



City & Guilds Level 2 Certificate of Competence in Felling Small Trees up to 380mm (0039-21)

August 2022 Version 1.3

Assessment Pack – Centre and Candidate Version

Version and date	Change detail	Section
1.0	First version	
1.1 August 2021	Assessor instructions updated	Introduction
1.2 October 2021	AO name added to qualification title Typos corrected	Throughout
1.3 August 2022	Formatting changes Updated logo Updated 'Sources of general information'	Throughout Front cover Appendix 2

Contents

Introduction	3
202 Felling small trees up to 380mm	4
Appendix 1 Practical table	15
202 Felling small trees up to 380mm	15
Appendix 2 Sources of general information	17

Introduction

This assessment relates to the unit in the Qualification handbook. The assessment can be achieved at pass only. If any task is not yet met the candidate is unsuccessful.

This assessment is for unit 202 Felling small trees up to 380mm covering the following learning outcomes:

1. Fell small trees up to 380mm

General guidance on the requirements for assessment can be found in the Assessor Guidance document available on the City & Guilds web site **www.nptc.org.uk**

The assessor must complete the Practical Table mark sheet for each candidate which should be kept by the assessor for a minimum period of twelve months.

Record of assessment (ROA)

A prepopulated record of assessment must be completed by the assessor following an assessment. The number of outcomes is listed above, these must be ticked into the relevant met or not met sections of the ROA.

ARAS Forms

An Assessment Result Advice Slip (ARAS form) must be completed by the assessor following an assessment. The ARAS is not a certificate but, based on the evidence of the candidate's performance, is a recommendation to City & Guilds that the candidate is either met or not met the assessment criteria. All feedback is to be recorded by the assessor on the feedback section of the ARAS form.

Assessment Time

The expected assessment time for this qualification is 2 – 4 hours.

Site/workshop requirements:

Site with sufficient space and available trees to meet the assessment criteria

Tree diameter at felling height between 200mm and 380mm

Equipment/Machinery:

Chainsaw (maximum guide bar 15 inch) with maintenance tools

Relevant chainsaw operator's manual

Felling and lifting aids eg felling lever, felling wedge, timber tongs/hook, turning strap

Measuring aid

Winching equipment

First aid kit

Consumables:

Fuel and chainsaw oil

This is not an open book assessment however additional technical information may be sought from the relevant manufacturer's operator manuals or any other appropriate training or safety publication.

Practical observation descriptor table

202 Felling small trees up to 380mm

Activity number and description from check list		Assessment criteria
1.	Identify the hazards, risks and controls associated with the site, task and machine	Identify hazards, risks and controls relevant to the site task and machine
2.	State the emergency procedures relevant to the site	Emergency procedures relevant to the work site
3.	State the appropriate safe working distances from other operators during felling operations	Safe working distances: <ul style="list-style-type: none"> Two tree lengths
4.	Describe the safeguards to implement when felling in proximity to	Safeguards may include: <p>In proximity to paths:</p> <ul style="list-style-type: none"> warning signs barrier tape banks person other <p>In proximity to roads:</p> <ul style="list-style-type: none"> warning signs traffic management permissions granted other <p>In proximity to underground/overground wayleaves:</p> <ul style="list-style-type: none"> increase safe working distances wayleaves shutdown permit to work other
5.	State the legal factors to be considered before felling trees	Legal factors to consider in relation to tree felling may include: <ul style="list-style-type: none"> felling licences Tree Preservation Order (TPOs) conservation areas other
6.	State environmental considerations specific to felling	Environmental considerations may include: <ul style="list-style-type: none"> location of fuelling site valuable flora and fauna damage to understory other

