



National Proficiency Tests Council

Registered Charity No. 272305

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**CATEGORY BASED TEST
IN
ARBORICULTURAL
OPERATIONS (A03)**

Bracing

and

Supporting

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RULES AND CONDITIONS FOR ARBORICULTURAL/FORESTRY AND RELATED MACHINERY OPERATION PROFICIENCY TESTS

A APPLICATION

1. The minimum age limit for Candidates taking proficiency tests is 16 years.
There is no upper age limit.
2. Application forms must be completed (including employer's declaration, where relevant), and sent with the appropriate assessment fee to the Assessment Centre before the test.
3. Candidates failing to attend for an assessment without prior notice will normally forfeit the assessment fee.
4. Personal Protective Equipment suitable for the test must be used.
5. Before coming forward for assessment Candidates should have had sufficient experience to enable them to have a reasonable chance of success and in MOST CASES ALSO HAVE RECEIVED EITHER FORMAL OR INFORMAL INSTRUCTION.

B CERTIFICATION

1. Upon the passing of an activity the successful Candidate will receive an acknowledgement.
2. Proficiency Test Certificates can be issued on request which may also act as certificates of competence for Health and Safety Purposes.

C ORGANISATION

1. Assessments are carried out by industrially based Assessors approved by NPTC. Under no circumstances can either instructors involved in the preparation of Candidates for an assessment or their work place supervisors assess those Candidates in that test.
2. Assessment items have been grouped in the assessment schedule for convenience but the order of assessment may be varied.
3. In the more extensive activities, and activities where seasonal work is involved, the assessment may be taken in parts but no acknowledgements will be issued until all the necessary parts have been completed.
4. Common activities are interchangeable between categories, e.g. Tractor Driving (but see 5 below), Pedestrian Controlled Rotary Cultivator, Manure Spreader, etc.
5. The successful completion of the Tractor Driving assessment activity qualifies the Candidate in any category based assessment activity, defined as Tractor Driving, and listed in the current 'List of Category Based Proficiency Tests for Agriculture, Horticulture and Forestry'.
6. Before taking an activity involving the use of a tractor the Candidate must normally have passed the Tractor Driving proficiency assessment activity.
7. It is strongly recommended that first aid equipment complying with the Health and Safety (First Aid) 1981 regulations be available during the assessments and their organisation.
8. Insurance - comprehensive insurance arrangements have been made to cover assessment; details of the insurance cover are available on request.

D STANDARDS

1. Candidates will be assessed on a competent/not yet competent basis.
2. Assessors will ask questions and such questions will be of a practical nature and related to the assessment items concerned.

Questions must not be used as a substitute for performing a practical part of the assessment.

3. All assessments must be conducted with due regard to legal requirements and safety regulations. Any breach of safety regulations will constitute failure of the assessment. In the event of failure to observe reasonable safety precautions that may lead to damage or injury to persons, stock or equipment, the Assessor may, at his/her discretion, stop the assessment and fail the Candidate.
4. Provision of the correct facilities is normally the responsibility of the Assessment Centre; Assessors and Candidates have the right to refuse machinery/equipment which is not suitable or does not comply with safety regulations.

Candidates who provide their own equipment, do so on the understanding that if it is not of the required standard, they will forfeit their assessment entry fee.

5. Unless otherwise stated, options within any assessment or assessment activity are to be applied at the sole discretion of the Assessor who, in making the decision will take into account local practices.
6. Assessors may, at their discretion, stop the assessment and fail Candidates who exhibit such a degree of incompetence, in any part of the assessment, that would indicate their inability to operate the machine or perform the range of skills that the passing of the assessment would imply.
7. Where time standards are stated the Assessor may, at his/her discretion, vary these times when the circumstances make it necessary. In other cases the time allowed is at the discretion of the Assessor, according to the conditions and amount of work involved.
8. Where applicable an assistant may be allowed to assist the Candidate. No help may be given to the Candidate other than as instructed by the Candidate and approved by the Assessor.
9. In all cases where machinery/chemicals are involved the manufacturer's instruction book/directions must be made available to the Candidate.
10. Candidates failing up to 25% of an activity may, at the discretion of the Assessor and the Assessment Centre, retake only the parts failed; those failing more than 25% must retake the whole activity.

