



National Unit specification: general information

Unit title: Horticultural Drainage

Unit code: H1JJ 10

Superclass: SL

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Summary

This Unit is intended as a general Unit which covers the planning, construction and maintenance of horticultural drainage. Candidates will develop the practical skills necessary to plan, construct and maintain a range of horticultural drainage types.

Outcomes

- 1 Plan and cost the installation of a drainage system.
- 2 Construct a drainage system.
- 3 Carry out repair and maintenance to a drainage system.

Recommended entry

Entry is at the discretion of the centre.

Credit points and level

0.5 National Unit credit at SCQF level 4: (3 SCQF credit points at SCQF level 4*)

**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.*

General information (cont)

Unit title: Horticultural Drainage

Core Skills

Achievement of this Unit gives automatic certification of the following Core Skills component:

Complete Core Skill None

Core Skill component Critical Thinking at SCQF level 4

There are also opportunities to develop aspects of Core Skills which are highlighted in the Support Notes of this Unit specification.

National Unit specification: statement of standards

Unit title: Horticultural Drainage

Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

Outcome 1

Plan and cost the installation of a drainage system.

Performance Criteria

- (a) Measure and produce a simple plan for the area.
- (b) Identify different drainage types.
- (c) Calculate quantities of materials required and their costs.
- (d) Select appropriate drainage type for given situation.
- (e) Identify the order tasks should be carried out.
- (f) Comply with current rules and regulations, health and safety requirements and planning restrictions relating to drainage installation.
- (g) Carry out a risk assessment.

Outcome 2

Construct a drainage system.

Performance Criteria

- (a) Contribute to the construction of a drainage system.
- (b) Comply with all relevant Health and Safety requirements.

Outcome 3

Carry out repairs and maintenance to drainage systems.

Performance Criteria

- (a) Carry out repairs and maintenance to drainage systems.
- (b) Comply with all relevant Health and Safety requirements.

National Unit specification: statement of standards (cont)

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Evidence Requirements for this Unit

Evidence is required to demonstrate that candidates have achieved all Outcomes and Performance Criteria.

Outcome 1

The candidate will be presented with an area requiring a drainage installation. The candidate will be required to produce a simple plan of the area, work out materials required including costs, and ensure the drainage system will conform to all relevant health and safety and planning restrictions and requirements.

The candidate will produce a risk assessment on a pro forma for the drainage task.

Outcome 2

The candidate is required to produce performance evidence of their ability to safely construct one of the following drainage systems:

- ◆ Perforated pipe
- ◆ French drain
- ◆ Channel system
- ◆ Open ditch

Outcome 3

The candidate is required to produce performance evidence of their ability to carry out a minimum of three of the following repairs and/or maintenance:

- ◆ Unblocking a pipe
- ◆ Replacement of broken/damaged components
- ◆ Maintenance of a silt trap
- ◆ Cleaning a gulley
- ◆ Drainage system location
- ◆ Clearing an outfall
- ◆ Locating and checking manholes
- ◆ Locating a blockage

National Unit specification: support notes

Unit title: Horticultural Drainage

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 20 hours.

Guidance on the content and context for this Unit

This Unit should be taught as a general introduction to drainage installation and repair. Candidates should achieve a level of competence which would enable them to install or repair a drain to a high standard either individually or be able to make a significant contribution as part of a team.

Guidance on learning and teaching approaches for this Unit

This Unit is primarily a practical Unit which gives candidates excellent opportunities to experience and participate in all aspects of drainage construction and repair. Theory topics should be covered in as practical a setting as possible. An opportunity to visit and inspect a range of drainage installations would be useful. Visits to local drainage contractors or suppliers to see the variety of materials, tools and equipment that are available would also be advantageous.

Safe working practices need to be stressed throughout and the dangers of failing to follow them should be highlighted. All relevant personal protective equipment should be worn throughout all practical activities.

Guidance on approaches to assessment for this Unit

The Unit requires candidates to construct a drainage system and maintain three different drainage systems. This should be carried out in groups ensuring that each candidate has ample time to become proficient at each task. Candidates should be under the supervision of the tutor at all times who will demonstrate each stage of the installation and rectify any errors as they arise. The difficulty of the task should be appropriate to the level of this Unit (SCQF Level 4) and must be as realistic as possible given the time restrictions associated with the delivery of this Unit.

National Unit specification: support notes (cont)

Unit title: Horticultural Drainage

Opportunities for the use of e-assessment

Given the highly practical nature of much of this Unit it does not readily lend itself to e-assessment, however it may be possible to assess some aspects of this Unit via e-assessment with careful planning from the centre.

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.

Opportunities for developing Core Skills

There is no automatic certification of Core Skills or Core Skills components in this Unit, however there may be opportunities to develop the Core Skills of *Communication*, *Numeracy*, *Working with Others* and *Problem Solving* at SCQF Level 4.

This Unit has the Critical Thinking component of Problem Solving embedded in it. This means that when candidates achieve the Unit, their Core Skills profile will also be updated to show they have achieved Critical Thinking at SCQF level 4.

Disabled candidates and/or those with additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements

History of changes to Unit

Version	Description of change	Date
02	Core Skills Component Critical Thinking at SCQF level 4 embedded.	10/10/2012

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