

Title	Demonstrate knowledge of tree felling		
Level	3	Credits	5

Purpose	People credited with this unit standard are able to: describe personal requirements for tree-felling operations; demonstrate knowledge of risks associated with tree felling; demonstrate knowledge of the five-step felling plan; demonstrate knowledge of tree-felling techniques; and identify difficult tree-felling situations and associated specialist techniques.
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Classification	Forestry > Tree Felling
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Available grade	Achieved
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Guidance Information

- 1 Competency in tree felling requires a combination of knowledge, physical skills and specialist equipment. It is recommended that people wishing to fell trees should also complete Unit 17766, *Fell trees safely using a chainsaw*.
- 2 Definition
Accepted industry practice – approved codes of practice and standardised procedures accepted by the wider forestry industry as examples of best practice.

Outcomes and performance criteria

Outcome 1

Describe personal requirements for tree-felling operations.

Performance criteria

- 1.1 Personal requirements for tree fallers are described in accordance with accepted industry practice.

Range personal health, training, experience, attitude, free from impairment.
- 1.2 The requirement for the availability of another person able to assist in the case of an emergency is explained in accordance with accepted industry practice.

- 1.3 Minimum requirements for personal protective clothing and equipment are described in accordance with accepted industry practice.
- Range may include but is not limited to – safety helmet, hearing protection, safety trousers or chaps, safety boots, high visibility clothing, eye protection.
- 1.4 Felling equipment and accessories required for tree felling are identified in accordance with accepted industry practice.
- Range may include but is not limited to – suitable saw, radio, felling aids, first aid requirements, fuel and oil containers, maintenance tools, fire extinguisher, hydration, felling signs.
- 1.5 The importance of having the correct sized wedges for the tree size is explained in accordance with accepted industry practice.

Outcome 2

Demonstrate knowledge of risks associated with tree felling.

Performance criteria

- 2.1 The 'Two Tree Length Rule' is explained in accordance with accepted industry practice.
- 2.2 Risks which may be found in the work area are identified, and methods to control them are explained in accordance with accepted industry practice.
- Range evidence of three risks and a control method for each is required.
- 2.3 Special precautions relating to roads, railways, and public access ways are explained in accordance with accepted industry practice.
- 2.4 The risks specific to tree felling are identified, and methods to control them are explained in accordance with accepted industry practice.
- Range evidence of four risks and a control method for each is required.
- 2.5 The reason for on-going risk management is explained in accordance with accepted industry practice.
- 2.6 Factors that may alter risks or introduce new risks are described in accordance with accepted industry practice.
- Range evidence of three factors is required.
- 2.7 Adverse weather conditions which would preclude tree felling are described in accordance with accepted industry practice.

- 2.8 Tree-felling rules and their purpose are explained in accordance with accepted industry practice.
- Range communication, hung up and cut up trees, felling cuts, felling aids, tree driving, trimming.
- 2.9 The way different tree species may react during tree felling is explained in accordance with accepted industry practice.
- 2.10 Situations that require the use of an observer are identified and described in accordance with accepted industry practice.

Outcome 3

Demonstrate knowledge of the five-step felling plan.

Performance criteria

- 3.1 Factors to be considered when carrying out a work site assessment are explained in accordance with accepted industry practice.
- Range may include but is not limited to – hazard identification, environmental issues, general condition of trees or stand, felling direction, hindrance.
- 3.2 Factors to be considered when carrying out an individual tree assessment are explained in accordance with accepted industry practice.
- Range ground conditions, terrain type, tree lean, crown weight, overhead hazards, stem condition, wind.
- 3.3 Factors to be considered when preparing the work area and escape route are explained in accordance with accepted industry practice.
- Range visibility of tree top, location of escape route, lower branches, hindrance.
- 3.4 Felling cuts to be used on trees over 20cm diameter are identified in accordance with accepted industry practice.
- 3.5 The process of, and reasons for 'retreating and observing' are described in accordance with accepted industry practice.

Outcome 4

Demonstrate knowledge of tree-felling techniques.

Performance criteria

- 4.1 The purpose of the scarf in tree felling is described in accordance with accepted industry practice.

- 4.2 The conventional scarf method is described in accordance with accepted industry practice.
- Range cut sequence, direction, angle and depth of cuts.
- 4.3 Alternative scarf methods are identified and when they are used is described in accordance with accepted industry practice.
- 4.4 The purpose of the back-cut and back-cut step in tree felling are described in accordance with accepted industry practice.
- 4.5 The conventional back-cut method is described in terms of its depth and position in relation to the scarf in accordance with accepted industry practice.
- 4.6 Hinge-wood is described in terms of its purpose, size, and position.
- 4.7 The technique of positioning and using a wedge to hold the back-cut open is described in accordance with accepted industry practice.
- 4.8 The technique of felling a tree against its lean is described in accordance with accepted industry practice.
- Range split level cut, quarter cut.
- 4.9 The technique for felling a tree with side lean is described in accordance with accepted industry practice.
- Range wedge use, scarf direction, type of backcut, shape of hinge-wood in relation to scarf.

Outcome 5

Identify difficult tree-felling situations and associated specialist techniques.

Performance criteria

- 5.1 Difficult situations which require specialised tree-felling skills are identified in accordance with accepted industry practice.
- Range difficult situations may include but are not limited to – hung up trees, trees close to boundaries, trees close to overhead lines, uprooted trees, heavy leaning trees, wind wrenched trees.
- 5.2 Specialist techniques which may be required to deal with difficult situations in tree felling are identified in accordance with accepted industry practice.
- Range machine assisted falling, tree driving.

Planned review date	31 December 2024
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	5 December 2000	31 December 2014
Review	2	22 May 2008	31 December 2016
Review	3	19 March 2015	N/A
Review	4	26 March 2020	N/A

Consent and Moderation Requirements (CMR) reference

0173

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.