SCHEDULE OF ACTIVITIES

The following Activities list has been produced in line with the requirements of the Royal Forestry Society Certificate in Arboriculture

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|----|----|--|
| AO | 1 | Planting |
| AO | 2 | Individual Protection - Metal/Wooden |
| AO | 3 | Bracing and Supporting |
| AO | 4 | Fencing- Strained Fencing <ul style="list-style-type: none">- Access- Garden Fencing |
| AO | 5 | Tractor Driving (<i>see the Certificate of Competence in Forest Machine Operations</i>) |
| AO | 6 | Brushwood Chipper |
| AO | 7 | Stump Grinder |
| AO | 8 | Chain Saw - Maintenance and Operation - Candidates must achieve CS Units 30,31, and 32 in the Certificate of Competence in Chain Saw and Related Operations |
| AO | 9 | Pruning Operations - Candidates must achieve CS Unit 40 in the Certificate of Competence in Chain Saw and Related Operations |
| AO | 10 | Dismantling Operations Candidates must achieve CS Unit 41 in the Certificate of Competence in Chain Saw and Related Operations |
| AO | 11 | Specialist Pruning |
| AO | 12 | Brushwood Cutters or Clearing Saws |
| AO | 13 | Machine Operations - Chain Saw Planking Attachment <ul style="list-style-type: none">- Mechanical Ditching (Candidates are assessed in the context of MO10)- Mechanical Hedge Trimming (Candidates are assessed in the context of MO 10)- Mobile Saw Bench- Mobile Peeler- Mechanical Weeding- Mobile Sawmill |
| AO | 14 | Brushing and Pruning with Hand Saw |
| AO | 15 | Weeding and Cleaning - Hand Weeding and Cleaning <ul style="list-style-type: none">- Chemical Weeding and Cleaning- Candidates should refer to the relevant modules in the Certificate of Competence in the Use of Pesticides- Mechanical Weeding- Candidates are assessed in the context of:<ul style="list-style-type: none">- AO 12 Brushwood Cutters or Clearing Saws or- MO 7 Mowers Mounted or Trailed or- MO15 Mowers Self Propelled |
| AO | 16 | Machine Maintenance - Candidates undertaking this test are assessed in the context of MO 2 Machine Maintenance |
| AO | 17 | Marking and Volume Assessment |
| AO | 18 | Extraction (Skidder or Forwarder) (<i>this has now been replaced by the Certificate of Competence in Forest Machine Operations</i>) |
| AO | 19 | Hand Draining |
| AO | 20 | Hedge Laying |
| AO | 21 | Mobile Elevated Work Platforms |

ACTIVITY AO 3 - BRACING AND SUPPORTING

Candidates are required to complete parts I, II, III, and either IV or V:

A Risk Assessment relevant to the operations involved in this activity must have been conducted by the Candidate and any necessary control measures implemented before commencement of the test.

The Candidate must wear appropriate protective clothing; personal clothing to be appropriate for tree work (FASTCo Safety Guide 401).

Test Item	Guide Notes
Part I: Selection of tools and materials	Site: Workshop/Store/Mobile Store
	Work to be done: Items (a) and (b)
	Suggested time allowed: 15 minutes
a) Select tools	Key points include: a) - select as appropriate for the tasks to be carried out
b) Select materials either for:	Key points include:
(i) Cable brace	b) (i) - cables/rods/props of sufficient length loading and diameter - bulldog and/or other grips compatible to cable - thimbles compatible to cable - eye bolts, washers, spacers - screw eyes - insulating tape
OR	
(ii) Rope brace	(ii) - rope/strops of sufficient length, loading and diameter - thimbles compatible to rope - energy absorber if applicable

Test Item
Part II EITHER
i) Setting up a cable brace

OR

ii) Setting up a rope brace

a) Demonstrate knowledge of the implications of installing a brace

i) Setting up a cable brace

b) Set up a cable brace

c) Use hand tools

Guide Notes

i) Candidate to assemble multi strand cable brace at height

OR

ii) Candidate to set up a rope brace at height

Key points include:

- a) - product liability
- tree growth/tree reaction

Site: Tree in need of bracing

Work to be done: (b) - (d)

Suggested time allowed: 1 - 2 hours

Key points include:

- b) - attachment points of brace in relation to the weight distribution of the tree
- sections
- angle of the cable in relation to the supported sections
- position of brace in respect of its visual appearance
- true line of lag and or bolt shaft and cable run (if applicable)
- fitting and positioning of bulldog or other grips
- bulldog grips tightened to avoid damage to cable
- correct support and crown flexibility achieved
- countersinking of washer (if applicable)
- cutting of eyebolt spacer (if applicable)

