

**LEVEL 2**

**CERTIFICATE OF COMPETENCE**  
**IN**  
**CHAIN SAW AND RELATED OPERATIONS**

**ASSESSMENT SCHEDULE**

**CS41**

**UNDERTAKE SECTIONAL FELLING OPERATIONS**  
(Pre-requisite: CS30, CS31, Climb Trees and Perform Aerial Rescue + CS39)

This unit covers the use of the chainsaw and lowering equipment working from a rope and harness in conjunction with a ground person in medium sized open grown trees. It also includes the use of climbing irons

## NPTC LEVEL 2 CERTIFICATE OF COMPETENCE IN CHAIN SAW AND RELATED OPERATIONS

### Introduction

The scheme is administered by NPTC.

NPTC will:

- Publish
  - scheme regulations
  - assessment schedule
  - assessment material
- Approve centres to co-ordinate and administer the scheme
- Set standards for the training of Verifiers and Assessors
- Recruit, train and deploy Verifiers
- Manage verification
- Issue certificates to successful Candidates

The Certificate of Competence/ID Card

Certificates of Competence/ID Cards will be awarded to Candidates who achieve the required level of competence in the Units to which their Certificate relates.

### Instruction

Attendance at a course of instruction is not a pre-requisite to an application for an assessment but potential Candidates are strongly advised to ensure that they are up to the standard that will be expected of them when they are assessed.

NPTC does **not** hold a register of instructors; however instruction will normally be available from recognised training providers and/or centres of further or higher education active in the areas covered by this certificate. Further information on training may be obtained from the local Assessment Centre.

### Access to Assessment

Assessment Centres will be responsible for arranging assessment on behalf of a Candidate. Assessment may only be carried out by an Assessor approved by NPTC for that scheme. Under no circumstances can either instructors involved in the preparation of candidates, or the candidates work place supervisors, or anyone else who might have a vested interest in the outcome, carry out the assessment.

The minimum age limit for Candidates taking certificates of competence is 16 years. There is no upper age limit.

### Assessment

Assessment is a process by which it is confirmed that the Candidate is competent in the Units within the award to which the assessment relates. It is a process of collecting evidence about his/her capabilities and judging whether that evidence is sufficient to attribute competence.

The candidate must be registered through an NPTC approved Assessment Centre for this qualification prior to assessment.

The schedule of assessment contains the criteria relating to:

- Observation of practical performance
- Assessment of knowledge and understanding

When all the criteria within the Units for which assessment has been sought have been completed the result(s) will be recorded on the Candidate Assessment Report Form(s).

### Performance Evaluation

The result of each assessment activity is evaluated against the following criteria:

- 4 = Meets or exceeds the assessment criteria by displaying a level of practical performance and/or underpinning knowledge, with no 'minor' or 'critical' faults. (Competent).
- 3 = Meets the requirements of the assessment criteria for both the practical performance and the underpinning knowledge, with some 'minor' faults but no 'critical' faults. (Competent).
- 2 = Does not fully satisfy the requirements of the assessment criteria, being unable to perform the practical task satisfactorily or being deficient in underpinning knowledge leading to the recording of minor faults. (Not yet competent).
- 1 = Does not satisfy the requirements of the assessment criteria, being unable to perform the practical task satisfactorily or safely or being deficient in underpinning knowledge leading to the recording of a critical fault. (Not yet competent).

A list of registered Assessment Centres is available from NPTC. ([www.nptc.org.uk](http://www.nptc.org.uk))

### Verification

Verification is a process of monitoring assessment; it is an essential check to confirm that the assessment procedures are being carried out in the way that NPTC has laid down. The overall aim of verification is to establish a system of quality assurance that is acceptable in terms of both credibility and cost effectiveness.

Approved Assessors will be subject to a visit by the Verifier at a time when assessments are being undertaken.

A selection of assessment reports completed by the assessor will be evaluated by NPTC.

Compliance with the verification requirements is a pre-requisite for Assessors remaining on NPTC's list of approved assessors.