7.	State how to recognise signs of disease and decay in trees and describe how to modify felling methods accordingly	<p>Recognition of disease and decay in trees may include:</p> <ul style="list-style-type: none"> • fungal growth/cavities • flaking/missing bark • discolouration of timber/bark • other <p>Modification of felling methods may include:</p> <ul style="list-style-type: none"> • placing felling cuts higher up the stem in sound timber • use of assisted felling techniques to ensure accurate felling direction • non-removal of buttresses roots/basal flare to provide more holding timber • other
8.	Explain the advantages of setting up or using a natural felling bench, brash mat or similar support prior to felling	<p>Advantages of setting up supports prior to felling may include:</p> <ul style="list-style-type: none"> • to provide an ergonomic working height for further processing • to ease the turning of trees • to reduce the need for manual handling • other
9.	Describe felling techniques for a range of trees and tree sizes up to 380mm and when they would be used	<p>Felling techniques for trees may include:</p> <p>Step cut – trees under 200mm upright or slightly leaning:</p> <ul style="list-style-type: none"> • Make a horizontal cut slightly over 50% diameter in the front of the stem in the felling direction. The second cut is made at the opposite side, stepped above or below overlapping the first cut. The tree can be broken off the stump. <p>80% front cut- trees under 200mm where the surrounding crown cover doesn't allow the tree to fall:</p> <ul style="list-style-type: none"> • Make a cut 80% of the diameter into the front of the stem in the felling direction. The second cut is made on the opposite side at an angle allowing the two cuts to meet. The tree can be removed from the stump.

		<p>Spear cut – trees under 200mm where the surrounding crown cover doesn't allow the tree to fall:</p> <ul style="list-style-type: none"> • A cut is made at a steep angle into the front of the stem in the felling direction or compression sides approximately 50% diameter. Second cut on the opposite side at a steep angle to match/meet the first cut. The cut stem will slide away from the saw. <p>Double v-cut - under 200mm heavily leaning tree:</p> <ul style="list-style-type: none"> • Make two cuts to form a V shaped profile on the compression side of the timber insuring they cross in the felling direction/lean. The severing cut is made at the same height at the back of the tree towards the felling direction forming a triangular hinge. The tree will fall in the direction of lean. <p>Basic fell - trees up to 380mm - upright/slightly leaning in direction of fell:</p> <ul style="list-style-type: none"> • Sink cut of appropriate dimensions made in the felling direction. Felling cut made from the back parallel to the felling direction level or slightly higher than the bottom of the sink retaining sufficient hinge. <p>Split Level - Trees up to 380mm - upright or leaning away from the direction of fell.</p> <ul style="list-style-type: none"> • Sink cut of appropriate dimensions made in the felling direction. The first felling cut made at the back parallel to the felling direction, approximately two thirds of the diameter of the tree retaining sufficient hinge. A felling aid is placed into the cut. The second felling cut is made parallel to the felling direction at an angle slightly overlapping the first felling cut retaining sufficient hinge.
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		<p>Dogs tooth/holding cut - trees up to 380mm heavily leaning/weighted in the felling direction.</p> <ul style="list-style-type: none"> Sink cut of appropriate dimensions made in the felling direction. Make a boring cut at normal felling height parallel to the felling direction across the diameter of the tree retaining sufficient hinge. Leave a hold on the back of the tree of approximately 25%. Sever the hold at an angle and parallel to the felling direction to approximately meet the back of the bore cut. <p>Danish/safe corner hold - trees up to 380mm used for upright or leaning trees:</p> <ul style="list-style-type: none"> Sink cut of appropriate dimensions made in the felling direction. Make a boring cut at normal felling height parallel to the felling direction across the diameter of the tree retaining sufficient hinge. Withdraw saw to approximately half the diameter and cut out towards the back of the tree leaving a quadrant/holding cut. Place a felling aid into this cut if appropriate. Remove the final quadrant with an appropriate severing cut.
10.	State what additional equipment, maybe used to assist with the felling of trees	<p>Equipment used to aid with the felling of trees maybe:</p> <ul style="list-style-type: none"> wedges felling levers other
11.	Describe how to deal with trees that have sat back	<p>Techniques that can be used to fell a tree that has sat back against the intended felling direction may include:</p> <ul style="list-style-type: none"> make a small boring cut into back of tree at position of felling cut and insert felling lever to lift tree over make new felling cuts to fell tree (in the direction of lean if site conditions allow) drive a wedge into the main felling cut to lift tree over

