



Higher National Unit Specification

General information for centres

Unit title: Habitat Management

Unit code: F3SM 35

Unit purpose: This Unit introduces candidates to the principles of habitat management, the use of data from survey or monitoring and to help formulate objectives and to assess the success of management projects. The Unit also introduces management planning and the drafting of realistic management proposals. On completion of the Unit the candidate should be able to:

- 1 Explain the objectives and scientific principles of habitat management.
- 2 Evaluate the effectiveness of management projects.
- 3 Produce management proposals.

Credit points and level: 1 HN credit at SCQF level 8: (8 SCQF credit points at SCQF level 8*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Recommended prior knowledge and skills: Access to this Unit is at the discretion of the centre. However it would be beneficial if the candidate had competence in surveying and the principles of ecology. This may be evidenced by possession of the HN Unit DN37 34, *Ecology and Ecosystems*, F433 35 *Ecological Surveying* or equivalent Units.

Core Skills: There are opportunities to develop the component Core Skill of *Communication* and *Problem Solving* at SCQF level 6 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Assessment: Outcome 1 could be assessed by restricted response assessment. Outcome 2 could be assessed by the production of an evaluation of the effectiveness of the management projects for a given site. Outcome 3 could be assessed by the production of proposals for the management of a given site. It should be noted that there are opportunities to combine elements of the assessment for Outcome 1 with both of the subsequent Outcomes.

Higher National Unit specification: statement of standards

Unit title: Habitat Management

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The sections of the Unit stating the Outcomes, Knowledge and/or Skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Explain the objectives and scientific principles of habitat management

Knowledge and/or Skills

- ◆ Habitat and species management
- ◆ Scientific principles

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ explain the following objectives of habitat management:
 - habitat and species management and enhancement
 - maintenance of species and habitat diversity
 - protection of genetic diversity
- ◆ explain the following scientific principles underpinning management of habitats:
 - succession and disturbance
 - competition
 - fertility
 - grazing and mowing
 - life histories
 - dispersal
 - patches
 - structure
 - site size,
 - external factors
 - conflicts of interest

Assessment Guidelines

This Outcome could be assessed by restricted response questions examining the objectives and scientific principles of habitat management. It could also be assessed in conjunction with the assessments for Outcomes 2 and 3 if the sites chosen for these assessments are sufficiently varied to allow Outcome 1 to be undertaken in an applied manner. This would better represent what would happen in the field. More details are contained in the Assessment Guidelines for Outcome 3.

Higher National Unit specification: statement of standards (cont)

Unit title: Habitat Management

Outcome 2

Evaluate the effectiveness of management projects

Knowledge and/or Skills

- ◆ Management plan
- ◆ Management objectives
- ◆ Management projects

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can from site visit data:

- ◆ describe six management projects
- ◆ evaluate the links between the management plan, objectives and management projects
- ◆ evaluate the effectiveness of the projects

Assessment Guidelines

This Outcome could be assessed by a submission which evaluates the effectiveness of management projects for a site with an existing management plan. This could be a 'real' site, or a brief containing the necessary data to generate all evidence. This Outcome could be assessed in conjunction with the assessments for Outcomes 1 and 3 (see under Assessment Guidelines for Outcome 3).

Higher National Unit specification: statement of standards (cont)

Unit title: Habitat Management

Outcome 3

Produce management proposals

Knowledge and/or Skills

- ◆ Management proposals
- ◆ Monitoring and evaluation

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can for a site:

- ◆ produce six management proposals for inclusion in a management plan for a site of contrasting habitats that are realistic in terms of site management objectives and constraints
- ◆ discuss the value of monitoring and evaluating the proposals

Assessment Guidelines

This could be assessed by producing a submission outlining management proposals for inclusion in a management plan for a site. It could be possible to include evidence tasks for Outcome 1 and 2 within this assessment by linking site data, its management plan, projects and their objectives and proposals to the appropriate scientific principles underpinning habitat management principles.

Administrative Information

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Unit title: Habitat Management
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Higher National Unit specification: support notes

Unit title: Habitat Management

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

The management of habitats for wildlife is not an exact science. The ecological requirements of most species are poorly known and the dynamics of most habitats are equally obscure. The science of ecology has contributed to habitat management but there are so many species and habitats that the level of detailed knowledge is low. Consequently most site managers rely on known fact, experience, observation, trial and error and sharing experiences with other practitioners. It is therefore true that most sites need tailor-made solutions but there are general principles which can help to guide the decision-making process and it is important that candidates are aware of some of these.