## Safe Practice

**At all times during the assessment, the chainsaw and other equipment must be operated in a safe manner in accordance with industry best practice, whatever the task being carried out.**

1. Assessors must hold a current 'First Aid at Work' Certificate.
2. It is strongly recommended that Candidates hold at least a recent, recognised 'Emergency First Aid' Training Certificate.
3. All chain saws used in the assessments must comply with Arboriculture and Forestry Advisory Group (AFAG) Safety Guide 301 in terms of safety features, and be a model and size suited to the task(s) required.
4. Recommended guide bar lengths should be observed, although variations may be accepted at the discretion of the Assessor where this is appropriate to the task.
5. Candidates should be familiar with the saw that they are going to use.
6. A spare working chainsaw must be available.
7. Appropriate Personal Protective Equipment (PPE) must be worn at all times. All PPE used must comply with AFAG Safety Guides 301, 401, 801, Health and Safety Executive publications and current legal requirements in terms of specification and use.
8. A First Aid kit meeting current regulations, of the appropriate size for the number of persons on site, must be available.
9. The candidate must be equipped with a personal first aid kit.
10. The Assessor must ensure a Risk Assessment has been carried out, and sufficient control measures implemented. In particular, the location of the site and weather conditions should be assessed, details of access, etc, which may be required by emergency services must be noted, as well as the nearest Accident and Emergency Hospital Unit. The means of contacting the emergency services must be established. Manual handling techniques must comply with current legislation.
11. Any necessary permissions must have been granted, and notifications made as appropriate: (e.g. Local Planning Authority, Forestry Commission, Forest Enterprise, Highways Authority, Private owners, Statutory undertakers, Police, etc).
12. All equipment being used for this assessment must comply with relevant requirements of the Provision and Use of Work Equipment Regulations (PUWER) 1998.
13. Information may be sought from the relevant operator manuals or any other appropriate training or safety publication.
14. The current Regulations for transport, handling and storage of fuel and oils must be complied with.
15. Provision must be made to avoid the risk of environmental pollution.
16. It is the responsibility of the Assessor and the Candidate to ensure that any additional requirements and provisions are met as relevant to this qualification.

**If these conditions are not observed this may result in the Candidate not meeting the required standard.**

## Complaints and Appeals

NPTC and its Assessment Centres have a formal Complaints and Appeals procedure. In the event of any dissatisfaction with the arrangements and conditions of assessment, the candidate should first contact the Assessment Centre through whom the assessment was arranged and submit the complaint in writing.

For further information on NPTC's Equal Opportunities Policy and Complaints and Appeals Procedures, please refer to [www.nptc.org.uk](http://www.nptc.org.uk)

## CS41 - UNDERTAKE SECTIONAL FELLING OPERATIONS

### Learning Outcomes

The candidate will be able to:

1. Identify, inspect and comment upon key parts of the equipment to be used.
2. Prepare the equipment for use ensuring the safety of themselves, other people and the environment.
3. Operate a chainsaw whilst maintaining a working position within the crown of a tree using a rope and harness.
4. Use lowering ropes and other associated equipment to carry out lowering and sectional felling operations.
5. Undertake a range of arboricultural operations without risk to themselves, other people or the environment.

The assessment contains 1 compulsory unit:

CS41 - Undertake Sectional Felling Operations.

**The candidate will be the climber and will be referred to as either the candidate or the climber in the following guidance.**

Candidates must successfully achieve all Assessment Activities unless otherwise specified.

### Assessment and site requirements:

- The Assessor must be able and equipped to carry out an aerial tree rescue.
- An experienced ground person must work under the direction of the candidate (the Assessor may act as the ground person).
- The assessment should be undertaken on a medium to large sized open grown tree(s), with sufficient side branches at a reasonably low level.
- The candidate should be equipped with a top or rear handled chainsaw in good condition with a maximum recommended guide bar length of 380mm (15").
- The candidate should be equipped with a rear handled chainsaw in good condition with a maximum recommended guide bar length of 635mm (25").
- The candidate should be equipped with sufficient fuel and oil, appropriate to the make and model of the chainsaws, for the assessment.
- The candidate should ensure that the worksite is signed as appropriate.
- The candidate should be equipped with sufficient rigging equipment to undertake the range of operations described in Unit 2.
- A spare working saw must be available.
- In addition to the relevant requirements of the Provision and Use of Work Equipment Regulations (PUWER) 1998, any ancillary equipment used for this assessment must also comply with relevant requirements of the Lifting Operations and Lifting Equipment Regulations (LOLER) 1998 where applicable.

