Higher National Unit Specification

General information for centres

Unit title: Gamekeeping: Woodland Deer Management

Unit code: DX1W 34

Unit purpose: The aims of this Unit are to develop the candidate knowledge and/or skills required to enable them to manage woodland deer populations to achieve formal long-term forest protection objectives and ultimately be able to contribute positively as a recognised member of a forest management team. Candidates will be made aware that it is important within the commercial forest sector to control woodland deer populations to maintain damage to forest crops and/or associated habitats to acceptable levels as set down by forest management objectives.

On completion of the Unit the candidate should be able to:

1 Describe woodland deer management objectives.
2 Identify commonly utilised commercial forest tree species and describe their relative vulnerabilities to deer damage.
3 Describe techniques and procedures for protecting forest crops from deer damage.
4 Describe the factors influencing forest design for deer management and control.

Credit points and level: 2 HN credits at SCQF level 7: (16 SCQF credit points at SCQF level 7*)

*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: There are no formal academic requirements for this Unit. However it would be beneficial if candidates did have vocational experience in an appropriate discipline or had studied, or were studying (DN8P 34) *Gamekeeping: Deer Biology* or related units.

Core Skills: There are opportunities to develop the Core Skills 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: This Unit is assessed by a series of extended response questions for Outcome 1, a presentation supported by a report for Outcome 2, a portfolio of evidence supported by a report for Outcome 3 and a series of extended response questions for Outcome 4.

Higher National Unit specification: statement of standards

Unit title: Gamekeeping: Woodland Deer Management

Unit code: DX1W 34

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

Describe woodland deer management objectives

Knowledge and/or Skills

♦   Importance of clear woodland deer management objectives
♦   National Forest Objectives and the Scottish Forestry Grant Scheme
♦   Forest Crop Protection
♦   Silvicultural Systems (Clearfell, Continuous Cover etc.)
♦   Deer population in balance with natural habitat
♦   Sustainable healthy population of native deer species
♦   Sporting shooting
♦   Monitoring if objectives are being met

Evidence Requirements

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

♦   describe the importance of clear woodland deer management objectives
♦   evaluate if woodland deer management objectives are being met

Assessment Guidelines

This Outcome should be assessed by a series of extended response questions.

Higher National Unit specification: statement of standards (cont)

Unit title: Gamekeeping: Woodland Deer Management

Outcome 2

Identify commonly utilised commercial forest tree species and describe their relative vulnerabilities to deer damage

Knowledge and/or Skills

♦   Tree species/shrubs
♦   Types of tree damage caused by deer
♦   Conservation/Biodiversity/Habitat
♦   Other Damaging Agents (insects, climate, hares etc.)
♦   Crop/habitat Damage Assessment Methods

Evidence Requirements

Candidates will need evidence to demonstrate their knowledge and/or skills by showing that they can:

♦   identify a minimum of five conifer and five native hardwood species correctly using common and Latin names
♦   describe two types of deer damage
♦   describe two types of damage from other damaging agents apart from deer
♦   describe typical crop and habitat damage assessment methods

Assessment guidelines

This Outcome should be assessed by a the production and delivery of a presentation to cover the first three Evidence Requirements, supported by a brief report to cover crop and habitat damage assessment methods. The presentation should contain relevant illustrations.

Outcome 3

Describe techniques and procedures for protecting forest crops from deer damage

Knowledge and/or Skills

♦   Deer Fencing
♦   Individual Tree Protection
♦   Chemical Protection
♦   Deer Population Management
♦   Health and Safety

Higher National Unit specification: statement of standards (cont)

Unit title: Gamekeeping: Woodland Deer Management

Evidence Requirements

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

♦ describe deer fencing techniques taking into account relevant Health and Safety requirements
♦ identify and describe techniques for individual tree protection taking into account relevant Health and Safety requirements
♦ identify and describe techniques for chemical protection taking into account relevant Health and Safety requirements
♦ describe the relationship between deer population management and forest crop damage
♦ identify and describe the advantages and disadvantages of different methods of forest crop protection

Assessment Guidelines

This Outcome should be assessed by the production of a portfolio of evidence which covers the first three Evidence Requirements listed above. This portfolio should be supported by a brief report which covers the final two Evidence Requirements.

Outcome 4

Describe the factors influencing forest design for deer management and control

Knowledge and/or Skills

♦ Soil type
♦ Plant Indicator Species
♦ Aspect
♦ Predominant wind direction
♦ Specific deer control areas
♦ Access (road network, ATV, pedestrian access paths, carcass extraction)
♦ Shooting position (ground/raised)
♦ Health and Safety

Evidence Requirements

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

♦ describe the influence of soil type on deer management and control
♦ identify and describe plant indicator species
♦ describe the influence of aspect on deer management and control
♦ describe the influence of predominant wind direction on deer management and control

Assessment Guidelines

This Outcome should be assessed by a series of extended response questions.

Administrative Information

Unit code: DX1W 34

Unit title: Gamekeeping: Woodland Deer Management

Superclass category: SG

Original date of publication: August 2005

Version: 01

History of Changes:

Version	Description of change	Date

Source: SQA

Higher National Unit specification: support notes

Unit title: Gamekeeping: Woodland Deer 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 80 hours.

Guidance on the content and context for this Unit

The aims of this Unit are to develop skills in woodland deer management with particular reference to achieving recognised national/commercial owned forest protection and conservation objectives. The Unit is suitable for delivery within the context of both government and privately owned commercial woodland and emphasis in delivery should be with regard to the vocational group or groups being taught. The Unit primarily intends to develop candidate skills in utilising relevant information available through policy/objective statements, crop/habitat monitoring and deer population/density estimates to formulate the relevant woodland deer management prescriptions. Whilst emphasis may be placed on distinct local/geographic deer management scenarios, problems of national significance should not be ignored. Lectures and tutorials should be supported by practical classes and field visits, resource materials, preserved specimens, and by the use of computer-based learning packages to develop skills and knowledge.