The Unit will expect that candidates are aware of some of the ecological principles that underpin the planning and management process. Some of these factors will already have been mentioned in the Unit *Ecology and Ecosystems* which candidates may have studied but Outcome 1 will look at these in more detail in the context of actual examples, preferably through site visits. These could be to any habitat but there may be merit in looking at habitats which will figure in other Outcomes.

For Outcome 2 candidates would be expected to have visited a site which has a good management plan and where they can see how management proposals are arrived at and how they link with the site's objectives. The visit should where possible be led by the site manager who can explain the rationale for the objectives and the importance of having SMART objectives in any future monitoring of the effectiveness of the management. Candidates will be expected to provide an evaluation of the effectiveness of any management.

Having looked at examples of management plans and the ensuing management candidates should be in a position to prepare their own management proposals for a simple site. At this stage they will not be expected to go into a lot of detail but the objectives should be realistic and measurable and the actual management tasks should be achievable within the likely resource limitations of the site management infrastructure.

Guidance on the delivery and assessment of this Unit

The purpose of the Unit is to give candidates an introduction to the process of management planning both in terms of the principles which underpin it and in terms of the management proposals that are carried out. It is important that candidates are given the opportunity to visit sites and to discuss their management with the actual site managers. In this way they should be able to link the work that takes place with the ecological principles that inform management decisions.

Outcome 1 could be assessed by questions that test the candidate's knowledge of the objectives and principles of habitat management. However it would also be possible to assess this Outcome through asking the candidate to identify the application of these scientific principles to the situations visited in the field or from site data by merging it with the assessments for Outcomes 2 and 3.

Higher National Unit specification: support notes (cont)

Unit title: Habitat Management

Outcome 2 could be based on a visit to a site (probably a nature reserve of some sort) which has a management plan and a site manager. Through a discussion of the plan and a knowledge of the management proposals the candidate should be able to evaluate the success of their implementation. If it is decided to partly assess Outcome 1 in conjunction with Outcome 2 the candidate could be asked to link the management proposals to the relevant ecological principles.

Outcome 3 could also be based on site visits but in this case the candidate will be asked to produce proposals for a particular area of conservation interest. These could be realistic and accurately reflect both the important features and the objectives for the site. There is again the opportunity here to ask the candidate to link their proposals with the relevant scientific principles identified in Outcome 1.

Opportunities for developing Core Skills

Although the Unit is designed to provide candidates with the Knowledge and/or Skills related to their specific occupational area there may be opportunities to develop the Core Skills of *Communication* and *Problem Solving*, both to SCQF level 6. Both Outcomes 2 and 3 will require candidates to develop proposals based upon their observations made during possible site visits and the knowledge they have acquired during the Unit. Decisions will be required to present the best case scenarios for the management proposals in relation to site data.

If a written submission was chosen, this would need to be well structured, written in a clear style that complied with accepted practice in terms of referencing and format. Such a submission could contribute towards the Core Skill component Written Communication of the Core Skill *Communication* at SCQF level 6.

Open learning

The Unit is not ideally suited to delivery by distance learning as it involves a number of site visits. While the general principles of habitat management could be delivered through guided learning the visits are a worthwhile element where the site manager would lead the candidates through the background to the management and would be available to answer questions.

Candidates with disabilities and/or additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Alternative Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs*, which is available on SQA's website: www.sqa.org.uk.

General information for candidates

Unit title: Habitat Management

While the management of sites for biodiversity conservation is based on ecological principles it is important that you understand how these can be applied to real life situations and that this is not an exact science. Every site is different and the management proposals need to be developed from a knowledge of the site's important features and the management objectives that have been agreed.

The Unit will start with a discussion of some of the main ecological principles that underpin habitat management such as competition, dispersal and succession. These will be introduced in context with examples which examine some of the issues associated with them. The remaining two Outcomes will give you the opportunity to apply some of these principles to real management situations.

Outcome 2 may involve a visit to one or more sites, possibly reserves, which have existing management plans. In discussion with the site manager you will be asked to appraise the effectiveness and appropriateness of the management and to link this management to the principles that you have already discussed.

In Outcome 3 you will be asked to develop your own management proposals for a site. This will not involve the submission of a full management plan but appropriate management projects demonstrating an awareness of what these are meant to achieve and how they relate to the ecology of the site.

There are opportunities to develop the component Core Skill of *Communication* and *Problem Solving* at SCQF level 6 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.