



## Higher National Unit specification

### General information for centres

**Unit title:** Arboriculture: Amenity Tree Management

**Unit code:** F3YB 34

**Unit purpose:** This Unit is designed to build the candidate's knowledge in relation to the care, arboricultural practice and management of amenity trees and woodland trees.

The Unit is relevant to candidates that need to develop their knowledge and understanding of arboriculture and the management of amenity trees.

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

- 1 Explain the planting, post-planting care and maintenance practices for amenity trees.
- 2 Identify damaging agents and their potential risk to amenity trees.
- 3 Carry out a tree inspection and tree survey.

**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:** Access to this Unit is at the discretion of the centre. However, prior knowledge of F3YW 34 *Forestry: Forest Science* and F3YA 34 *Arboriculture Practice* would be helpful to the candidate.

**Core Skills:** There are opportunities to develop the Critical Thinking component of *Problem Solving*, the Written Communication component of *Communication*, and *Information Technology* at SCQF level 5, although there is no automatic certification of Core Skills or the Core Skills components.

## **General information for centres (cont)**

**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.

This Unit is included as a mandatory Unit in the framework of the:

- ◆ HNC Arboriculture and Urban Forestry
- ◆ HND Arboriculture and Urban Forestry

**Assessment:** The Unit could be assessed by a combination of practical identification tests of tree species, assignments and the production of a tree survey report.

## Higher National Unit specification: statement of standards

**Unit title:** Arboriculture: Amenity Tree 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 planting, post-planting care and maintenance practices for amenity trees

#### Knowledge and/or Skills

- ◆ Amenity tree species
- ◆ Site type requirement
- ◆ Suitable amenity locations
- ◆ Species selection
- ◆ Pre-planting preparations
- ◆ Post-planting operations
- ◆ Constraints on planting and aftercare
- ◆ Health and safety
- ◆ Current tree legislation

#### Evidence Requirements

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

- ◆ identify a range of tree species from their leaf characteristics, crown shape and habit. This will consist of 15 conifer and 25 broadleaf tree specimens. The specimens must be mounted and their common and Latin names displayed along with detail on their amenity properties and mature habit.
- ◆ correctly state the site type requirement for a range of different tree species. A minimum of three site types must be covered.
- ◆ identify three different locations for trees and explain why they are suitable in relation to the trees' characteristics and habit.
- ◆ select tree species for amenity tree planting and explain why these are appropriate to location and site type.

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

### Unit title: Arboriculture: Amenity Tree Management

- ◆ explain the correct planting and post planting care and maintenance necessary for the successful establishment and security of amenity trees.
- ◆ identify the correct equipment and materials to aid the successful establishment and security of amenity trees.
- ◆ identify the likely health and safety requirements for work on the site.
- ◆ explain the constraints that may effect amenity tree planting for a given site.
- ◆ outline the current law that applies to amenity tree management.

### Assessment Guidelines

Part of Outcome 1 will be assessed by a practical identification project requiring the collection of 15 conifer and 25 broadleaf tree specimens. The specimens must be mounted and their common and Latin names displayed along with detail on their amenity properties and mature habit. (The description relating to each of the 40 specimens could have a word limit of 25 words or equivalent, total 1,000 words or equivalent).

The other assessment could take the form of a project assignment where the candidate is given an urban planting and a woodland planting scenario and is asked to describe the planting and aftercare management required to establish amenity trees successfully for the given site type and location. (Suggested word limit of 1,000 words or equivalent).

This could cover:

- ◆ site description
- ◆ species choice
- ◆ size of plant stock and stocking density
- ◆ access
- ◆ planting methods — ground preparation, tree support and protection, fertilizers, mulch
- ◆ aftercare — weeding, stake maintenance, watering
- ◆ machinery and tools employed
- ◆ health and safety aspects
- ◆ current tree law as applicable to amenity trees

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

**Unit title:** Arboriculture: Amenity Tree Management

### **Outcome 2**

Identify damaging agents and their potential risk to amenity trees

#### **Knowledge and/or Skills**

- ◆ Fungal and bacterial diseases
- ◆ Insects
- ◆ Non pathogenic diseases
- ◆ Symptoms
- ◆ Control methods

#### **Evidence Requirements**

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

- ◆ identify the common fungal and bacterial diseases that attack amenity trees and the symptoms displayed.
- ◆ identify the common non-pathogenic disorders. This must include one disorder from the following categories: urban, environmental and climatic factors. Candidates must explain the effect these disorders have on the trees.
- ◆ identify common insect attacks on amenity trees and the symptoms displayed.
- ◆ explain the control methods available to treat amenity tree disorders.

