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LEVEL 2 AWARD
IN
CHAINSAW AND RELATED OPERATIONS (QCF)

CS34 - Sever Individually Uprooted Trees

(Pre requisite: CS30, CS31 and CS32)

This unit covers single windblown stems which are still attached to the root plate

ASSESSMENT SCHEDULE

CS34 - Sever Individually Uprooted Trees

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 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 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 learner 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 and where appropriate, Lifting Operations and Lifting Equipment Regulations (LOLER) 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 Learner to ensure that any additional requirements and provisions are met as relevant to this qualification.
17. At all times during the felling operation, learners must act in a way so as not to endanger themselves, the assessor or any other person or equipment. Work must be carried out to achieve the requirements of the assessment criteria in accordance with all relevant and current legislation and good practice guidance (e.g. INDG317, Chainsaws at Work, AFAG Guides 306 and 310).

If these conditions are not observed this may result in the learner 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 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. Sever wind blown or otherwise uprooted trees, both under and over effective guidebar length in diameter
2. Restrain overhanging (forward weighted) root plates prior to severing stems.

Unit 34 - Sever individually uprooted stems and use a hand operated winch to restrain root plates
Learners must successfully achieve all Assessment Activities unless otherwise specified.

The unit covers trees that have been uprooted by storm damage ("wind blown"), by earth movement from landslip or subsidence, by being undermined by water, by mechanical means or other physical agent.

The uprooted trees will be both over and under guidebar length in diameter and will be fully uprooted.

The trees will not be in a position that requires assistance from emergency services or utility companies.

Qualifications and Credit Framework (QCF) – credit value

The Award to Sever Individual Windblown Trees has a credit value of 1 credit on the QCF.

Assessment and site requirements

- Hand operated Winch and ancillary equipment complying with current legislation
- Minimum of three recently uprooted (within twelve months) trees with fully exposed root plates one with a diameter over 380mm (15")
- Simulation may be necessary if forward leaning root plates not available on site: winch restraint of upright or backward- weighted root plates is acceptable
- Root plate severing from winch restrained stem must be demonstrated on a stem bigger than guidebar length.
- Hand-operated winch and ancillary equipment adequate for restraining a root plate on a stem over effective guide-bar length in diameter
- Rear handled chainsaw in good condition [maximum recommended guidebar length: 380mm (15")] appropriate to size of tree
- Sufficient fuel and oil for the assessment, appropriate to saw model
- Appropriate aids (e.g. felling lever)
- An adequate tool kit for field maintenance
- In addition to the relevant requirements of the Provision and Use of Work Equipment Regulations (PUWER) 1998, Risk Assessment and the work carried out may determine that winches and ancillary equipment used for this assessment must also comply with relevant requirements of the Lifting Operations and Lifting Equipment Regulations (LOLER) 1998, where applicable.
- When cross cutting timber of high intrinsic value, measuring and marking of best logs by a third party is acceptable
- Hand-operated winch and ancillary equipment to have a safe working load/working load limit of 1.6 tonnes in a straight line pull

Part 1: Preparation	
ASSESSMENT ACTIVITIES	**ASSESSMENT CRITERIA**
1. Identify any hazards specific to the site, task and machinery, the risks involved and the controls to be put in place	- Walk the site and identify hazards - Assess the risks - Confirm that the condition of the site is acceptable for the operation to take place - Report to the appropriate person if the site condition or equipment available is unsuitable
Demonstrate knowledge of additional hazards to be aware of in a "windblown" situation	Additional hazards which may occur include: - Live overhead lines brought down by the tree - Broken trees or branches lodged overhead - Unstable structures which have been damaged by the falling tree
2. Demonstrate knowledge of safety considerations when dealing with individually uprooted trees	- Risk assessment must be carried out. - An emergency procedure must be agreed - All works adjacent to public highways must comply with road traffic and signage regulations - Operators have responsibility for safety of fellow workers and general public - Terrain, ground conditions, season, weather and tree condition will have safety implications on severing of root plates - Safe system of work established to include safe exclusion zone (e.g. 2 tree lengths)
Demonstrate knowledge of safety considerations and legal requirements when dealing with individually uprooted windblown trees	- Equipment should be regularly inspected - All components in a system should be compatible - Risk zone when winching must be identified - Communication and teamwork between operators established - have access to and keep accurate and up-to-date records with regard to winches and ancillary equipment - maintain the security of all equipment when severing root plate
3. Select and wear Personal Protective Equipment	PPE is subject to legislative/ HSE requirements and risk assessment but will normally include: - Chainsaw safety trousers - Chainsaw safety boots - Safety helmet with eye and ear protection - Gloves appropriate for the task - Non-snag outer clothing - Personal first aid kit - Whistle
4. Check and prepare chainsaw for operation	- Chain tension and condition checked for safe and effective use - Safety features checked for condition and function - External nuts and bolts checked for security - Chainsaw contains sufficient fuel and chain oil for operations
5. Demonstrate knowledge of safety regarding overhead and underground services when severing root plates	- Winch cable can contact damaged power lines or equipment - Lifted root plate could expose or damage underground services such as gas or electric - Overhead power lines, street lighting etc. could be entangled in the uprooted tree - Work to be stopped and emergency services contacted if cables, pipes etc encountered
6. Prepare the site to sever individual windblown stems	- Remove debris, branches, climbing vegetation, scrub and other obstructions from around the tree and compact vegetation to facilitate access. - Inspect the tree and adjacent trees for dead wood, insecure branches or other objects - Ensure no Overhead Power Lines or other services are in the vicinity of the working area - Ensure no unauthorised person is within two tree lengths when working in windblown. No personnel below tree or root plate on slopes - Establish an escape route for chainsaw operator (and winch operator when appropriate)