12.	Carry out pre-start checks and setting of the chainsaw	<p>Pre-start checks and setting of the machine to include:</p> <ul style="list-style-type: none"> • 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 • battery saw contains sufficient oil and charge
13.	Demonstrate safe starting of the chainsaw	Chainsaw is checked, started and function tested ready for use in accordance with manufactures information
14.	Prepare site and establish escape routes as appropriate	<p>Prepare site and escape routes by:</p> <ul style="list-style-type: none"> • ensuring the control measures identified in site specific risk assessment are applied • determining the felling direction • setting up a felling bench if required • removing debris from around the base of the trees to be felled and compact vegetation to facilitate felling at appropriate height • removing dead or suppressed trees and any other vegetation adjacent to the tree, in the felling direction or escape routes that may be a danger • inspecting the felling area and adjacent trees for dead wood and insecure branches • ensuring no unauthorised person is within two tree lengths

15.	Prepare trees appropriately to the tree condition and the specification for the site	<p>Preparing trees for felling may include:</p> <ul style="list-style-type: none"> • brashing lower branches • correct break-in • position of the saw in relation to the operator, bar on opposite side of stem • height to which branches are removed • saw body not above shoulder height • operating technique • brashing close to the stem • removing climbing vegetation • removing buttresses and other obstructions as appropriate • inspecting the tree for signs of rot or decay
16.	Select a felling direction appropriate to tree form and site conditions	<p>An appropriate felling direction is selected taking into account:</p> <ul style="list-style-type: none"> • tree form • site conditions/considerations • hazards/obstacles • equipment used • other
17.	Fell trees using recognised felling methods and felling aids	<p>Felling techniques should account for:</p> <ul style="list-style-type: none"> • the felling method chosen and safe working zones • selection and preparation of escape routes • a sink of the appropriate dimensions • felling cuts made and felling aid employed using a safe and effective felling method • a hinge being retained of adequate dimensions • appropriate aid tools are used safely when applicable • escape routes being used as soon as the tree begins to fall • site checked for safety once tree has fallen • stump height left appropriate to site specification

18.	State incorrect practices for dealing with hung up trees	<p>Incorrect techniques for dealing with hung up trees include:</p> <ul style="list-style-type: none"> • felling the supporting tree • felling another tree across the hung-up tree • walking or working under a hung-up tree • climbing a hung-up tree • leaving a hung-up tree unattended
19.	Identify where the danger areas are in relation to the trees being taken down	<p>Danger areas in relation to hung up trees include:</p> <ul style="list-style-type: none"> • directly under a hung-up tree • directly behind a hung-up tree
20.	Describe take down methods for hung up trees	<p>Take down methods may include:</p> <ul style="list-style-type: none"> • hinge reduction - roll out • hinge removal – pole/drag back • step down method • other
21.	Describe additional equipment to aid with the take down of a hung-up tree	<p>Following hinge removal additional equipment maybe:</p> <ul style="list-style-type: none"> • timber lengths to walk a tree backwards • smaller trees dragged with lifting aids • felling lever with cant hook for rolling • winches for pulling/rolling • mechanical assistance for dragging/lifting • other
22.	State the appropriate actions to take if a tree cannot be taken down	<p>Appropriate action to take if a tree cannot be taken down may include:</p> <ul style="list-style-type: none"> • the tree being cordoned off with warning tape • supervisor/colleagues informed • other