#### **Assessment Guidelines**

Outcome 2 could be assessed by an identification test concentrating on the identification of common damaging agents and the damage caused. The test could concentrate on common amenity tree damaging agents and will cover bacteria, fungi, insects, and non-pathogenic damage. The test could include a minimum of eight common damaging agents and six common examples of symptoms displayed and concentrate on the most significant damaging agents at the time. The identification test could have the same agent represented in both parts of the test.

It is suggested that this assessment could be presented to the candidate as a laboratory identification test where all the exhibits can be brought together in one place so that actual examples can be used or photographic images displayed where this is not possible. 10x hand lenses may be made available to the candidates to assist in identifying smaller objects, eg aphids, but this should not be necessary for the majority of the test.

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

**Unit title:** Arboriculture: Amenity Tree Management

### **Outcome 3**

Carry out a tree inspection and tree survey

#### **Knowledge and/or Skills**

- ◆ Measurement techniques and conventions
- ◆ Management strategies
- ◆ Tree survey and inspection
- ◆ Tree survey and inspection records

#### **Evidence Requirements**

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can carry out a tree inspection and tree survey. Candidates must:

- ◆ measure conifers or broadleaves trees for survey requirements. This must include tree height and girth. Measurements must be accurate and candidates must use the appropriate techniques and conventions for measuring.
- ◆ assess trees for damage, tree health status, required work, and tree hazards.
- ◆ state the appropriate management strategies for amenity trees to promote tree health and public safety.
- ◆ produce the necessary records appropriate to a survey.
- ◆ produce a report for a given site.

#### **Assessment Guidelines**

Outcome 3 could be assessed by a practical exercise on a given site to produce a tree survey report that will provide information on the site the health of the trees and any identifiable hazards associated with the trees. The report will also give recommendations for the management of the trees on the site in relation to any maintenance requirements and any identifiable tree surgery work that requires to be carried out on the trees. It is recommended that the survey will include a minimum of TEN trees (suggested word limit for the report of approximately 1,500 words or equivalent).

## Administrative Information

**Unit code:** F3YB 34

**Unit title:** Arboriculture: Amenity Tree Management

**Superclass category:** SG

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### History of changes:

Version	Description of change	Date

**Source:** SQA

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## **Higher National Unit specification: support notes**

### **Unit title:** Arboriculture: Amenity Tree 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**

This Unit is included as mandatory in the framework for the following Group Awards:

- ◆ HNC Arboriculture and Urban Forestry
- ◆ HND Arboriculture and Urban Forestry

It is recommended that the delivery of this Unit should be through a combination of lectures, site visits and practical exercises.

The Unit is designed to emphasis amenity tree care in the urban and woodland setting. The content should introduce and develop the specialised care of amenity trees from planting through to remedial and preventative work on large amenity trees. The practical management of amenity trees through a knowledge of the techniques applied by arboriculturalists will be the main thrust of the Unit from tree species identification, through tree surgery techniques to tree inspection and survey practices.

The following support notes cover the mandatory requirements of the Unit and recommended aspects that could be covered in teaching and learning.

#### **Outcome 1**

This Outcome will build up knowledge of a wide variety (both conifer and broadleaf) of tree species, their biological characteristics and the site types and amenity locations that suit the needs of the tree species such as soil type, fertilizer requirements and micro climate and the requirements of differing site locations such as proximity to roads and buildings, pollution, human influences and tree size.

This knowledge could be developed into the planning and management suggestions for the establishment of amenity trees covering both individual urban tree establishment and larger woodland establishment. For both scenarios the correct practices of ground preparation, planting, staking, protection and subsequent tree management such as weeding, watering, cleaning, thinning, coppicing will be discussed along with required soil ameliorants, materials and equipment for correctly carrying out the work. Tree choice should consider aesthetic association as well as site, climatic, artificial lighting and pollution and disease resistance suitability.

Laws and regulations such as health & safety (COSHH, Risk Assessment, etc), pollution control, pesticide use (COPR), TPO and Conservation Areas (Town and Country Planning Act) should be covered by lectures and web searches to use case studies for learning purposes.

#### **Outcome 2**

This Outcome will develop an understanding of the life cycles and conditions required for damaging agents and identify their damage stage, the damage they cause to amenity trees and the control methods available along with the benefits of applying control.

