

▶ Tree Felling Competency Assessment Training Tool

ST_V1_3071

Name of Tree Faller	Date of Birth	Date

INSTRUCTIONS

This tool can be used as a **benchmark** to assess the **current competency** of a **tree faller** and help prepare them for **assessment**. It can be used by a **Foreman, Contractor** or another **experienced Faller**. When carrying out assessments, refer to the **Approved Code of Practice** or the **Best Practice Guidelines** for correct answers.

The assessment includes **Practical Observations**. Refer to the **Approved Code of Practice** and the **Worksafe Best Practice Guidelines** for guidance on what to look for in the practical assessment. The **FITEC/Competenz Best Practice Guidelines for Tree Felling** can also be referenced for more detail on tree felling practices.

1) CODE OF PRACTICE

This section tests the knowledge the tree faller has about Section 11 in the Approved Code of Practice for Safety & Health in Forest Operations. Ask the tree faller the questions and score the answers according to accuracy and content. Some rules are covered in later sections so to avoid duplication they are not all included here; e.g. Tree Driving has its own section later in the assessment.

Note: This assessment can be done by verbal questioning or allowing the faller to write in the answers. Do not worry about spelling mistakes or incorrect grammar as the content is the most important component.

Explain the rules from the Tree Felling Section of the Approved Code of Practice			
Questions	Required Information from Rule	Tree Faller's Answers: Use ✓ or X	Score
What are the general rules relating to communication? (Minimum two answers required)	Communication (One answer required)		
	Monitoring (One answer required)		
What are the rules regarding Felling Aids and their use? (Minimum two answers required)	When falling trees greater than 20 centimeters in diameter at the stump, what felling aids should the faller carry? (Three possible answers, two required)		
	What hazard should be avoided? (One possible answer)		
What are the rules regarding Safety Zones and the Two Tree Length rule? (Minimum eight answers required, at least one from each rule)	What items, activities and/or living beings must be two tree lengths away from any tree being felled? (Three possible answers)		
	When can machines go within the two-tree length restriction? (Two possible answers)		

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1) CODE OF PRACTICE (Continued)

Questions	Required Information from Rule	Tree Faller's Answers: Use ✓ or ✗	Score
<p>What are the rules regarding Safety Zones and the Two Tree Length rule? (Minimum eight answers required, at least one from each rule)</p>	<p>Under what circumstances can a person, other than the Faller, be closer than two tree lengths from a tree being felled? (Five possible answers)</p>		
	<p>Who else can use a chainsaw in the two tree length zone? (One answer required)</p>		
	<p>What precautions need to be taken if felling trees within two tree lengths of any road, railway or public access way? (One answer required)</p>		
<p>What should be done with the following difficult felling situations? (Minimum two answers required)</p>	<p>A hung-up tree? (One answer required)</p>		
	<p>A cut-up tree? (One answer required)</p>		
<p>What are the rules for Machine Assisted Tree Felling? (Minimum eight answers required, at least one from each rule)</p>	<p>What are the general requirements for machine assisted tree felling? (Five possible answers)</p>		
	<p>What are the requirements when using a ground-based machine to push trees over? (Two possible answers)</p>		

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1) CODE OF PRACTICE (Continued)

Questions	Required Information from Rule	Tree Faller's Answers: Use ✓ or ✗	Score
<p>What are the rules for Machine Assisted Tree Felling? (Minimum eight answers required, at least one from each rule)</p>	<p>What are the requirements if using a ground-based machine to back pull trees over? (Three possible answers)</p>		
	<p>What are the requirements when using a cable yarder to back pull trees over? (Three possible answers)</p>		
TOTAL SCORE FOR CODE OF PRACTICE:			

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2) THE FIVE-STEP FELLING PROCESS

Can the Tree Faller explain the Five-Step Felling Process?		
Questions	Tree Faller's Answers: Use ✓ or ✗	Score
Site assessment? (Two answers required)		
Individual tree assessment? (Four answers required)		
Preparation of the work area and escape route? (Two answers required)		
Using safe felling techniques? (Two answers required)		
Retreat and observe? (Two answers required)		
TOTAL SCORE FOR FIVE STEP FELLING PROCESS:		

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3) THE SEVEN KEY CAUSES OF HARM

Can the Faller identify the Seven Key Causes of Harm relating to Tree Felling and explain how to minimise the chances of them happening?		
Key Cause of Harm	Tree Faller's Response on how to Manage the hazard: Use ✓ or X	Score
Faller working too close to other people or machines? (Three answers required)		
Incorrect or poor felling technique? (Two answers required)		
Broken limbs or tops lodged in the tree? (Three answers required)		
Hung-up trees left standing or using incorrect techniques to fell them? (Four answers required)		

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3) THE SEVEN KEY CAUSES OF HARM (Continued)

