

**-SQA- SCOTTISH QUALIFICATIONS AUTHORITY**

**NATIONAL CERTIFICATE MODULE: UNIT SPECIFICATION**

**GENERAL INFORMATION**

**-Module Number-** 1230146

**-Session-** 1996-97

**-Superclass-** SG

**-Title-** TREE SURGERY: USE OF POWER TOOLS

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**-DESCRIPTION-**

**GENERAL COMPETENCE FOR UNIT:** Developing the candidate's knowledge and skills necessary to carry out complex tree surgery tasks.

**OUTCOMES**

1. explain the range and application of advanced tree surgery techniques;
2. plan a piece of work requiring advanced tree surgery techniques;
3. carry out a piece of work requiring advanced tree surgery techniques.

**CREDIT VALUE:** 1 NC Credit

**ACCESS STATEMENT:** 88157 Tree Climbing and Rescue Techniques; 1230136 Tree Surgery Using Hand Tools; 1153011 Felling and Processing Trees Using a Chainsaw. Students must be over 18 years of age.

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For further information contact: Committee and Administration Unit, SQA, Hanover House, 24 Douglas Street, Glasgow G2 7NQ.

Additional copies of this unit may be purchased from SQA (Sales and Despatch section). At the time of publication, the cost is £1.50 (minimum order £5.00).

**NATIONAL CERTIFICATE MODULE: UNIT SPECIFICATION****STATEMENT OF STANDARDS****UNIT NUMBER:** 1230146**UNIT TITLE:** TREE SURGERY: USE OF POWER TOOLS

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

**OUTCOME**

1. EXPLAIN THE RANGE AND APPLICATION OF ADVANCED TREE SURGERY TECHNIQUES

**PERFORMANCE CRITERIA**

- (a) The explanation of the range of advanced tree surgery techniques is correct.
- (b) The description of the situation in which each technique is used is accurate and appropriate to the given situation.

**RANGE STATEMENT**

The range for this outcome is fully expressed in the performance criteria.

**EVIDENCE REQUIREMENTS**

Written evidence which will show the candidate's ability to explain tree surgery techniques and the most appropriate use of each as described in performance criteria (a) - (b).

All assessments must be carried out by an assessor who is registered with the Scottish Skills Testing Service (SSTS)/National Proficiency Test Council (NPTC) for assessment of Schedule E material (Arboricultural use of power saws).

**OUTCOME**

2. PLAN A PIECE OF WORK REQUIRING ADVANCED TREE SURGERY TECHNIQUES

**PERFORMANCE CRITERIA**

- (a) The selection of ropes is correct with reference to timber weights and characteristics.
- (b) The selection of appropriate tools for each task is correct.
- (c) The explanation of the proposed methods of work to be used is clear and comprehensive and fully discussed with grounds staff.

**RANGE STATEMENT**

The range for this outcome is fully expressed in the performance criteria.

**EVIDENCE REQUIREMENTS**

Performance evidence in the form of a practical exercise which tests the candidate's ability to plan advanced tree surgery.

All assessments must be carried out by an assessor who is registered with the Scottish Skills Testing Service (SSTS)/National Proficiency Test Council (NPTC) for assessment of Schedule E material (Arboricultural use of power saws).

**OUTCOME**

3. CARRY OUT A PIECE OF WORK REQUIRING ADVANCED TREE SURGERY TECHNIQUES

**PERFORMANCE CRITERIA**

- (a) The implementation of techniques and procedures in the handling of tools and equipment is correct.
- (b) Safe working practices and precautions are correctly adhered to in terms of current Health and Safety Legislations.
- (c) Arisings resulting from the work are safely disposed of.

**RANGE STATEMENT**

The range for this outcome is fully expressed in the performance criteria.

**EVIDENCE REQUIREMENTS**

Performance evidence in the form of activities carried out which satisfies all performance.

All assessments must be carried out by an assessor who is registered with the Scottish Skills Testing Service (SSTS)/National Proficiency Test Council (NPTC) for assessment of Schedule E material (Arboricultural use of power saws).

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**ASSESSMENT**

In order to achieve this unit, candidates are required to present sufficient evidence that they have met all the performance criteria for each outcome within the range specified. Details of these requirements are given for each outcome. The assessment instruments used should follow the general guidance offered by the SQA assessment model and an integrative approach to assessment is encouraged. (See references at the end of support notes).

