

**LEVEL 2 AWARD
IN
CHAINSAW AND RELATED OPERATIONS (QCF)**

CS40 - CARRY OUT PRUNING OPERATIONS

(Pre-requisite: CS30, CS31, CS38 + CS39)

Maximum recommended Guidebar length: 380mm (15")

This unit covers the use of the chainsaw and/or other pruning tools working from a rope and harness in conjunction with a ground person in medium sized open grown trees

ASSESSMENT SCHEDULE

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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 Learners

The Certificate of Competence/ID Card

Certificates of Competence/ID Cards will be awarded to Learners 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 Learners 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 Learner. 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 learners, or the learners work place supervisors, or anyone else who might have a vested interest in the outcome, carry out the assessment.

The minimum age limit for Learners 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 Learner 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 learner 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 Learner 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)

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 Learners hold at least a recent, recognised 'Emergency First Aid' Training Certificate.
3. All chainsaws used in the assessments must comply with Arboriculture and Forestry Advisory Group (AFAG) Safety Guide 301, HSE Chainsaws at Work INDG317(rev1) and AFAG 308 (for top handled chainsaws), in terms of safety features, and be a model and size suited to the task(s) required.
4. Recommended Guidebar lengths should be observed, although variations may be accepted at the discretion of the Assessor where this is appropriate to the task.
5. Learners should be familiar with the saw, associated machinery and appropriate tools 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 by both the learner and the assessor. All PPE used must comply with AFAG Safety Guide 301, 308, 401, HSE Chainsaws at Work INDG317(rev1), 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 (AFAG 802), along with appropriate fire fighting and suitable welfare facilities e.g. Hand cleansing wipes.
9. The learner **must** be equipped with a personal first aid kit in accordance with AFAG802, 308
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. All recorded risk assessment information should be clearly legible and accessible to all operators and completed for all locations where assessment activities are scheduled to take place.
11. Manual handling techniques must comply with current legislation.
12. Any necessary permission must have been granted, and notifications made as appropriate: (e.g. Local Planning Authority, Forestry Commission, Forest Enterprise, Highways Authority, Land owners, Statutory undertakers, Police, etc).
13. All equipment being used for this assessment must comply with 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.
14. Information may be sought from the relevant operator manuals or any other appropriate training or safety publication. This **would not** include the NPTC schedule of assessment for the duration of the assessment activity.
15. The current Regulations for transport, handling and storage of fuel and oils must be complied with.
16. Provision must be made to avoid the risk of environmental pollution.
17. It is the responsibility of the Assessor and the Learner to ensure that any additional requirements and provisions are met as relevant to this qualification.
18. Learners must ensure they are complying with relevant legislative requirements applicable to the work being carried out.
19. If required, relevant records must be accurately kept.
20. Appropriate steps should be taken to maintain effective teamwork in respect of other persons on site during the assessment. This may include taking steps to ensure effective communication and safety precautions.

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 learner 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

Learning Outcomes

The learner 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. Comment upon the structure, condition and properties of the tree(s) to be worked upon.
4. Use a chainsaw and other pruning tools whilst maintaining a working position within the crown of a tree using a rope and harness in conjunction with ground staff.

The assessment contains 3 compulsory parts as follows:

Part 1: Carry out Crown Thinning.

Part 2: Carry out Crown Reduction

Part 3: Demonstrate knowledge of crown thinning and crown reduction operations

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

Learners must successfully achieve all Assessment Activities unless otherwise specified.

Qualifications and Credit Framework (QCF) – credit values

The Award in Carry out pruning operations has a credit value of 2 credits on the QCF.

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 learner (the Assessor may act as the ground person).
- The assessment should be undertaken on one medium sized open grown tree(s) containing sufficient material to demonstrate crown thinning and crown reduction.
- The learner should be equipped with a top or rear handled chainsaw in good condition with a maximum recommended Guidebar length of 380mm (15").
- The learner should be equipped with sufficient fuel and oil, appropriate to the make and model of the chainsaws, for the assessment.
- The learner should ensure that the worksite is signed as appropriate.
- 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.

