

## Higher National Unit Specification

### General information for centres

**Unit title:** Managing Sites for Biodiversity

**Unit code:** DN62 34

**Unit purpose:** The purpose of this unit is to enable candidates to develop an understanding of nature conservation in a range of contexts and apply management strategies aimed at the enhancement or the maintenance of conservation value for a given site.

On completion of this unit, the candidate will be able to:

- ◆ Define and evaluate the requirements of nature conservation.
- ◆ Relate conservation methodology and terminology used in site designation.
- ◆ Evaluate resources for the management of nature conservation
- ◆ Develop a management plan for a site using current accepted industry standards.

**Credit points and level:** 2 HN Credit at SCQF level 7: (16 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, although it would be advantageous if the candidate had some prior knowledge of countryside issues, biodiversity and management, for example Higher Managing Environmental Resources (X055 12) or work experience in the field.

**Core skills:** There may be opportunities to gather evidence towards the core skill of Problem Solving at Higher level in this Unit, although there is no automatic certification of core skills or core skills components.

**Context for delivery:** This unit is included as an optional unit in the framework of the HNC Applied Sciences and HND Environmental Science but may be offered as part of other Higher National units. 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:** A single instrument of assessment that requires the candidate to produce an essay based on a case study should assess outcome 1. Outcome 2 should be assessed by means of a report. Outcomes, 3 and 4 should be assessed holistically culminating in the production of a management plan developed to current industry standards.

## **Higher National Unit specification: statement of standards**

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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**

Define and evaluate the requirements of nature conservation.

#### **Knowledge and/or skills**

- ◆ Conservation designation - Special Protection Area (SPA), Special Area Conservation (SAC), RAMSAR site, Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), Local Nature Reserve (LNR) and Sites of Importance for Nature Conservation (SINC's),
- ◆ Conservation legislation - local, national, international - Wildlife Countryside Act (WCA), Registration enacted under the Act, Nature Conservation (Scotland) Act, Planning
- ◆ Historical background.
- ◆ Sustainable management.
- ◆ Conflict between nature conservation and site users.

#### **Evidence requirements**

Candidates must show an ability to define conservation in a local, national and international context and the legislation supporting the designation. Candidates need to explain the need for habitat and species protection, provide a historical background and define the concept of sustainable management. Candidates should show an ability to evaluate objectively, conflicts of interest between conservation and other site users and the effectiveness of the supporting legislation.

After researching a case study, candidates should produce an essay of approximately 1000 words covering all criteria set in the Knowledge and/or Skills section. This assessment is open book and there are no restrictions on assessment.

#### **Assessment guidelines**

This assessment is open book and could be done in the candidates own time or could be an open book assessment held under controlled conditions. The assessment for this outcome could be linked to a number of site visits eg SSSI, LNR, Nature reserve, SINC and a particular site could be selected for study. This site visit could also be integrated with a site visit for Outcome 2.

## Higher National Unit specification: statement of standards (cont)

### Unit title: Managing Sites for Biodiversity

**Risk assessment** – it is paramount that a full risk assessment is carried out for all practical activities including site visits to habitats. It is important that student planning identifies any sites they might visit unsupervised whilst performing parts of the investigation; if these are unsuitable or cannot be risk-assessed within the timescale of the investigation then students must select an alternative that can be risk-assessed and approved. No investigation should be offered or approved unless its performance can fully comply with appropriate regulations or guidelines.

### Outcome 2

Relate conservation methodology and terminology used in site designation.

#### Knowledge and/or skills

- ◆ Classification of habitats:
  - Terrestrial
  - Aquatic
- ◆ Criteria for conservation value.
- ◆ Designation of sites of high natural or scientific value.

#### Evidence requirements

Candidates should demonstrate an ability to classify terrestrial and aquatic habitats using the currently recognised National Standard on a chosen site. Using the criteria for conservation, candidates should be able to designate the importance of the chosen site for conservation.

