



Higher National Unit specification

General information for centres

Unit title: Forestry: Arboricultural Operations

Unit code: F3YN 34

Unit purpose: This Unit is designed to give the candidate the understanding and knowledge to manage trees in amenity areas.

The Unit is relevant to candidates requiring knowledge and the understanding to plan arboricultural operations and organise the planting and care of trees in amenity areas.

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

- 1 Carry out a tree inspection to identify the need for arboricultural operations.
- 2 Produce a work schedule based on a tree inspection.
- 3 Plan and organise the planting, establishment, aftercare and maintenance of individual specimen trees.
- 4 Evaluate established amenity tree planting sites.

Credit points and level: 1 HN credit at SCQF level 7: (8 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. Prior knowledge of tree identification would be of benefit to the student.

Core Skills: There are opportunities to develop the Core Skills *Communication* and *Working with Others* to SCQF level 5, 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.

This Unit is an optional component of the following SQA Group Awards:

- ◆ HNC Forestry
- ◆ HND Forestry

General information for centres (cont)

Assessment: The assessment for this Unit could take the form of:

- 1 Production of a work schedule which prioritises the work to be done identified in the inspection carried out for Outcome 1.
- 2 Practical activity: tree selection, site preparation, tree lifting, planting and aftercare/maintenance.
- 3 A comparative appraisal of two sites (from a choice of three) discussing suitability of species choice, identifying examples of good and/or bad practice, in planting and aftercare techniques.

Higher National Unit specification: statement of standards

Unit title: Forestry: Arboricultural Operations

Unit code: F3YN 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

Carry out a tree inspection to identify the need for arboricultural operations

Knowledge and/or Skills

- ◆ Tree condition
- ◆ Immediate tree hazards
- ◆ Hidden defects
- ◆ Risk assessment

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 to identify the need for arboricultural operations. This must be carried out in a given area containing a minimum of 10 trees.

The tree inspection must include:

- ◆ description of aspects of trees that display the tree's good health. Each description must include condition of stem, crown, foliage, bark, roots, site and age.
- ◆ production of a risk assessment based on tree condition, the risk assessment must include the evaluation of hazards in terms of high, medium and low risk.
- ◆ assessment of tree condition that display hidden defects that may need more exploration. The assessment must show evidence of the candidate checking for thin crowns, poor growth, foliage colour and resin bleeding.
- ◆ recommendation of further investigation and timescales for immediate, remedial and future action appropriate to the results of the tree inspection.

This Outcome is integrated with Outcome 2. Candidates must undertake a tree inspection which would be used to produce evidence for both Outcomes.

Assessment Guidelines

The assessment for this Outcome is combined with the assessment for Outcome 2.

Higher National Unit specification: statement of standards (cont)

Unit title: Forestry: Arboricultural Operations

Outcome 2

Produce a work schedule based on a tree inspection

Knowledge and/or Skills

- ◆ Schedule of work
- ◆ Risk and hazard assessment
- ◆ Tree Preservation Orders (T.P.Os)
- ◆ Conservation Areas
- ◆ Local Plans
- ◆ Current fiscal policies

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can produce a work schedule based on the tree inspection carried out in Outcome 1.

The work schedule must include:

- ◆ a description of the areas and the condition of the trees and the recommendation of work to be carried out quickly and that to be monitored for future operations
- ◆ production of risk assessments appropriate to the given area and to the work to be done
- ◆ production of tree hazard assessments appropriate to the trees in the given area and to the tree inspection
- ◆ a record of which trees are affected by legislation such as T.P.Os, Conservation Areas and Local Plans

Assessment Guidelines

Based on the information collected for Outcome 1, a work schedule could be produced. The schedule produced could take account of influencing factors such as Tree Preservation Orders, Conservation Areas, Local Plans, and any other current fiscal policies which might apply to the area.

