems	Open-book questions	Report	Report	Not applicable
Geographic Information Systems	Practical assignment	Practical assignment	Practical assignment	Not applicable
Ecological Surveying	Practical ecological survey with portfolio of evidence.	Practical ecological survey with portfolio of evidence.	Practical ecological survey with portfolio of evidence.	Not applicable
Data Management for Ecological Surveying	Project report	Project report	Project report	Not applicable
Biodiversity Conservation	Project report	Project report	Project report	Not applicable

6. Guidance on approaches to delivery and assessment

6.1 Sequencing/integration of units

Suggested delivery sequence

Unit	Season for delivery	Possible order of delivery (Assuming a September start)
Classification and Identification of Organisms	Spring / Summer / Autumn	1
Geographic Information Systems	Autumn / Winter	2
Biodiversity Conservation	Autumn / Winter	3
Data Management for Ecological Surveying	Autumn / Winter / Spring	4
Ecology and Ecosystems	Spring / Summer	5
Ecological Surveying	Spring / Summer	6

Possible integration of assessment / delivery within PDA in Ecological Surveying; Data management for ecological surveying (DMES); Geographic information systems (GIS); Ecological surveying (ES), Classification and identification or organism (CIO); Ecology and Ecosystems (EE); Biodiversity conservation (BC).

DMES	GIS	ES	CIO	EE	BC
GIS	DMES	DMES	DMES	ES	ES
ES	ES	GIS	GIS		
CIO	CIO	CIO	ES		
		EE			
		BC			

The table on previous page shows the possibilities for integration of assessment so that production of a survey report as part of the Ecological Surveying Unit for example could cover a number of elements within a number of other units. Integration of assessment would mean that key pieces of work such as survey reports would provide evidence towards a number of units.

Some units could be assessed as stand-alone units, however opportunities for integration of assessment within these units should still be sought as it would reduce the burden of assessment for both learners and assessors.

The Classification and Identification of Organisms unit is a building unit that feeds into the Ecological Surveying Unit, whilst the Data Management for Ecological Surveying builds on the Geographic Information Systems Unit. It makes sense to deliver, assess and achieve the 'foundation' units of the award first, namely Ecology and Ecosystems and Classification and Identification of Organisms before moving on to the field-based survey units. However much depends on the time of year when the PDA is first undertaken; if learners start in winter, then there is little sense in undertaking field-based work. However, the converse is true and there is no point wasting the survey season by undertaking office based or non-survey related topics.

6.2   Recognition of prior learning

SQA recognises that learners gain knowledge and skills acquired through formal, non-formal and informal learning contexts.

In some instances, a full group award may be achieved through the recognition of prior learning. However, it is unlikely that a learner would have the appropriate prior learning and experience to meet all the requirements of a full group award.

The recognition of prior learning may **not** be used as a method of assessing in the following types of units and assessments:

- HN Graded Units.
- Course and/or external assessments.
- Other integrative assessment units (which may or not be graded).
- Certain types of assessment instruments where the standard may be compromised by not using the same assessment method outlined in the unit.
- Where there is an existing requirement for a licence to practice.
- Where there are specific health and safety requirements.
- Where there are regulatory, professional or other statutory requirements.
- Where otherwise specified in an assessment strategy.

More information and guidance on the *Recognition of Prior Learning* (RPL) may be found on our website www.sqa.org.uk.

The following sub-sections outline how existing SQA units may contribute to this group award. Additionally, they also outline how this group award may be recognised for professional and articulation purposes.

6.2.1 Articulation and/or progression

The PDA in Ecological Surveying would link well with other related programmes of study at Universities or Further Education colleges. There would be some overlap with existing SQA awards, most notably courses of study involving Ecology and Ecosystems, Biodiversity Conservation and Classification and Identification of Organisms Units.

The PDA is a specialist award designed to develop highly vocational knowledge and skills and as such will allow successful learners to seek employment within relevant areas, however learners may also wish to progress to other qualifications.

Examples of possible progression routes are detailed below:

SCQF level 8:

- HND Wildlife and Conservation Management*
- HND Environmental Management*

SCQF level 10:

- Wildlife and Conservation Management Bachelor of Science with Honours (BSc (Hons))
- Environmental Management Bachelor of Science with Honours (BSc (Hons))

SCQF level 11:

- Environmental Protection and Management Master of Science (MSc)
- Wildlife and Conservation Management Master of Science Postgraduate Diploma; Postgraduate Certificate (MSc (PgDip; PgCert)

*Units from the PDA can contribute towards the above HNDs.

6.3 Opportunities for e-assessment

Elements of the award could also be delivered by distance learning and assessed by e-assessment, however provision for in person practical exercises should be made wherever possible.

6.4 Support materials

A list of existing Assessment Support Packs (ASPs) is available to view on SQA's website.