Key Cause of Harm	Tree Faller's Response on how to Manage the hazard: Use ✓ or X	Score
<p>Unplanned backward stem movement (rebounding) or butt swing (sideways)? (Three answers required)</p>		
<p>Dead trees? (Three answers required)</p>		
	<p>Being struck from behind by an object or tree? (Three answers required)</p>	
<p>TOTAL SCORE FOR THE SEVEN KEY CAUSES OF HARM:</p>		

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4) HEALTH HAZARDS

Can the Tree Faller identify Health Hazards associated with tree falling?		
Instructions	Tree Faller's Answers: Use ✓ or ✗	Score
<p>Explain the health hazards that Tree Fallers are exposed to? (Six answers required)</p>		
TOTAL SCORE FOR HEALTH HAZARDS:		

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5) BASIC FELLING CUTS

Can the Tree Faller describe the Basic Felling Cuts?		
Questions	Tree Faller's Answers: Use ✓ or ✗	Score
What is the recommended depth of the scarf? (One answer required)		
What is the recommended scarf depth if felling a spar? (One answer required)		
What is the recommended top cut angle of the scarf? (One answer required)		
What is the purpose of the scarf? (Two answers required)		
What are alternative scarf cuts? (Two answers required)		
When would these alternative scarf cuts be used? (One answer required)		
What is the recommended thickness of the hingewood? (One answer required)		
What is the purpose of the hingewood? (One answer required)		
Explain the required dimensions of wing cuts? (Two answers required)		
What is the purpose of putting in wingcuts? (One answer required)		

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5) BASIC FELLING CUTS (Continued)

Questions	Tree Faller's Answers: Use ✓ or ✗	Score
<p>Where should a standard backcut finish and how high should it be above the bottom cut of the scarf? (One answer required)</p>		
<p>Explain the purpose of the backcut? (One answer required)</p>		
<p>Describe a quarter cut backcut and explain where it would be used? (Two answers required)</p>		
<p>Describe a split level backcut and explain when and why it would be used? (Two answers required)</p>		
<p>Describe a bore and release backcut and explain where it would be used? (Two answers required)</p>		
<p>Describe the technique of bore cutting the scarf and explain where it would be used? (Two answers required)</p>		
TOTAL SCORE FOR BASIC FELLING CUTS:		

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6) WEDGING TECHNIQUES

Can the Tree Faller describe how to Wedge trees safely?		
Questions	Tree Faller's Answers: Use ✓ or ✗	Score
Explain where wedges are to be used? <i>(Four answers required)</i>		
What is the purpose of using wedges? <i>(Three answers required)</i>		
Explain the correct timing to insert wedges? <i>(Minimum two answers required)</i>		
Which way up should the wedge be inserted? <i>(One answer required)</i>		
Why are wedges inserted this way? <i>(One answer required)</i>		
Explain the purpose of double wedging? <i>(One answer required)</i>		
Explain the technique of double wedging? <i>(One answer required)</i>		
TOTAL SCORE FOR WEDGING TECHNIQUES:		

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7) TREE DRIVING

Can the Tree Faller explain Safe Tree Driving Techniques?		
Questions	Tree Faller's Answers: Use ✓ or ✗	Score
Under what circumstances is tree driving acceptable practice? (Two answers required)		
Give examples of situations when Tree Driving can be used? (Three answers required)		
What are the most important Tree Driving rules? (Five answers required)		
What are the requirements of an observer? (Two answers required)		
Explain the role of an observer (Three answers required)		
TOTAL SCORE TREE DRIVING:		

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8) ENVIRONMENTAL

Can the Tree Faller identify Environmental Constraints affecting Tree Felling?		
Questions	Tree Faller's Answers: Use ✓ or ✗	Score
Name the environmental constraints that could be faced when tree falling? (Four answers required)		
TOTAL SCORE FOR ENVIRONMENTAL:		

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9) PLANNING

How well prepared is the Tree Faller to do the required work?		
Questions	Tree Faller's Answers: Use ✓ or ✗	Score
<p>What evidence should there be to confirm that the tree felling was properly planned? (Two answers required)</p>		
<p>What are the key components of the tree felling plan? (Five answers required)</p>		
<p>What tree felling safety precautions should be discussed and decided at the daily tailgate/toolbox meetings? (Three answers required)</p>		
<p>What is the procedure for stopping work in adverse weather conditions? (One answer required)</p>		
TOTAL SCORE FOR PLANNING:		

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10) TRAFFIC CONTROL

Testing the Tree Faller's knowledge of road control and traffic planning		
Questions	Tree Faller's Answers: Use ✓ or ✗	Score
When is traffic control needed during tree felling? <i>(Three answers required)</i>		
What is the process used to determine road control measures? <i>(One answer required)</i>		
What signage is required when falling next to a road or track that can be accessed by a vehicle? <i>(Three answers required)</i>		
TOTAL SCORE TRAFFIC CONTROL:		