Higher National Unit specification: statement of standards (cont)

Unit title: Forestry: Arboricultural Operations

Outcome 3

Plan and organise the planting, establishment, aftercare and maintenance of individual specimen trees

Knowledge and/or Skills

- ◆ Tree species
- ◆ Planting objectives
- ◆ Lifting and transportation of trees
- ◆ Tree planting guidelines
- ◆ Establishment
- ◆ Aftercare
- ◆ Maintenance

Evidence Requirements

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

- ◆ select appropriate species for a given site which must meet given planting objectives.
- ◆ apply the correct procedures for the lifting and transportation of trees from the nursery or supplier to the planting site. This must include: root pruning, lifting, handling, protection from damage and drying.
- ◆ apply the correct method of storage of trees on the planting site prior to planting. This must include temporary storage, protection from damage, and browsing.
- ◆ plant in accordance with required guidelines. Width and depth of hole, breaking compaction, addition of organic matter and nutrients, mulching, and staking to ensure trees establish properly.
- ◆ produce a suitable programme for the aftercare and maintenance of the planted trees. This must include watering, weeding, stake adjustment and removal, and pruning.

Assessment Guidelines

Candidates could provide evidence by completion of a given planting operation against a checklist compiled by their tutor which could include:

Site selection and preparation, tree lifting and transport, positioning, back fill, additives/fertiliser, stake and tie if appropriate, mulch, pruning.

They will demonstrate by correct completion of the planting operation their understanding of factors that should influence selection of species, methods of lifting and transportation that minimise stress and damage to trees, planting techniques that reflect the best of modern practice, and methods of aftercare which promote sustained development and good health for the trees.

Outcome 4

Evaluate established amenity tree planting sites

Higher National Unit specification: statement of standards (cont)

Unit title: Forestry: Arboricultural Operations

Knowledge and/or Skills

- ◆ Tree species
- ◆ Planting objectives
- ◆ Lifting and transportation of trees
- ◆ Tree planting guidelines
- ◆ Establishment
- ◆ Aftercare
- ◆ Maintenance

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can evaluate at least two established sites. This must include:

- ◆ identify the extent to which correct practice in the selection of species for each site has taken place.
- ◆ constructively analyse planting operations. This must include things that have been done well and any flaws identified.
- ◆ whether appropriate staking has been done.
- ◆ whether appropriate aftercare has taken place.

This Outcome is integrated with Outcome 3 in that the Knowledge and Skills from Outcome 3 will be used by candidates to complete this Outcome.

Assessment Guidelines

Assessment for this Outcome could be through the production of a brief report.

Administrative Information

Unit code: F3YN 34
Unit title: Forestry: Arboricultural Operations
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Higher National Unit specification: support notes

Unit title: Forestry: Arboricultural Operations

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

This Unit is designed as an optional part of the following SQA Group Awards:

- ◆ HNC Forestry
- ◆ HND Forestry

The content of this Unit should provide the candidate with the knowledge and understanding of arboricultural operations at a general forestry level that will help guide candidates that are at a forestry related operational and supervisory level.

Outcome 1

The purpose of this Outcome is to help the candidate identify defects in trees and recommend remedial treatments.

Outcome 2

The purpose of this Outcome is allow the candidate to rationalise information gained in Outcome 1 and to produce a work schedule which takes into account external influences which can impact on the work recommended to be carried out.

Outcome 3

The purpose of this Outcome is to help candidates develop their skills in organising and delivering the successful planting and care of trees in amenity areas.

- ◆ the various roles for trees in amenity plantings: shelter, screening, shade, interest, pleasure, wildlife habitat, environment
- ◆ site factors and conditions and their effect on species choices
- ◆ amelioration/improvement of detrimental site conditions
- ◆ pre-planting methods: lifting, handling, transport, storage, from nursery/supplier to site
- ◆ planting to current guidance on good practice standards: site preparation, root assessment and pruning, tree placement, staking and ties, modern and traditional methods, branch pruning for disease/damage/shape
- ◆ aftercare/post-planting maintenance: fertilisers/additives, mulches (inorganic and organic), watering, weeding

Higher National Unit specification: support notes (cont)

Unit title: Forestry: Arboricultural Operations

Outcome 4

The purpose of this Outcome is to allow candidates to demonstrate that they can apply the knowledge and skills acquired in Outcome 3. Candidates will use their knowledge and skills to evaluate already established sites. Candidates could be given a choice of sites of which they have to select at least two.