**CS41: Undertake Sectional Felling Operations**

ASSESSMENT ACTIVITIES	ASSESSMENT CRITERIA
<p>1. Demonstrate knowledge of what is involved in a Risk Assessment</p>	<p>Risk Assessment must be specific to:</p> <ul style="list-style-type: none"> <li>- Site</li> <li>- Task</li> <li>- Machine</li> </ul> <p>Risk Assessment must contain:</p> <ul style="list-style-type: none"> <li>- Identified hazards</li> <li>- Evaluated risk</li> <li>- Control measures to be implemented</li> <li>- Emergency procedures</li> </ul> <p>- Risk Assessment must be communicated to operator</p>
<p>2. Demonstrate knowledge of the legal and environmental factors that may be present on the work site.</p>	<p>Legal and environmental considerations could be:</p> <ul style="list-style-type: none"> <li>- Tree Preservation Order</li> <li>- Conservation Area</li> <li>- Felling Licence</li> <li>- Nesting Birds</li> <li>- Bat Roosts</li> <li>- Presence of other valuable flora and fauna.</li> </ul>
<p>3. Undertake a hazard assessment of the tree(s) to be worked upon.</p>	<p>The pre-climb inspection should look for:</p> <ul style="list-style-type: none"> <li>- Evidence of cavities, decay or decay fungi</li> <li>- Deadwood and broken branches</li> <li>- Dead or flaking bark</li> <li>- V shaped unions</li> <li>- Cracks</li> <li>- Nesting insects</li> <li>- Timber characteristics of the tree species should be commented on</li> <li>- The presence of power lines or telephone wires</li> <li>- Targets and obstacles underneath the tree</li> </ul>
<p>4. Brief the ground staff.</p>	<p>The climber should brief the ground staff about the following topics:</p> <ul style="list-style-type: none"> <li>- The risk assessment.</li> <li>- The tree hazard evaluation.</li> <li>- The planned method and sequence of work.</li> <li>- Individual responsibilities.</li> <li>- Communication.</li> <li>- Emergency procedures.</li> </ul>
<p>5. Achieve a working position and receive the chainsaw.</p>	<p>Position achieved to receive the chainsaw:</p> <ul style="list-style-type: none"> <li>- Proximity to work position achieved.</li> <li>- Supplementary anchor point established.</li> <li>- The climber directs the ground staff.</li> </ul>
<p>6. Start the warm (or cooled) saw in the tree.</p>	<p>One of the following methods should be used:</p> <p>Top handled saw only</p> <ul style="list-style-type: none"> <li>- Controls are set.</li> <li>- The bar and chain clear of obstructions and the operator.</li> <li>- The chain brake should be applied.</li> <li>- Top handle held with the right hand.</li> <li>- Starter mechanism engaged.</li> <li>- Starter cord pulled firmly and evenly.</li> </ul> <p>Top or rear handled saw</p> <ul style="list-style-type: none"> <li>- Controls are set.</li> <li>- Bar and chain clear of obstructions and operator.</li> <li>- The chain brake should be applied.</li> <li>- Front handle secured.</li> <li>- Starter mechanism engaged.</li> <li>- Starter cord pulled firmly and evenly.</li> </ul> <p>Top or rear handled saw</p> <ul style="list-style-type: none"> <li>- Controls are set.</li> <li>- Bar and chain clear of obstructions and operator.</li> <li>- The chain brake should be applied.</li> <li>- Rear handle / rear of saw gripped firmly by the legs.</li> <li>- Front handle firmly held.</li> <li>- Starter mechanism engaged.</li> <li>- Starter cord pulled firmly and evenly.</li> </ul>

