National Unit specification: general information

Unit title: Lay Domestic Drainage (SCQF level 5)

Unit code: H0T9 11

Superclass: TH

Publication date: March 2012

Source: Scottish Qualifications Authority

Version: 01

Summary

This Unit provides an introduction to the key principles and techniques of installing drainage systems in a domestic environment. It will develop the candidate's understanding and practical skills in installing domestic drainage systems. This Unit is suitable for candidates working towards a Modern Apprenticeship in the Construction Operative and Specialist suite.

Outcomes

1 Prepare for the installation of domestic drainage.
2 Lay domestic drainage to given specification.

Recommended entry

Entry is at the discretion of the centre. Candidates undertaking this Unit in a Group Award as part of a Modern Apprenticeship (MA) must meet the requirements of the MA which include being employed in the relevant construction industry.

Credit points and level

2 National Unit credits at SCQF level 5: (12 SCQF credit points at SCQF level 5*)

**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: Lay Domestic Drainage (SCQF level 5)

Core Skills

Achievement of this Unit gives automatic certification of the following:

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

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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

Prepare for the installation of domestic drainage.

Performance Criteria

(a) Calculate material requirements and quantities from the given specifications for the task.
(b) Explain safety and security checks to be conducted on the work environment prior to drainage work.
(c) Identify tools and equipment required.
(d) Identify any potential hazards and control measures including PPE.

Outcome 2

Lay domestic drains to given specification.

Performance Criteria

(a) Lay new or replacement plastic and clay foul and water drainage pipes to required specifications.
(b) Position drainage components to required alignment, gradient and falls.
(c) Test foul and surface water drainage systems.
(d) Backfill and compact trenches to required specifications.

National Unit specification: statement of standards (cont)

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Evidence Requirements for this Unit

Evidence is required to demonstrate that the candidate has achieved this Unit to the standard specified in the Outcomes and Performance Criteria. Candidate training and assessment should take place in as realistic an environment as possible to that of a live working site.

Performance and knowledge evidence is required to demonstrate that the candidate has achieved the standard specified in the Outcomes and Performance Criteria.

Performance and knowledge evidence must be produced at an appropriate point in training under supervised conditions once the candidate has developed the necessary skills and knowledge required to carry out the assessment. This evidence must be supplemented with a completed assessor observational/operational checklist.

Evidence must be demonstrated by the candidate laying all of the following:

- Foul drainage (in clay and/or plastic pipes)
- Surface water drainage (in clay and/or plastic pipes)
- Inspection chambers (plastic and/or concrete and/or brick)

Using the following materials:

- Drainage fitments
- Straight pipe length
- Inspection chambers
- Sand
- Cement
- Aggregate
- Adhesives
- Solvents

Candidates must adhere to relevant Health and Safety regulations, codes and practice and other legislation relating both to working practices within the construction environment, as well as those specific to any practical task they are requested to carry out (such as emphasising the importance of selecting and using the correct PPE at all times).

As part of the assessment for this Unit, the candidate will also produce evidence of a method statement and a completed risk assessment for a specified training activity. Oral or written evidence of knowledge and understanding may be demonstrated by the candidate during practical assignments set for all Outcomes and Performance Criteria and noted at the time by the training assessor.

National Unit specification: support notes

Unit title: Lay Domestic Drainage (SCQF level 5)

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 Outcomes and Performance Criteria for this Unit can be demonstrated by the candidate laying all of the following:

- Foul drainage (clay and/or plastic pipes)
- Surface water drainage (clay and/or plastic pipes)
- Inspection chambers (plastic and/or concrete and/or brick)

Using the following materials:

- Components
- Pipes
- Inspection chambers
- Sand
- Cement
- Aggregate
- Adhesives
- Solvents

The content and context of this Unit has been set at an introductory level so that the candidate can develop a basic knowledge and ability in laying domestic drainage within a construction environment.