The assessment should be set as an open book assignment requiring the candidate to map and describe habitats according to the currently recognised industry standard for classification. Candidates should then apply the criteria of size, diversity, rarity, fragility, typicalness, position in an ecological unit, naturalness, recorded history, intrinsic appeal, potential, access for assessing the value of the site for nature conservation and arrive at a conclusion as to the value of the site for conservation.

This outcome will be assessed by an open book report, to be completed in the candidates own time of approximately 1000 words and a current industry standard for classification. Candidates should cover all knowledge and skills items listed above.

#### Assessment guidelines

This outcome leads on from Outcome 1 and evidence could be gathered from a single site visit and a single report/essay of approximately 2000 words produced. The information gathered may form part of the management plan for outcome 4.

Currently recognised industry standards for classification could include the standard phase 1 habitat assessment format to at least level three descriptions, River Habitat survey or other suitable format.

## **Higher National Unit specification: statement of standards (cont)**

**Unit title:** Managing Sites for Biodiversity

### **Outcome 3**

Evaluate resources for the management of nature conservation

#### **Knowledge and/or skills**

- ◆ Onsite, and external resources required for site management
- ◆ Constraints of site management
- ◆ Aims and objectives for suitable on site management.
- ◆ Grant aid systems

#### **Evidence requirements**

This outcome should be assessed holistically with outcome 4. Candidates should show the ability to identify and evaluate resources required for sustained conservation management for a given site and the aims and objectives for suitable site management. Candidates should also show that they are able to identify such constraints as legal, financial and manpower. This should take the form of a field logbook where information required will be recorded accurately, and used to formulate part of the management plan in outcome 4.

#### **Assessment guidelines**

Candidates should complete a field logbook and the information will be used to formulate the management plan for outcome 4.

### **Outcome 4**

Produce a management plan for a site using current accepted industry standards.

#### **Knowledge and/or skills**

- ◆ Coherent management planning.
- ◆ Site management intervention techniques.
- ◆ Industrially recognised standards for management planning.
- ◆ Compromise between nature conservation and other site use.
- ◆ Mechanism for reappraisal and planning update.
- ◆ Management Intervention techniques: create, enhance and maintain habitats

## **Higher National Unit specification: statement of standards (cont)**

**Unit title:** Managing Sites for Biodiversity

### **Evidence requirements**

This outcome should be assessed holistically with outcome 3 and should test all criterion set in the knowledge and skills section. Candidates should be able to show the ability to create a coherent management plan to a recognised industry standard. The plan should cover at least three habitats, and cover a variety of management intervention techniques. The management plan should be for 5 years and should set specific management objectives and targets and create a mechanism for reviewing site management. The plan should be approximately 2000 words in length and should include details on sources of potential funding.

This assessment should be set as an open book unsupervised project. Candidates should use evidence gathered in outcome 3 to produce a management plan that is set to a national standard and covers all the criterion in the knowledge and skills section.

### **Assessment guidelines**

A site containing 3 habitats should be selected for study. This site can have existing nature conservation value or potential nature conservation value and should be a local site as in outcome 3

The management plan could contain information such as: site photos, diagrams, tables. And candidates could utilise journals, books and the internet.

## **Administrative Information**

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<b>Unit title:</b>	Managing Sites for Biodiversity
<b>Superclass category:</b>	QA
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## **Higher National Unit specification: support notes**

### **Unit title: Managing Sites for Biodiversity**

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 80 hours.

### **Guidance on the content and context for this Unit**

This unit is designed to enable candidates in outcome 1 to understand nature conservation in a range of contexts. It is also the purpose to allow candidates in outcomes 2, 3 and 4, to relate nature conservation to a site and to formulate management plans for it within constraints imposed from a variety of sources. Persons delivering this unit should attend evidence gathering field visits to ensure evidence used in the formulation of outcomes 2, 3 and 4 is authentic and related to the site.