23.	Take down a hung-up tree using tools	<p>The takedown of hung-up trees must include:</p> <ul style="list-style-type: none"> • assessing the position of tree and checking the condition of the hinge • removal of debris and obstacles from take down route • deciding on the final felling direction • preparing new escape routes as appropriate • selecting and positioning aid tools as required • ensuring no unauthorised persons are within two tree lengths or directly below on steep slopes • correct operator stance and safe position to the side of tree • appropriate position and angle of cuts using a cutting technique for the removal of an appropriate part of the hinge • safe withdrawal of the saw • leaving approximately 10% -20% of hinge to support the tree on each/either side appropriate to take down method utilised • safe placement of the saw on completion of cuts • aid tool positioned and attached safely to the tree <p>Aid tool operated ensuring:</p> <ul style="list-style-type: none"> • good stance and operator position • correct pushing technique used (where appropriate) • the use of correct lifting techniques • good grip • the repositioning of the aid tool when required • operator not working in danger areas • the release of the aid tool as the tree falls • use escape routes • if tree does not fall through roll out technique, remnant of hinge removed by safe method (if still attached) and tree is walked down with an appropriate aid tool • tree in a stable condition before being processed
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24.	State the risks to consider when removing branches	<p>Risks to consider when removing branches may include:</p> <ul style="list-style-type: none"> • tripping or falling over • contacting obstructions with chainsaw • tree rolling onto operator • spring back from cut branches or saplings when severed • kick back • other
25.	Remove branches from felled trees using a recognised method	<p>Branch removal techniques should account for:</p> <ul style="list-style-type: none"> • a systematic sequence of cuts and position of the saw to remove branches as appropriate for the branching habit • correct stance and support of the saw on tree or right leg • left thumb around the front handle • neither handle released while the chain is moving • apply chain brake if reaching across bar • apply chain brake when negotiating obstacles • not walking when the saw is on the same side of the tree as the operator without applying the chainbrake • avoid working on lower side of tree on side slopes • operator not reaching too far round with saw on far side of tree • operators not cutting towards legs or body • avoiding the use of the tip of guidebar • avoiding overreaching with chainsaw • not straddling the stem • compression and tension forces assessed and appropriate cuts used • using an under-sweep technique if applicable • the top cut at an appropriate diameter • top removed with a safe method of cutting • the stem turned using appropriate aid tools/ techniques • using the stem for protection when removing remaining branches as appropriate • using a safe and effective method to sever remaining branches • all branches being removed flush with the stem

26.	Explain the advantages of leaving a clean stem following branch removal	<p>Advantages of leaving a clean stem following branch removal may include:</p> <ul style="list-style-type: none"> • reducing possible injury to the person moving the timber • reduce friction/collecting debris when • pulling timber along the ground • prevent damage to other trees when extracting timber • allowing timber to easily enter machines (chipper, peeler or saw bench) • easier stacking or loading • other
27.	State how to deal with brash and branches after-branch removal	<p>Brash and branches may be dealt with by:</p> <ul style="list-style-type: none"> • chipping • stacking • windrowing • baling • other
28.	State how to measure logs/timber into lengths	<p>Measuring of timber/logs could include:</p> <ul style="list-style-type: none"> • loggers tape • measured stick • other
29.	Cross-cut pole length timber in accordance with the site specification	<p>Cross-cutting of timber to length should include:</p> <ul style="list-style-type: none"> • ensuring appropriate safe working distances from both fuel and other operators is maintained • correct use of PPE • timber is in a safe and appropriate position • safe starting procedure adopted <p>Safe stance adopted including:</p> <ul style="list-style-type: none"> • legs and feet are clear of the chain • left thumb around the front handle • chainsaw is stable/secure/supported during crosscutting • minimal risk of muscular/skeletal injury • bar aligned to maintain accuracy • head out of line of chain • use of throttle to cut safely and efficiently • cutting techniques employed to complete severance of timber • appropriate boring technique used if applicable • sequence of cuts undertaken to prevent saw becoming trapped • appropriate aids used for lifting, rolling or levering if applicable • accuracy of measurement within site specification and reasonable tolerances • tension and compression cuts should meet • chain brake used appropriately • saw switched off and left in safe position, bar cover replaced if appropriate

30.	Stack produce for subsequent operations using appropriate aids and tools	Stacking of timber should take into account: <ul style="list-style-type: none"> • use of appropriate aids to handle/ move products • correct stance during lifting • avoiding excessive lifting by levering, sliding, rolling • quality of stacking must be to an agreed job specification • tidy stacking of timber • position of stack appropriate to method of extraction • manually constructed stacks are limited to one metre high
31.	Check timber is in an appropriate and safe position	Timber should be left in a safe, stable condition and appropriate position
32.	Dispose of waste safely in line with legislation	All waste produced is disposed of in line with legislation, good practice and site requirements
33.	Used appropriate tools, equipment and personal protective equipment (PPE)	All tools, equipment and personal protective equipment is used in line with industry good practice
34.	Carried out work to minimise environmental damage	It is ensured that any possible environmental damage is minimised at all times
35.	Worked in a way which maintains health and safety and is consistent with relevant legislation and industry good practice	All activities must be completed in a way which protects the operator and those around them

Appendix 1 Practical table

202 Felling small trees up to 380mm

All criteria must be achieved.