Part 2: Sever individual uprooted trees using a chainsaw	
ASSESSMENT ACTIVITIES	**ASSESSMENT CRITERIA**
1. Describe the features of tension and compression in the timber to be considered when severing rootplates	- tension in timber can be very high in either top, bottom or side depending on how the stem is supported - tension and compression can change dramatically in different positions up the stem away from the root plate - compression cuts are always made first followed by tension cut stepped towards the piece that is likely to move the least - a reducing cut on the safer ('far') side of the tree is required when severing stems over guidebar length in diameter
2. Sever the root plate from under-guidebar diameter stems using appropriate cuts	- Ensure there is no risk to the operator from the root plate rolling or falling or the stem springing (including sideways) - Identify tension and compression in stems and select severing methods which is appropriate to tree size and condition - Ensure tree and root plate are in a safe condition to enable subsequent operations - Clearly marked as a hazard if cannot be made safe
3. Sever the root plate from over-guidebar diameter stem using appropriate cuts Demonstrate Knowledge of when it is appropriate to use aid tools when severing root plates	- Ensure there is no risk to the operator from the root plate rolling or falling or the stem springing (including sideways) - Identify tension and compression in stems and select a severing method which is appropriate sizes and condition of trees - Ensure tree and root plate is in a safe and appropriate position and condition to enable subsequent operations - Use of reducing cuts as appropriate - Use of a wedge to release compression - Use of lever to ensure stem severed - Winch for restraint of trees with side tension - Winch restraint used where the stem is likely to roll
4. Demonstrate knowledge of additional safety considerations that may be needed when severing root plates	- winch restraint of a root plate may be necessary - cutting a 'long log' involved severing buried stems or unstable root plates - Root plates may need moving mechanically to be made safe after severing - timber under very heavy tension may require 'V' cuts to be made - winch restraint of side tension may be required
5. Demonstrate knowledge of other types of uprooted or damaged trees that will require specialist methods	- Partly uprooted (leaning) trees - Broken trees with tops still attached - Shattered trees with no top / crown - Multiple uprooted and/ or storm damaged trees ("Multiple windblown")

Part 3: Restrain root-plates on individually uprooted trees using a suitable winch	
ASSESSMENT ACTIVITIES	**ASSESSMENT CRITERIA**
1. Select and inspect winch and ancillary equipment and comment on condition and compatibility	- Check for signs of damage or fatigue to equipment - Ensure winch, strops, chokers, winch rope, cable fittings, shackles, pulleys or other ancillary equipment are compatible - Winch overload prevention device in place - Winch components secure - Establish safe system of work and communication where required with clear line of sight or alternative measures
2. Inspect uprooted tree, site and anchor point(s) and comment on system to be set up	- Planning of site and location of any offset/ redirect pulleys required - Communication between winch operator and the chainsaw operator established - prepare site by removing obstacles at work position and behind root plate to route winch cable - establish escape route as appropriate - choose cutting position to ensure no obstructions behind chainsaw operator
3. Select a winch anchor point, comment on suitability and attach winch	- Anchor point bearing capacity adequate for weight of tree and root plate - Allowance made for any shock loading that may be applied to the system, especially on slopes - Capacity and configuration of strop compatible with load to be applied - Escape route available for winch operator - If a tree used as anchor point, chainsaw operator in a safe position in case of anchor point failure
4. Attach winch cable to uprooted stem using strop or choker in appropriate position and configuration	- Selection of strop/ choker and method of attachment on stem correct - Method to prevent cable cutting through root plate used if appropriate - Placing of off-set/ redirect pulley if required
5. Demonstrate knowledge of when offset winching should be used and additional precautions required Tension winch to restrain a forward- weighted ('overhanging') root plate	- If terrain or safety factors prevent a straight line pull - If the work method deployed means winch and chainsaw operator need to be visible to each other - Bearing capacity of anchor point, strops, shackles, pulley / snatch block etc. must be appropriate for the potential load to be applied to all parts of the system - The exclusion zone within the 'bight' of the winch cable must not be entered - if a tree is used as an offset / redirect pulley anchor, the winch and chainsaw operators must be in a safe position in case of anchor point failure - Pre-tension cable fully prior to severing root plate - Position strops in relation to where cuts to be made - Identify risk zones - Root plate restrained adequately
6. Sever tree from root plate	- a reducing cut is made on the 'far' side of the stem - Relieving cut made in to compression wood - Severing cut made in to tension wood leaving a minimum step of 25mm to leave the saw on the part that will move the least - Ensure strop / choker avoided when making cuts - use escape route(s) as necessary - Root plate winched over as appropriate and left in a safe and stable condition

Part 3: Restrain root-plates on individually uprooted trees using a suitable winch (continued)	
ASSESSMENT ACTIVITIES	**ASSESSMENT CRITERIA**
7. De-tension and dismantle the winch system and make tree and root plate safe	- Make sure root plate and tree stem are in a safe and appropriate position - Any tension in the system released - Dismantle, inspect, clean and stow winch system components
8. Leave site in tidy condition	- Ensure no branches are left on fences, paths, roads, timber stacks, young trees etc. or in ditches, ponds, waterways etc. - Brash stacked tidily, if appropriate, ready for subsequent handling (e.g. for a wood chipper)
9. Demonstrate knowledge of alternative methods of restraining a root plate	- Use of heavy machinery to stabilise a tree - Safety distances and safeguards to the chainsaw and machine operators must be put in place - Examination scheme under Lifting Operations and Lifting Equipment Regulations (LOLER) 1998 may be required on winching equipment that is used to restrain a heavily overhanging rootplate (e.g. a tree uprooted downhill on a steep slope) - Use of alternative winch types