Outcome 1 identifies the importance of having clearly defined woodland deer management objectives from the outset. Candidates should be made aware of differing objectives and the constraints/opportunities this will have on related deer management prescriptions. Since the Unit is primarily vocationally based, the long-term protection of the commercial tree crop from establishment to felling and eventual re-establishment (economic sustainability) is usually the main objective. Alongside this main economic objective a secondary objective of woodland deer management must be to conserve native deer as a species in their own right and maintain a healthy population. In some cases the limitation of the spread of exotic deer may be an objective. Candidates should be made aware of the relevant constraints/opportunities which arise as a result of the objectives set out in the Scottish Forest Strategy, the related current forest grant system and forest/woodland product certification.

Outcome 2 should introduce the candidate to the main tree species that are utilised within the forest industry. It should develop the candidate's knowledge and understanding of how different deer species show a marked preference for particular tree species and levels of browsing, fraying and bark stripping damage on each species is usually distinctly different with related qualitative and quantitative losses to crop value. In addition, candidates should recognise that due to time/cost constraints it is important to utilise a method of damage assessment which is accurate, consistent but also simple and quick.

In Outcome 3 candidates will consider the advantages/disadvantages, limiting factors and economic consequences for differing forest crop protection procedures. Health and Safety and environmental issues must be covered with respect to the use of chemical repellents.

Higher National Unit specification: support notes (cont)

Unit title: Gamekeeping: Woodland Deer Management

In Outcome 4 candidates should recognise the importance of a sound forest design based on soil type, which incorporates space and provides extra internal forest edge and native site-specific broadleave species within and throughout the commercial forest. In addition candidates should be able to consider where it is appropriate to create additional specific deer control areas and when to utilise raised/ground based shooting platforms/highseats. Health and Safety issues should be covered with respect to the use of raised shooting platforms/highseats.

Guidance on the delivery and assessment of this Unit

This Unit can be delivered as a free-standing Unit but will more normally be delivered as part of the HNC in 'Gamekeeping and Wildlife Management' (G7WF 15). As part of a Group Award it would be beneficial for it to be delivered after or in conjunction with complimentary Units, for example (DN8P 34) *Gamekeeping: Deer Biology*. In these circumstances candidates will more easily appreciate the integration of the material. This should also allow the Unit to be delivered in a way that enables candidates to appreciate its relevance to the occupational area concerned.

For Outcome 1 each candidate will need evidence to demonstrate they are aware of the importance of formulating clear deer management objectives and monitoring if objectives are being met. Evidence could be generated using extended response questions.

For Outcome 2 candidates will need evidence to demonstrate their knowledge and/or skills by showing that s/he can identify commonly utilised commercial forest crop species and describe their individual relative vulnerabilities to pest damage and how this may change with age. In addition candidates need evidence to demonstrate the ability to identify differing damaging agents other than deer and demonstrate they are aware of the recognised methods to measure deer impacts on forest crops and habitats.

Evidence could be generated by the production and delivery of a presentation, which should contain relevant illustrations. The presentation should also be supported by a brief report which describes typical crop and habitat damage assessment methods.

For Outcome 3 evidence for the knowledge and/or skills in this Outcome will be provided through the production of a portfolio of evidence. Each candidate will need evidence to demonstrate they are fully conversant with the advantages/disadvantages, limiting factors and economic consequences for differing protection procedures. The portfolio should be supported by a brief report which covers the relationship between deer population management and forest crop damage and the advantages and disadvantages of different methods of forest crop production.

For Outcome 4 each candidate will need evidence to demonstrate they have knowledge/skills required to create a sound forest design based on soil type enabling long-term forest protection objectives to be realised.

Evidence for the knowledge and/or skills in this Outcome will be provided through the use of extended response questions.

Higher National Unit specification: support notes (cont)

Unit title: Gamekeeping: Woodland Deer Management

Opportunities for developing Core Skills

There may be opportunities to gather evidence towards the Core Skills of *Communication* and *Problem Solving* in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Open learning

This Unit could be delivered by distance learning. It is probable that candidates would need to attend the centre for assessment of Outcome 2, though this could be done in other locations under approved supervision.

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. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (**www.sqa.org.uk**).

General information for candidates

Unit title: Gamekeeping: Woodland Deer Management

This Unit is designed to enable you to develop skills associated with woodland deer management to maintain damage to forest crops and/or associated habitats to acceptable levels as set down by forest management objectives. It is intended to introduce you to the skills required to enable you to manage woodland deer populations to achieve formal long-term forest protection objectives and ultimately be able to contribute positively as a recognised member of a forest management team. As such it covers four main areas: the importance of having clearly defined woodland deer management objectives form the outset; an appreciation of how different deer species show a marked preferences for particular tree species and levels of browsing, fraying and bark stripping damage on each species is usually distinctly different with related qualitative and quantitative losses to crop value; an appreciation of differing forest crop protection procedures; and an appreciation of the input required to create a sound forest design based on soil type enabling long-term forest protection objectives to be realised.

Upon completion of the Unit you will be expected to recommend deer management strategies to achieve differing woodland deer management objectives and be able to monitor if these objectives are being met or not. In order to complete the Unit you will be expected to achieve a satisfactory level of competence in the factors which need to be considered when managing a woodland deer population and demonstrate that you can draw on the relevant information to select an appropriate deer management strategy.