

-SQA- SCOTTISH QUALIFICATIONS AUTHORITY

**Hanover House
24 Douglas Street
GLASGOW G2 7NQ**

NATIONAL CERTIFICATE MODULE DESCRIPTOR

-Module Number-	1152160	-Session-	1990-91
-Superclass-	TL		

-Title-	HAND DRAINAGE (X¹/₂)
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-DESCRIPTION-

Purpose	This module is designed to introduce the student to the basic principles of open drainage.
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It is aimed at those who wish to develop their abilities at the craft level in the land based sector.

Preferred Entry Level	1152140 Maintenance of Hand Held Tools in Forestry Work.
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Outcomes	The student should: 1. produce new drains; 2. maintain existing drains.
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Assessment Procedures	Acceptable performance in the module will be satisfactory achievement of all the Performance Criteria specified for each Outcome.
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The following abbreviations are used below:

PC Performance Criteria
IA Instrument of Assessment

Note: The Outcomes and PCs are mandatory and cannot be altered. The IA may be altered by arrangement with SQA. (Where a range of performance is indicated, this should be regarded as an extension of the PCs and is therefore mandatory.)

OUTCOME 1 PRODUCE NEW DRAINS

- PCs
- (a) The selection of tools and equipment is appropriate to the job to be undertaken,
 - (b) The cutting of the new drains is carried out in an efficient and effective manner.
 - (c) The profile of the finished drain is of appropriate dimensions, evenness and gradient.
 - (d) The statement of the reasons for digging drains is correct.

IA Assignment

The student will be set an assignment to test the knowledge and skills required to produce new drains.

The student will be expected to cut a new drain of at least 20m in length meeting the standards specified in the Performance Criteria and state the reasons for digging drains.

The practical elements of the Outcome (Performance Criteria (a) to (c)) may be carried out with the aid of an observation checklist.

Satisfactory achievement of the Outcome will be based on all the Performance Criteria being met.

OUTCOME 2 MAINTAIN EXISTING DRAINS

- PCs
- (a) The selection of tools and equipment is appropriate to the job to be undertaken.
 - (b) The removing of the debris from the drain is complete.
 - (c) The maintenance of existing drains is carried out in an efficient and effective manner.
 - (d) The profile of the finished drain is of appropriate dimensions, evenness and gradient.
 - (e) The statement of the reason for maintaining existing drains is correct.

IA Assignment

The student will be set an assignment to test the application of knowledge and skills required to maintain existing drains.

The student will be expected to carry out the following:

- (i) select tools and equipment;
- (ii) remove debris from the drain;
- (iii) maintain existing drain;
- (iv) finish drain to appropriate dimensions, evenness and gradient;
- (v) correctly state the reasons for maintaining drains.

The practical elements of the Outcome (Performance Criteria (a) to (d)) may be assessed with the aid of an observation checklist.

Satisfactory achievement of the Outcome will be based on all the Performance Criteria being met.

**The following sections of the descriptor are offered as guidance.
They are not mandatory.**

CONTENT/CONTEXT

Safety regulations and safe working practices and procedures should be adhered to at all times.

Corresponding to Outcomes 1-2:

1. Tools required to produce a drain ie. rutter, drain drag and bottoming spade.

Types of drains ie. cut off drain, main drain, cross drain, collecting drain.

Important aspects include the drain profile, gradient and alignment.
 2. Tools required to maintain existing drains ie. rutter, drain drag and bottoming spade. The profile of the drain is maintained allowing them to function.
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SUGGESTED LEARNING AND TEACHING APPROACHES

Initial classroom session with visual aids to demonstrate drainage systems, principles and ideal conformations.

Field visits should be arranged to study both existing systems and evaluate drainage problems.

Culminating with a practical exercise involving the digging of a length of new drain not less than 20m.

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