Activity number and description	Achieved
1. Identify the hazards, risks and controls associated with the site, task and machine	
2. State the emergency procedures relevant to the site	
3. State the appropriate safe working distances from other operators during felling operations	
4. Describe the safeguards to implement when felling in proximity to	
5. State the legal factors to be considered before felling trees	
6. State environmental considerations specific to felling	
7. State how to recognise signs of disease and decay in trees and describe how to modify felling methods accordingly	
8. Explain the advantages of setting up or using a natural felling bench, brash mat or similar support prior to felling	
9. Describe felling techniques for a range of trees and tree sizes up to 380mm and when they would be used	
10. State what additional equipment, maybe used to assist with the felling of trees	
11. Describe how to deal with trees that have sat back	
12. Carry out pre-start checks and setting of the chainsaw	
13. Demonstrate safe starting of the chainsaw	
14. Prepare site and establish escape routes as appropriate	
15. Prepare trees appropriately to the tree condition and the specification for the site	
16. Select a felling direction appropriate to tree form and site conditions	
17. Fell trees using recognised felling methods and felling aids	
18. State incorrect practices for dealing with hung up trees	
19. Identify where the danger areas are in relation to the trees being taken down	
20. Describe take down methods for hung up trees	
21. Describe additional equipment to aid with the take down of a hung-up tree	
22. State the appropriate actions to take if a tree cannot be taken down	
23. Take down a hung-up tree using tools	
24. State the risks to consider when removing branches	
25. Remove branches from felled trees using a recognised method	
26. Explain the advantages of leaving a clean stem following branch removal	
27. State how to deal with brash and branches after-branch removal	
28. State how to measure logs/timber into lengths	

29. Cross-cut pole length timber in accordance with the site specification	
30. Stack produce for subsequent operations using appropriate aids and tools	
31. Check timber is in an appropriate and safe position	
32. Dispose of waste safely in line with legislation	
33. Used appropriate tools, equipment and personal protective equipment (PPE)	
34. Carried out work to minimise environmental damage	
35. Worked in a way which maintains health and safety and is consistent with relevant legislation and industry good practice	

Appendix 2 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. To download the documents and to find other useful documents, go to the *Centre Document Library* on www.cityandguilds.com or click on the links below:

Quality Assurance Standards: Centre Handbook

This document is for all approved centres and provides guidance to support their delivery of our qualifications. It includes information on

- Centre quality assurance criteria and monitoring activities
- Administration and assessment systems
- Centre-facing support teams at City & Guilds / ILM
- Centre quality assurance roles and responsibilities.

The Centre Handbook should be used to ensure compliance with the terms and conditions of the Centre Contract.

Quality Assurance Standards: Centre Assessment

This document sets out the minimum common quality assurance requirements for our regulated and non-regulated qualifications that feature centre assessed components. Specific guidance will also be included in relevant qualification handbooks and/or assessment documentation.

It incorporates our expectations for centre internal quality assurance and the external quality assurance methods we use to ensure that assessment standards are met and upheld. It also details the range of sanctions that may be put in place when centres do not comply with our requirements, or actions that will be taken to align centre marking/assessment to required standards. Additionally, it provides detailed guidance on the secure and valid administration of centre-assessments.

Access arrangements - When and how applications need to be made to City & Guilds provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The *Centre Document Library* also contains useful information on such things as:

- Conducting examinations
- Registering learners
- Appeals and malpractice

Useful contacts

Please visit the Contact Us section of the City & Guilds website, *Contact us*

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