Part 1: Carry out crown thinning	
ASSESSMENT ACTIVITIES	ASSESSMENT CRITERIA
1. Carry out a hazard assessment of the tree(s) to be worked upon	<p>The pre-climb inspection should look for:</p> <ul style="list-style-type: none"> - Root plate movement/ heave - Evidence of cavities, decay or decay fungi - Deadwood and broken branches/ Hangers - Dead or flaking bark - V shaped unions - Cracks - Nesting insects/ birds - The presence of power lines, telephone lines or other utilities - Previous tree management e.g. Bracing - Targets and obstacles underneath the tree
2. Brief the ground staff	<p>The climber should brief the ground staff about the following topics:</p> <ul style="list-style-type: none"> - The risk assessment - The tree hazard evaluation - The planned method and sequence of work - Individual responsibilities - Communication - Emergency procedures and rescue plan
3. Achieve a working position and begin the thinning operation	<p>A working position is achieved:</p> <ul style="list-style-type: none"> - Anchor point established - Supplementary anchor point established - Proximity to work position achieved - The climber directs the ground staff <p>The tree is thinned to the agreed specification, taking into account:</p> <ul style="list-style-type: none"> - Sequence of operations - Route within the tree crown - Communication and control of ground staff - Selection of branches for removal - Selection of appropriate pruning tool for branch removal - Removal of dead, dying and diseased material - Removal of crossing branches - Uniform removal of live branches - Crown density reduced within the tolerance of the tree species - General overall size and shape of the tree retained - Accuracy of cuts - Position of final pruning cuts - Avoidance of damage to the retained parts of the tree - Avoidance of damage to surrounding features - No cut branches left hanging in the tree

Part 2: Carry out Crown Reduction	
ASSESSMENT ACTIVITIES	ASSESSMENT CRITERIA
1. Carry out a hazard assessment of the tree(s) to be worked upon	<p>The pre-climb inspection should look for:</p> <ul style="list-style-type: none"> - Root plate movement/ heave - Evidence of cavities, decay or decay fungi - Deadwood and broken branches/ Hangers - Dead or flaking bark - V shaped unions - Cracks - Nesting insects/ birds - The presence of power lines, telephone lines or other utilities - Previous tree management e.g. Bracing - Targets and obstacles underneath the tree
2. Brief the ground staff	<p>The climber should brief the ground staff about the following topics:</p> <ul style="list-style-type: none"> - The risk assessment - The tree hazard evaluation - The planned method and sequence of work. - Individual responsibilities - Communication - Emergency procedures and rescue plan
3. Achieve a working position and begin the reduction operation	<p>A working position is achieved:</p> <ul style="list-style-type: none"> - Anchor point established - Supplementary anchor point established - Proximity to work position achieved - The climber directs the ground staff <p>The tree is reduced to the agreed specification, taking into account:</p> <ul style="list-style-type: none"> - Sequence of operations - Route within the tree crown - Communication and control of ground staff - Selection of branches for removal - Selection of appropriate pruning tool for branch removal - Removal of dead, dying and diseased material - Branches reduced to suitable growth points. - Height and/ or spread of the tree is reduced to leave a balanced crown - Appropriate structure for future crown development - The extent of the work is not to exceed the tolerance of the tree species - Accuracy of cuts - Position of final pruning cuts - Avoidance of damage to the retained parts of the tree - Avoidance of damage to surrounding features - No cut branches left hanging in the tree