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



## **Unit title: Arboriculture: Amenity Tree Management**

The Outcome will cover common tree rot, canker and wilt fungi/bacteria, insects such as bark beetles, caterpillar larvae and aphids plus non-pathogenic disorders such as pollution, climate, soil conditions.

### **Outcome 3**

This will outline the correct practice for carrying out tree inspections and tree surveys and the production of reports detailing subsequent tree management proposals.

Practical exercises could be carried out taking tree height and girth measurements, assessing tree health, assessing the problems of the built environment to tree growth and health, identification of hazardous trees, visual inspections, awareness of available instrumentation to aid tree condition assessment.

Data will be collected in the field and recording forms could be developed on computer software to display this information for survey assessment and report compilation.

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

Outcome 1 will be achieved partly through practical tree identification in the field where possible and by site visits to see and discuss the positioning of amenity tree in the environment, with discussion on both the positive aspects of the tree species and the site and location factors.

The assessment will take the form of a tree collection where both conifer and broadleaf tree samples are collected, mounted and identified by Latin and common names. The species should then carry a succinct description of their habit and ideal use for amenity situation, indicating inappropriate use where relevant.

The management of amenity tree establishment could be assessed by a project evaluating an urban and a woodland planting and maintenance scenario where the candidate has to describe the site types and choose suitable tree species for the conditions that they identify and define the planting methods and subsequent maintenance management of the areas.

An outline of the relevant law in relation to amenity trees will be delivered through lectures with a section of the project assessment being identified to describe the legal position that applies to amenity trees and the aid that may be available for their establishment and maintenance.

Outcome 2 could be achieved through Internet based searches, lectures and field visits where applicable. The candidates could research and gather information of particular agents and give oral presentations to the other candidates.

The Outcome could be assessed by a closed-book identification test where samples of pictures are laid out and the candidates correctly identify a sample of the damaging agents and their damage that has been studied. A cutting score of 70% is recommended.

Outcome 3 could be achieved through practical tree measurement and assessment supported by lectures. The use of computer software should be encouraged to present the data and a tree survey report produced with recommendations. It is recommended that a minimum of 10 trees be used for the exercise.

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

## **Unit title:** Arboriculture: Amenity Tree Management

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

There are opportunities to develop the Critical Thinking component of *Problem Solving*, the Written Communication component of *Communication*, and *Information Technology* at SCQF level 5 in this Unit. Critical Thinking could be developed in all Outcomes in which candidates have to carry out identification and analysis. The Written Communication component of *Communication* could be developed if candidates produce a written report for Outcome 3. *Information Technology* could be developed if candidates use IT to carry out information research and produce the tree survey report.

### **Open learning**

All Outcomes are appropriate for open and distance learning approaches, and it would be good practice to provide candidate packs and tutor input and support at all stages. Centre-devised supervision agreements should detail any conditions to ensure authenticity of evidence.

### **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](http://www.sqa.org.uk)).

## General information for candidates

### Unit title: Arboriculture: Amenity Tree Management

This Unit is designed to provide you with a knowledge of a wide variety of tree species used for amenity purposes and to build up your knowledge on the attributes of the different tree species how and where to plant them, the diseases and conditions that trees suffer from and how to assess trees for survey and reporting purposes.

The Outcomes that you will acquire on completion of the Unit are as follows:

Outcome 1 will give you knowledge about tree species, their features and requirements and how to correctly plant, manage and maintain them. The Unit will also cover legal aspects relating to amenity trees.

Outcome 2 will give you knowledge of the damaging agents and the damage that they potentially cause to amenity trees.

Outcome 3 will give you practice in tree inspection and tree survey techniques and the preparation of survey reports.

This Unit is a mandatory Unit in the HNC Arboriculture and Urban Forestry and the HND Arboriculture and Urban Forestry. It is, however, a freestanding Unit and may be delivered as such for purposes of continuing professional development.

The knowledge and skills acquired in this Unit will help you achieve competence in amenity tree management in urban and woodland situations and provide you with the skills to carry out tree surveys with associated management recommendations for future tree surgery work.

For candidates already in employment this Unit provides an opportunity to extend existing knowledge and skills and lays a sound grounding for further study in arboriculture.

This Unit will give you opportunities to develop the Critical Thinking component of *Problem Solving*, the Written component of *Communication*, and *Information Technology* at SCQF level 5.

The Unit will be assessed by a combination of practical identification tests of tree species, assignments and the production of a tree survey report.