Outcome 1

The principle activity will be a tree inspection report which indicates actions to be taken based on hazard and risk indicators relating to visible defects.

A visual inspection of trees will be carried out. The number of trees to be inspected will be at the discretion of the lecturer, but it is recommended it should not total more than ten.

Candidates will be expected to use books and guides to identify defects and the causes of the defects.

The inspection will be non-intrusive, if sophisticated equipment for carrying out inspections is available to candidates this can be used.

Outcome 2

Candidates will produce a work schedule based on the information gathered in Outcome 1. The work schedule will prioritise work to be carried out based on hazards identified and the risk involved because of these hazards.

The work schedule will also take into account the affect that legislation might have on the recommendations within the report.

The factors could be T.P.Os., conservation areas and local plans for example.

Outcome 3

The principle activity will be the guided practical planting of trees in realistic conditions.

Candidates will also be expected to use library facilities and web searches and this will be supplemented with lectures, tutorials, and site visits to further the development of a fuller understanding of all aspects of this activity.

It is suggested that the check list assessment should be made available to the candidate as progress is made during the practical activity.

Higher National Unit specification: support notes (cont)

Unit title: Forestry: Arboricultural Operations

Outcome 4

This Outcome uses knowledge and skills delivered in Outcome 3. Candidates could be given a choice of amenity tree planting sites from which they must select at least two. Candidates will be required to evaluate the sites chosen. Assessment could be through the production of a site report. This report would be compiled by the candidate following visits to the sites. Sites could be within the locality, or at a locality agreed with the tutor, which display examples of a diverse range of methods and examples of good and/or bad practice.

Opportunities for developing Core Skills

Core Skills may be developed during delivery and assessment of this Unit. It is envisaged that *Communication* and *Working with Others* at SCQF Level 5 will be the most likely Core Skills to be developed.

Open learning

All Outcomes are appropriate for Open and Distance Learning approaches with candidate packs and Tutor input and support at all stages. Centre devised supervision agreements should detail controlled 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).

General information for candidates

Unit title: Forestry: Arboricultural Operations

This Unit is designed to provide you with the basic understanding and knowledge to plan arboricultural operations and organise the planting and care of trees in amenity areas.

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

Outcome 1 will give you the ability to identify the need for arboricultural operations by carrying out a tree inspection.

Outcome 2 will allow you to present the findings of Outcome 1 in the form of a work schedule.

Outcome 3 will give you the knowledge needed to plan and organise the planting, establishment, care and maintenance of individual or specimen trees, by developing an understanding of the process of appropriate selection of species, to meet the planting objectives of particular sites, and that the lifting, transport and subsequent planting of new trees follows current industry best practice guidelines.

Outcome 4 will give you the opportunity to apply the knowledge and skills gained in Outcome 3. You will be asked to choose at least two already established amenity tree planting sites and evaluate these.

This Unit is an optional component of the following SQA Group Awards:

- ◆ HNC Forestry
- ◆ HND Forestry

Overall, the knowledge and skills acquired in this Unit will help you understand what is required to plan arboricultural operations and organise the planting and care of trees in amenity areas.

For candidates already in employment this Unit provides an opportunity to extend existing knowledge and skills, and lays a solid foundation from which to go on to further studies in arboriculture and amenity tree management.

This Unit will give you the opportunity to develop your *Communication* and *Working with Others* Core Skills through the use of practical group activities and assignments.

The Unit will be assessed by assignment submissions based on given scenarios.