### **Guidance on the delivery and assessment of this Unit**

#### ***Opportunities for developing Core Skills***

This unit should be delivered as if the candidates have no prior knowledge or understanding of the subject area. The opportunity exists for candidates to fully evaluate a site. The unit should also develop research skills. Although candidates will study a site in depth, every opportunity should be taken to visit other sites.

#### **Outcome 1**

This outcome should introduce the concepts and ideas of nature conservation and should include looking at the historical development of conservation and conservation from a local, national and international context and the ideas of sustainable management. The conflicts, which might arise between primary site users and the need for conservation, should be fully explored. The outcome should be set in the context of the Scottish Biodiversity Strategy and the Nature Conservation (Scotland) Act 2004

Candidates could be given a case study looking at a site of local (SINC), national (SSSI) and international (SPA or SAC) importance. How are such areas of conservation designated? Candidates could research development within designated areas and identify conflicts between primary site users and conservation.

For example: the conflicts between primary site users and conservation with regards to the Cairngorm Funicular development and the impact on countryside access and areas of sensitive nature conservation value

#### **Outcome 2**

This outcome should introduce the concepts of habitat classification in line with the currently accepted industry standards. The candidates should be made familiar with techniques for mapping habitats according to recognised methods. Candidates should also be able to describe habitats in a currently recognised format.

The candidates should be made familiar with the criteria set for evaluating habitats for conservation importance.

## Higher National Unit specification: support notes (cont)

### Unit title: Managing Sites for Biodiversity

Candidates could be allocated a site that covers a variety of terrestrial habitats and at least one aquatic habitat (may include wetlands such as bog or fen). Candidates could then use mapping techniques to map the site. Habitat descriptions should accompany the habitat map.

Candidates may then carry out research into site history and use the collected information to evaluate the site using conservation value criteria.

The information gathered could then be taken forward to outcome 3 and 4 where management objectives will be set and a plan developed.

#### Outcome 3

Candidates should evaluate the site for resources, both existing and required external resources. Candidates should set realistic and achievable objectives for the sustained management of the site with conservation in mind. Such constraints as financial, legal and physical can be researched. Information gathered here and in outcome 2 forms part of the management plans in outcome 4.

#### Outcome 4.

The evidence gathered in outcomes 2 and 3 should build towards creating a management plan for nature conservation. The plan should be written according to the current nationally accepted industry standard. The plan should show a planning regime covering a 5 year timescale that includes evolution and review mechanisms

### Open learning

If this unit is delivered by open or distance learning methods, additional planning resources may be required for candidate support, assessment and quantity assurance. A combination of new and traditional authentication tools may have to be devised for assessment and reassessment purposes.

For further information and advice, please see *Assessment and Quality Assurance of Open and Distance Learning* (SQA, February 2001 – publication code A1030).

### Candidates with additional support needs

This Unit specification is intended to ensure that there are no artificial barriers to learning or assessment. 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 Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs*, which is available on the SQA website [www.sqa.org.uk](http://www.sqa.org.uk).



## **General information for candidates**

### **Unit title:** Managing Sites for Biodiversity

This unit will give you an understanding of nature conservation from international, national and local contexts. It will allow you to analyse a site for its nature conservation and biodiversity value.

The outcomes will take you through looking at nature conservation with regards to historical development, the compromise between conservation and other site use and the application of sustainable management.

You will undertake analysis of a site in terms of habitat mapping; assess the value of the site in relation to conservation, assess onsite resources and identify required resources. Short and long term management objectives will then be set to enhance the conservation value of the site.

The site will then be researched in depth to ascertain past history in terms of land use, previous management, ownership and any current designation attached. You will then be required to use all the information gathered to write a minimum management plan for the site.

The assessments for this unit will take the form of a case study for outcome 1, a report for outcome 2 with outcomes 3 and 4 being assessed holistically with each outcome building towards the production of a final report in the form of a management plan developed to a national standard.