Key points include:

- c) - auger shaft kept true whilst turned in wood (if applicable)
- bit cleared regularly (if applicable)
- tools carried securely

d) Demonstrate knowledge of tensioning methods

- Key points include:**
- d) - use of draw vice/ratchet winch
 - drawing brace points together
 - eye bolt left proud by correct amount (if applicable)
 - use of screw lags (if applicable)
 - appropriate allowance made for(e.g.):
 - climber's weight
 - season (deciduous trees)
 - wet/dry foliage
 - seed/fruit weight

e) Demonstrate knowledge of post installation inspection periods

- Key points include:**
- e) - an annual inspection should be undertaken to check security, tension and condition of materials

OR

ii) Setting up a rope brace

a) Set up a rope brace

- Key points include:**
- a) - attachment points of brace in relation to the weight distribution of tree sections
 - attachment points for support strop in relation to natural features
 - allowance made for climber's weight
 - position of brace in respect of its visual appearance
 - correct fitting of elasticated belt if applicable
 - rope positioned to avoid chafing on tree
 - correct insertion and position of rubber cylinder if applicable
 - correct fitting of thimble in rope
 - correct splicing of rope
 - correct crown support and flexibility achieved
 - cutting and sealing of rope end

b) Demonstrate knowledge of implications of inserting a rope brace and rubber cylinder

- b) - admission of tree defect
- crown flexibility altered
- subsequent wind loading changed
- rope strength may be reduced by up to 30%

c) Demonstrate knowledge of post installation inspection periods

- Key points include:**
- c) - an annual inspection should be undertaken to check security, tension and condition of material

Test Item
Part III: Propping

a) Demonstrate knowledge of propping techniques

EITHER

b) Select and install natural props

OR

c) Select and install constructed props

d) Demonstrate knowledge of post installation inspection periods

EITHER

Test Item
Part IV: Bracing of trees and shrubs

Guide Notes

Site: Tree in need of propping

Work to be done: Items (a) - (c)

Suggested time allowed: 1 hour

Key points include:

- a) - use of propping as a means of preventative surgery
- positioned to provide adequate support
- adequate base support for prop
- b) - size:
• length
• diameter
• strength
- naturally durable wood chosen
- straight grained
- sufficiently open forked or correctly shaped
- reasons for de-barking and pre-treatments:
• for visual effect
• problems of pests and diseases
• prolonged life
- c) - designed to meet specifications
- d) - props to be inspected periodically for stability, effectiveness and free of defects

Guide Notes

Brace a shrub or small tree from ground level

Site: Suitable shrub or tree

Work to be done: Item (a)

Suggested time allowed: 30 minutes

a) Set up a brace for a small tree/shrub

b) Demonstrate knowledge of post installation inspection periods

OR

Test Item
Part V: Rod Bracing

a) State uses of Rod bracing

b) Insert rod brace(s) as suitable for **one** of the following applications

(i) forked trees

- Key points include:**
- a) - attachment points
 - angle of the cable in relation to the supported sections
 - position of brace in respect of its visual appearance
 - tensioning of brace
 - durable brace material
 - attached in such a way to minimise damage to shrubs

- Key points include:**
- b) - regular inspections should be carried out to re-tension brace materials as appropriate
 - all materials should be inspected for security and condition
 - checks should be made to ensure that no part of the plant is being chafed by the support

Guide Notes

Insert Rod Brace(s) as agreed by the Assessor

Site: Suitable tree

Work to be done: Items (a) - (c)

Suggested time allowed: 1 hour

- Key points include:**
- a) - forked trees
 - splits in trunks and branches
 - crossing branches
 - use in conjunction with other preventative surgery
- (i) - brace(s) inserted a little below crotch
- position and route of hole as near through the centre of the trunk as natural shape and features of tree allows

- | | |
|--|---|
| (ii) splits in trunks and branches | (ii) - optimum position of hole to provide support for split and to draw sections together |
| (iii) crossing branches | (iii) - position brace to hold the optimum alignment of branches
- prevent untrue alignment from distortion by climber's weight
- where appropriate ensure a good match to enable natural grafting to occur |
| c) Demonstrate knowledge of the remaining applications not carried out | |
| d) Demonstrate knowledge of post installation inspection periods | d) - Key points include:
- rod to be inspected periodically for condition and effectiveness |