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11) COMMUNICATION

Testing the Tree Faller's knowledge of Communication when Tree Felling		
Questions	Tree Faller's Answers: Use ✓ or ✗	Score
What are the minimum requirements for check in procedures? (Three answers required)		
How could a faller identify where the current felling location is? (Two answers required)		
Under what circumstances should a faller call up more often? (Two answers required)		
What are the standard requirements for emergency procedures? (Four answers required)		
TOTAL SCORE COMMUNICATION:		

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Practical Assessment

12) PRE-START CHECK – PPE

Check the Tree Faller's PPE to make sure it meets industry standards and is being used.

Mandatory Protective Equipment: Use ✓ or X	Required	Meets Standard	Used	Score
Safety helmet – within expiry date	Required			
Ear muffs – hygiene kit is good	Required			
Hi vis top/vest/coat – has NZS number	Required			
Leg protection – no cuts in protective layers	Required			
Safety footwear	Required			
Eye protection – visor/glasses	Required			
First Aid kit – two large sterile wound dressings #15, in date	Required			
Has radio	Required			
SCORE FOR MANDATORY PROTECTIVE EQUIPMENT:				

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13) PRE-START CHECK – FELLING EQUIPMENT

Check the Tree Faller's Felling Equipment to make sure it meets industry standards & is used:

Felling Equipment: Use ✓ or X	Required	Meets Standard	Used	Score
Suitable hammer and four wedges	Required			
Belt	Required			
Approved fuel containers	Required			
Adequate means of hydration	Required (1)			
Fire extinguisher – charged (if required)	Optional (2)			
TOTAL SCORE WITHOUT EXTINGUISHER:				
TOTAL SCORE WITH EXTINGUISHER:				

Note 1: If weather conditions are cool, it is acceptable for fallers to leave their means of hydration at their fuel containers but they must have some form of hydration available to them on site.

Note 2: If an extinguisher is required, it must be charged and the minimum required score for a **Pre-Start Check will be 28**. If, according to company rules, it is not required during winter months, enter n/a in the RHS column and the minimum **required score will be 26**.

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14) PRE-START CHECK – CHAINSAW

C. Chainsaw: Use ✓ or X	Required	Meets Standard	Used	Score
On / Off switch	Required			
Mitt	Required			
Chain brake	Required			
Throttle lock out	Required			
Rear hand guard	Required			
Muffler & spark arrestor	Required			
Chain catching peg	Required			
Effective anti-vibration mounts	Required			
All components secure	Required			
Chain stationary at idle	Required			
Chain maintenance – tension/sharp/angles	Required			
Chainsaw files fitted with handles	Required			
Bar length long enough? (3)				
Saw size appropriate? (3)				
TOTAL SCORE FOR CHAINSAW:				

Note 3: Bar length and saw size can be issues of personal preference or cost, so unless the saw size or bar length is putting the operator at risk, the faller should not be penalised for having something different – for example, a faller uses a 22" bar when the preferred choice would be 24".

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15) STUMP CHECK

Purpose

- ▶ To identify habits that might: (a) place the faller at risk of injury; (b) result in value loss.

Instructions

- ▶ Walk over 10 stumps with the faller and assess each stump for the following criteria. If 10 stumps are not available, have the faller work for an hour while you do something else
- ▶ Each time a stump does not meet the standard, ask the faller to explain.
- ▶ Use ✓ or ✗

Felled on previous day/s												
Felled on the day												
Stump Criteria	1	2	3	4	5	6	7	8	9	10	Score	
Stump height												
Scarf size (25-33%)												
No over-cuts in scarf												
Shape of hinge												
Correct hinge width												
Felling cuts on same plane												
Wing cuts correct (if used)												
Backcut height (10%)												
TOTAL SCORE FOR STUMP CHECK:												
Stumps meet industry standards? Y/N (Tick Box) (NB: Yes, if no serious/critical issues identified)							Y	N	No more than two crosses in any single row		Y	N

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16) INDIVIDUAL TREE ASSESSMENT

Ask the feller to identify five trees that will be felled during the assessment. Before the felling begins, ask the feller to assess the five trees and answer the questions below.

Note: Enter the code letter(s) to the top line of the question when the feller has made the assessment then add ✓ or ✗ to the second line if the assessment is correct when the tree is felled. The reference point for all questions is standing behind the tree, looking towards the direction in which it is going to fall. If the feller did not follow the original plan, ask why it was changed. It may have been appropriate to change the plan.