Health and Safety are vital to working practices within the construction industry and therefore, emphasis will be placed wherever appropriate during the delivery of this Unit on the correct application of Health and Safety principles and processes, in accordance with current codes of practice and legislation.

National Unit specification: support notes (cont)

Unit title: Lay Domestic Drainage (SCQF level 5)

Guidance on learning and teaching approaches for this Unit

These notes are for guidance purposes only, and are not to be considered as a complete training package for centres to follow.

The introductory training for this Unit should take place in a separate training area independent of the productive work environment and using dedicated equipment and resources. This should cover theoretical and practical principles before any practical application of knowledge is carried out by candidates.

Delivery of this Unit will be focussed on enabling candidates to develop the knowledge required for laying domestic drainage safely before they are given the opportunity to do so within the workplace environment. Candidates should learn and be encouraged to communicate the theories and principles of domestic drainage. Delivery of this Unit should also ensure candidates learn about the different components of domestic drainage, using the correct terminology and understanding the correct tools, equipment and materials to be used for specified systems, before any practical work takes place. Emphasis will also be placed on the importance of candidates accurately understanding and interpreting the information provided within work specifications and drawings.

During delivery of the practical components of this Unit, candidates should understand the importance of ensuring good visibility at all times when operating tools and machinery.

E-learning approaches may be appropriate to help tailor delivery to suit the individual needs or learning styles of candidates. This might include, for example, encouraging learners to use electronic resources to conduct research into a specific knowledge area.

Opportunities for integrated delivery of the Core Skills and knowledge developed in other Units may be possible within the practical activities in this Unit.

National Unit specification: support notes (cont)

Unit title: Lay Domestic Drainage (SCQF level 5)

Guidance on approaches to assessment for this Unit

Centres may use the method of assessment which they consider to be most appropriate but are encouraged to use the Training Assessment Programme (TAP) developed centrally by SQA. It is expected that candidates will have to demonstrate current knowledge and understanding of safe working practice and risk assessment methods, etc prior to being set the assessment tasks.

Knowledge and Understanding of the processes involved in laying domestic drainage should be assessed before any practical assignments are carried out by candidates. This will include assessment of a candidate's ability to prepare the work area for laying domestic drainage.

Practical assignments should be carried out under supervised conditions and recorded in an assessor observation /operational checklist. Assessments should confirm that a candidate has the ability to safely carry out basic domestic drainage laying procedures using designated machinery or equipment correctly and safely, whilst adhering to current statutory Health and Safety regulations and legislation.

Adherence to current statutory working regulations and Health and Safety procedures will be observed during the practical exercise carried out by the candidate towards all Outcomes.

Detailed assessment material for this Unit will be found in the relevant Training and Assessment Programme (TAP). Centres may use the instruments of assessment which they consider to be most appropriate but are advised to use the TAP which has been developed centrally by SQA. Any other instruments of assessment used must be comparable to the TAP and have been prior verified.

Opportunities for the use of e-assessment

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)*.

National Unit specification: support notes (cont)

Unit title: Lay Domestic Drainage (SCQF level 5)

Opportunities for developing Core Skills

Candidates will apply the Core Skill of *Numeracy* (SCQF level 3) when positioning drainage components to required alignment, gradient and falls. Identifying any potential hazards to be aware of during the task and testing foul and surface water drainage systems will require candidate to think critically, plan and organise the task accordingly — key aspects of the Core Skill of *Problem Solving* (SCQF level 3).

The opportunity for the Core Skill *Working with Others* (SCQF level 3) will be provided as candidates ensure the safety of others as they comply with codes of practice and working regulations. Throughout this Unit, candidates will be expected to develop the Core Skill of *Communication* (SCQF level 3) within the work environment, for example to inform others of any safety considerations, using the correct terminology and a tone appropriate to the workplace environment. In addition, assessment processes may enable candidates the opportunity to develop their written communication skills.

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

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