Part 3: Demonstrate knowledge of crown thinning and crown reduction operations	
ASSESSMENT ACTIVITIES	ASSESSMENT CRITERIA
1. Demonstrate knowledge of the legal and environmental factors that may be present on the work site	<p>Legal and environmental considerations could be:</p> <ul style="list-style-type: none"> - Tree Preservation Order - Conservation Area - Felling Licence - Nesting Birds - Bat Roosts - Presence of other valuable flora and fauna
2. Demonstrate knowledge of tree pruning operations	<ul style="list-style-type: none"> - Species and season influence pruning because some species 'bleed' heavily if pruned at certain times of year (e.g. Sycamore and Birch if pruned in the spring) <p>Likely responses to pruning operations may be:</p> <ul style="list-style-type: none"> - The heavy reduction of limbs in vigorous species may result in dense re-growth of shoots around the wound. - The heavy reduction of limbs in non vigorous species or those under stress may cause die-back and / or epicormic growth - Light pruning to a strong growing point should stimulate healthy growth
<p>3. Demonstrate knowledge of:</p> <p>Slow -growing species and explain their significance in relation to growth</p> <p>And</p> <p>Fast -growing species and explain their significance in relation to growth</p>	<p>Slow growing species could include:</p> <ul style="list-style-type: none"> - Oak - Beech - Laburnum - Box - Yew - Holly - Other <p>Significance:</p> <ul style="list-style-type: none"> - Growth increments are smaller per annum so may not require cutting so often or so drastically as other species <p>Fast growing species could include:</p> <ul style="list-style-type: none"> - Ash - Sycamore - Sweet Chestnut - Willow - Birch - Alder - Leyland Cypress - Other. <p>Significance:</p> <ul style="list-style-type: none"> - High growth rates means more frequent cutting required, or remove species altogether
4. Demonstrate knowledge of the reason various pruning tools are used	<ul style="list-style-type: none"> - Pruning (lopping) head is used on twigs and branches less than about an inch in diameter - Pruning saw is used on branches over about an inch in diameter - Secateurs are used on very small growth usually less than an half an inch in diameter - Hand loppers are used on much larger material possibly 1-2 inches diameter. Can be designed with mechanical advantage for operator ease - Chainsaw can be used on much larger diameter timber, increased speed of cutting, would need to be balanced against inherent risk to operator

<p>5. Demonstrate knowledge of:</p> <p>The reasons for 1-2-3 sequence of cuts when undertaking pruning operations</p> <p>The reasons for target pruning</p> <p>The procedures to clean, transport and store pruning tools</p>	<p>To control the cut section</p> <ul style="list-style-type: none"> - To prevent tearing or ripping of the bark - To ensure the final (target) pruning cut can be carried out precisely <ul style="list-style-type: none"> - Preserves the branch bark collar and trees' defences against decay - Stubs and flush cuts allow decay to enter - Stubs and flush cuts encourage sprout growth - Stubs and flush cuts leave tree looking unsightly <ul style="list-style-type: none"> - Clean off sap, resin etc - Dry and apply suitable rust preventative/ lubricant - Cover tool heads to transport or store - Store in a dry, safe place
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Part 3: Demonstrate knowledge of crown thinning and crown reduction operations (continued)	
ASSESSMENT ACTIVITIES	ASSESSMENT CRITERIA
<p>6. Demonstrate knowledge of various pruning techniques used within arboriculture</p>	<p>Crown lifting</p> <ul style="list-style-type: none"> - Is the removal of the lowest branches. Reasons include to provide more light, enhance views, facilitate access for vehicles and pedestrians. Local planning authorities may provide statutory height clearances for road ways <p>Crown cleaning</p> <ul style="list-style-type: none"> - The removal of dead, dying, diseased, crossing, hanging, weakly attached branches. The removal of foreign objects and climbing plants may also be specified <p>Crown thinning</p> <ul style="list-style-type: none"> - The removal of a small proportion of secondary and small live branches throughout the crown. Often specified as a percentage, generally not exceeding 15% <p>Crown reduction</p> <ul style="list-style-type: none"> - Used to reduce the size of a crown of a tree whilst maintaining its natural shape as far as practicable. The ends of branches are removed to internal lateral branches or stems, observing the rule of thirds and not using topping cuts. Generally no more than 20% of total foliage volume should be removed <p>Veteran tree management</p> <ul style="list-style-type: none"> - Is used on valuable old trees that have lost their natural form and structure through a variety of reasons, the purpose is to maintain a crown on healthy, stable branches usually achieved through crown reduction over a longer extended duration with damaged or dangerous branches removed or internally supported. Reduction points are normally dictated through natural dieback or re-growth points