ASSESSMENT ACTIVITIES	ASSESSMENT CRITERIA
<p>7. Remove limbs using a chainsaw.</p>	<p>Limbs and limb sections would be removed taking the following points into account:</p> <ul style="list-style-type: none"> <li>- Appropriate working position attained.</li> <li>- Suitable anchor points for climbing and lowering lines.</li> <li>- Appropriate equipment selected for the anchor point of the lowering line.</li> <li>- Use of a craning fork where appropriate.</li> <li>- Relative positions of climbing and lowering lines.</li> <li>- Appropriate means for the control of friction employed in the lowering system.</li> <li>- Characteristics and properties of the wood allowed for.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>- Manageable sections selected.</li> <li>- Climber positioned so as not to be struck by cut branch section.</li> <li>- Climber safe from swing and shake after severance.</li> <li>- Position and method of attaching rope to the section.</li> <li>- Correct position and depth of cuts.</li> <li>- Accuracy of cuts to ensure maximum control.</li> <li>- Chain brake applied or saw switched off whilst lowering sections.</li> <li>- The climber must direct the ground operations.</li> <li>- Limbs are lowered under control.</li> </ul>
<p>8. Remove vertical trunk sections using a chainsaw</p>	<p>Vertical stem sections would be removed taking the following points into account:</p> <ul style="list-style-type: none"> <li>- Appropriate working position attained.</li> <li>- Suitable anchor points for climbing systems.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>- Appropriate means for the control of friction employed in the lowering system.</li> <li>- Characteristics and properties of the wood allowed for.</li> <li>- Manageable sections selected.</li> <li>- Climber positioned so as not to be struck by cut branch section.</li> <li>- Climber safe from swing and shake after severance.</li> <li>- Position and method of attaching rope to the section.</li> <li>- Correct position and depth of cuts.</li> <li>- Accuracy of cuts to ensure maximum control.</li> <li>- Chain brake applied or saw switched off whilst lowering sections.</li> <li>- A tug line used if appropriate.</li> <li>- The climber must direct the ground operations.</li> <li>- Limbs are lowered under control.</li> </ul>
<p>9. Return to the ground, store equipment and ensure that the site is safe and tidy.</p>	<ul style="list-style-type: none"> <li>- The saw is returned to the ground or brought down by the operator.</li> <li>- Operator descends from the tree in a safe and controlled manner.</li> <li>- Rope is retrieved and stored.</li> <li>- Tools and equipment are checked and stored.</li> <li>- The site is left safe and tidy.</li> </ul>

ASSESSMENT ACTIVITIES	ASSESSMENT CRITERIA
<p>10. Demonstrate knowledge of lowering operations and equipment. (LOLER 1998)</p>	<p>Safety considerations to be observed when selecting a rope for lowering should be:</p> <ul style="list-style-type: none"> <li>- The rope has a sufficient safe working load (SWL) for the intended lowering operation.</li> <li>- The length of the rope is adequate.</li> <li>- The rope has been inspected and found to be in a serviceable condition.</li> <li>- The rope was designed for lowering and is fit for purpose.</li> </ul> <p>Factors to be considered when selecting the lowering anchor point and the route for the lowering line should be:</p> <ul style="list-style-type: none"> <li>- The lowering anchor point needs to be clear of the climber's anchor point.</li> <li>- The lowering anchor point is of sufficient size and strength for the piece to be lowered.</li> <li>- The route should not cross the climber's safety line.</li> <li>- The route should aim to reduce friction and wear on the lowering line.</li> <li>- Selection of the lowering point is determined in relation to the drop zone.</li> <li>- Re-directs can be used to route the rope through the crown of the tree.</li> </ul> <p>The equipment that is available to reduce the wear on the rope is:</p> <ul style="list-style-type: none"> <li>- False crotch.</li> <li>- Pulley blocks.</li> <li>- Friction lowering device.</li> </ul> <p>Safety considerations to be observed when selecting work position should be:</p> <ul style="list-style-type: none"> <li>- Position of lowering ropes clear of climbing safety line.</li> <li>- Lowering ropes are routed to allow the cut section to fall clear of the climber.</li> <li>- Supplementary anchor points established as directed by risk assessment.</li> </ul> <p>A climber could use the following techniques if the risk assessment showed that the work positioning system could be severed.</p> <ul style="list-style-type: none"> <li>- Wire cored flip lines should be used.</li> <li>- A supplementary anchor point would be used.</li> </ul>