Questions on the Tree Felling Elements:	1	2	3	4	5	Score
What are the tree characteristics? (N = Normal, S = Spar, M = Malformed, DL = Double leader, D = dead) Was the assessment correct?						
Estimate of tree diameter (cms) (For reference only)						
What are the hazards associated with this tree? (OH = Overhead, TC = Tree Characteristics, FP = in the Fall Path, AT = Around the Tree, ER = in the Escape Route, RF = Restricting the Fall, M = Multiple) Was the assessment correct?						
How will you manage these hazards? (E,I,M) Was the assessment correct?						
What is the predominant lean and side lean? (FL = Forward lean, HFL = Heavy Forward Lean, BL = Back Lean, HBL = Heavy Back Lean, SL = Side Lean, HSL = Heavy Side Lean, L = Left, R = Right) Was the assessment correct?						
What is the intended direction of fall? (D = Downhill, A = Across slope, U = Uphill, ST = Into Standing Trees) Was the assessment correct?						
Where will the escape route be? L or R (Left or Right) Was the assessment correct?						
What felling aids are required? (N = None, W = Wedges, MA = Machine Assistance, D = Drive, O = Observer) Was the assessment correct?						
Backcut to be used? (C = Conventional, Q = Quarter cut, B = Bore & release, S = Split level) Was the assessment correct?						
On which side of the tree will the back cut be finished? Left or Right Was the assessment correct?						
TOTAL SCORE FOR INDIVIDUAL TREE ASSESSMENT:	ENTER THE TOTAL SCORE ACHIEVED					
IF THERE IS MORE THAN ONE CROSS IN ANY LINE OF GRAY BOXES, ENTER NC IN THIS BOX ▶▶▶						

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17) SAFE WORK PRACTICES

Instructions:

- ▶ Ask the faller to fell another 10 trees and assess their performance on each tree using the criteria below
- ▶ If the ground is clear and there is no need to cut an escape route, note whether the faller checks and indicates where the intended route will be
- ▶ The faller's use of felling aids should be pre-planned, not a remedy to rectify incorrect tree assessment.

Any out-of-the-ordinary tree characteristics? (Spar, hung up, wind-thrown, driven, driver)												
Criteria: Use ✓ or X	1	2	3	4	5	6	7	8	9	10	Score	
Estimate tree diameter												
Re-checks hazards before starting												
Clears around tree before starting the cuts												
Clears escape route												
Felling cuts meet industry standards												
Correct use of felling aids demonstrated												
Re-checks overhead hazards												
Watches for tree top movement												
Uses escape route (ER)												
Estimate ER distance (m)												
Watches for hazards in vicinity of falling tree												
Stays in safe position until things stop moving												
Safely moves to next tree												
Uses correct chainsaw techniques												
Fells to plan												
TOTAL FOR SAFE WORK PRACTICES:												
IF THERE ARE MORE THAN TWO CROSSES IN ANY LINE OF GRAY BOXES, ENTER NC IN THIS BOX ▶▶▶												

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18) SUMMARY PAGE

INSTRUCTIONS

At the completion of the assessment, tally up the scores in each section and compare with the Maximum Possible score. The difference between the Tree Faller's score and the Maximum Possible score will show where they need to brush up on their knowledge of the Rules, Recommended Practices and Practical Skills.

If the Tree Faller's percentage is below the Minimum Required percentage in any category, the Tree Faller has not met the standards and needs training in that particular category. If the Tree Faller's overall score is below 85%, the Pre-Assessment test result is Not Competent (NC). Use this information positively to bring the faller up to the required level.

Knowledge Questions	Tree Faller's Score	Maximum Score Possible	Tree Faller's %	Minimum % Required
1) Code of Practice		33		70%
2) Five-Step Felling Process		16		75%
3) Seven Key Causes of Harm		32		65%
4) Health Hazards		12		50%
5) Basic Felling Cuts		31		75%
6) Wedging Techniques		16		75%
7) Tree Driving		20		75%
8) Environmental		6		65%
9) Preparation - Planning		16		70%
10) Preparation - Traffic Control		10		70%
11) Communication		13		85%
RESULT OF KNOWLEDGE QUESTIONS:		205		70%

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18) SUMMARY PAGE (Continued)

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Practical Skills	Tree Faller's Score	Maximum Score Possible	Tree Faller's %	Minimum % Required
12) Pre-Start Check - PPE		16		100%
13) Pre-Start Check - Felling Equipment		10		85%
14) Pre-Start Check - Chainsaw		26		95%
15) Stump Check		80		90%
16) Individual Tree Assessment		45		90%
17) Safe Work Practices		130		85%
RESULT OF PRACTICAL SKILLS TEST:		307		90%

Overall Result	Tree Faller's Score	Maximum Score Possible	Tree Faller's %	Minimum % Required
Total score; Knowledge and Practical Skills tests		512		80%
RESULT OF PRE-ASSESSMENT TEST: (Circle the appropriate outcome)			PASS	NC