Accurate records should be made of the assessment instruments used showing how evidence is generated for each outcome and giving marking schemes and/or checklists, etc. Records of candidates' achievements should be kept. These records will be available for external verification.

**SPECIAL NEEDS**

In certain cases, modified outcomes and range statements can be proposed for certification. See references at end of support notes.

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**NATIONAL CERTIFICATE MODULE: UNIT SPECIFICATION****SUPPORT NOTES**

**UNIT NUMBER:** 1230146

**UNIT TITLE:** TREE SURGERY: USE OF POWER TOOLS

**SUPPORT NOTES:** This part of the unit specification is offered as guidance. None of the sections of the support notes is mandatory.

**NOTIONAL DESIGN LENGTH:** SQA allocates a notional design length to a unit on the basis of time estimated for achievement of the stated standards by a candidate whose starting point is as described in the access statement. The notional design length for this unit is 40 hours. The use of notional design length for programme design and timetabling is advisory only.

**PURPOSE** The purpose of this module is to enable the student to acquire the knowledge and skills needed to carry out complex tree surgery tasks.

SQA publishes summaries of NC units for easy reference, publicity purposes, centre handbooks, etc. The summary statement for this unit is as follows:

On completion of this module the candidate will be able to explain advanced tree surgery techniques, plan a piece of work requiring tree surgery and carry out a piece of work requiring tree surgery.

**CONTENT/CONTEXT** Safety regulations, safe working practices and procedures and legal requirements should be observed at all times.

Corresponding to Outcomes 1-3:

Outcomes 1 to 3

Advanced tree surgery techniques should include tree removal in confined spaces, use and selection of ropes in relation to comparative weights and characteristics of timber. Principles and practices of these techniques.

Awareness of situations where deep root feeding or aeration may be important .  
Methods employed.

Techniques and procedures involved in use of: chainsaws; powered augers; powered pruners.

Types available, use and limitations.

Safety precautions.

Hand machine powered winches.

**APPROACHES TO GENERATING EVIDENCE** This is basically a practical skills module requiring a substantial amount of demonstration followed by practice. The candidate should be provided with as wide a range of tree problems as possible and given the opportunity to make decisions on the action to be taken before carrying out the work necessary. The work is time consuming and in situations where the candidates are not able to practice the skills outside the teaching situation it may take considerably longer than 40 hours to achieve an acceptable level of skill.

Besides a high level of skill these activities are also potentially dangerous to the operator and passers by. Safe practices and procedures should be stressed throughout with the proper servicing of climbing gear and equipment.

**ASSESSMENT PROCEDURES** Acceptable performance in the module will be satisfactory achievement of all the Performance Criteria specified for each Learning Outcome.

All assessments must be carried out by an assessor who is registered with the Scottish Skills Testing Service (SSTS)/National Proficiency Test Council (NPTC) for assessment of Schedule E material (Arboricultural use of power saws).

#### Outcome 1

The test will consist of 12 restricted response questions.

The written test should be weighted in favour of part (a) ie. 8 restricted response questions on advanced tree surgery techniques with 4 restricted response questions on advanced tree surgery techniques.

Satisfactory achievement of the Learning Outcome will be based on the candidate producing 6 correct responses to (a) and 3 correct responses to (b).

#### Outcome 2

The candidate will be required to produce evidence in the form of a full oral explanation of how the work will be carried out and a check list should be used to ensure all equipment has been selected.

#### Outcome 3

The candidate is required to assist in delimiting a tree in a confined space.

The test will be carried out in conjunction with an observation checklist.

Satisfactory achievement of the Learning Outcome will be based on the candidate attaining all the performance criteria. The candidate must be at a level whereby they could pass national proficiency test unit 22 chainsaw use in trees.

**RECOGNITION** Many SQA NC units are recognised for entry/recruitment purposes. For up-to-date information see the SQA guide 'Recognised Groupings of National Certificate Modules'.

## REFERENCES

1. Guide to unit writing. (A018).
2. For a fuller discussion on assessment issues, please refer to SQA's Guide to Assessment. (B005).
3. Procedures for special needs statements are set out in SQA's guide 'Candidates with Special Needs'. (B006).
4. Information for centres on SQA's operating procedures is contained in SQA's Guide to Procedures. (F009).
5. For details of other SQA publications, please consult SQA's publications list. (X037).

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