6.5 Resource requirements

Learners will need access to a computer/laptop (either MS Windows or Apple Mac) that is capable of running GIS software (either a personal device of one provided for the learner). However, if this is not possible then access to a remote computer able to run the software will need to be provided.

Learners will also need access to a local site in order to conduct species identification and classification, and surveying of habitats. This can be any publicly accessible location such as nature conservation areas or inner-city parks.

7. General information for centres

Equality and inclusion

The unit specifications making up this group award have been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners will be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

Internal and external verification

All assessments used within these qualifications 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* (www.sqa.org.uk/GuideToAssessment).

8. Glossary of terms

Embedded Core Skills is where the assessment evidence for the unit also includes full evidence for complete Core Skill or Core Skill components. A learner successfully completing the unit will be automatically certificated for the Core Skill. (This depends on the unit having been successfully audited and validated for Core Skills certification.)

Finish date: The end of a group award's lapsing period is known as the finish date. After the finish date, the group award will no longer be live and the following applies:

- candidates may not be entered for the group award.
- the group award will continue to exist only as an archive record on the Awards Processing System (APS).

Lapsing date: When a group award is entered into its lapsing period, the following will apply:

- the group award will be deleted from the relevant catalogue.
- the group award specification will remain until the qualification reaches its finish date at which point it will be removed from SQA's website and archived.
- no new centres may be approved to offer the group award.
- centres should only enter candidates whom they expect to complete the group award during the defined lapsing period.

SQA credit value: The credit value allocated to a unit gives an indication of the contribution the unit makes to an SQA group award. An SQA credit value of 1 given to an SQA unit represents approximately 40 hours of programmed learning, teaching and assessment.

SCQF: The Scottish Credit and Qualification Framework (SCQF) provides the national common framework for describing all relevant programmes of learning and qualifications in Scotland. SCQF terminology is used 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: SCQF credit points provide a means of describing and comparing the amount of learning that is required to complete a qualification at a given level of the Framework. One National Unit credit is equivalent to 6 SCQF credit points. One National Unit credit at Advanced Higher and one Higher National Unit credit (irrespective of level) is equivalent to 8 SCQF credit points.

SCQF levels: The level a qualification is assigned within the framework is an indication of how hard it is to achieve. The SCQF covers 12 levels of learning. HNCs and HNDs are available at SCQF levels 7 and 8 respectively. Higher National Units will normally be at levels 6–9 and graded units will be at level 7 and 8. National Qualification Group Awards are available at SCQF levels 2–6 and will normally be made up of National Units which are available from SCQF levels 2–7.

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

Signposted Core Skills: Refers to opportunities to develop Core Skills arise in learning and teaching but are not automatically certificated.

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. Centres are advised to check SQA's APS Navigator to confirm they are using the up-to-date qualification structure.

NOTE: Where a unit is revised by another unit:

- No new centres may be approved to offer the unit which has been revised.
- Centres should only enter candidates for the unit which has been revised where they are expected to complete the unit before its finish date.

Version number	Description	Date

Acknowledgement

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of this qualification.

Template version: October 2022.

9. General information for learners

This section will help you decide whether this is the qualification for you by explaining what the qualification is about, what you should know or be able to do before you start, what you will need to do during the qualification and opportunities for further learning and employment.

The PDA in Ecological Surveying is designed to provide you with the competencies required in order to enter the field of ecological surveying.

This unique SQA award will provide you with the necessary ecological theory, identification skills and field surveying methodologies, combined with familiarity with the latest GIS technology and an awareness of suitable business skills to become ready to enter the marketplace as an ecological surveyor.

To achieve the award, you will need to prove your competency in a range of survey skills, including:

- Knowledge of ecological processes
- Identification of a wide range of species including higher and lower plants, birds, mammals, invertebrates, reptiles/amphibians
- Familiarity with the established survey techniques and methodologies including:
  o Phase 1 and NVC
- Use of latest technology to gather and manage data
- Ability to process and produce industry standard reports using survey data
- Ability to inform decision makers regarding surveyed sites including:
  o knowledge of latest environmental laws and regulations

To achieve the award, you will be assessed through open-book tests, closed-book tests, assignments, report writing, questioning, observation. You will undertake both group projects and assessments requiring self-study.

In addition to the skills above you will also have the opportunity to develop:

- technology skills
- analytical skills
- project management skills
- learning and study skills
- planning skills
- evaluative skills

You will also have an opportunity to develop the following Core Skills:

- Communication
- Numeracy
- Information and Communication Technology (ICT)
- Problem Solving
- Working with Others

You will be encouraged to learn from other members of the training group, led by the teacher / ecologist in a real work environment, where real ecological data will be used to inform day-to-day management of wildlife reserves and other important wildlife sites.