

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 2028
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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
Rollover	5	26 April 2024	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 Muka Tangata - People, Food and Fibre Workforce Development Council qualifications@mukatangata.nz if you wish to suggest changes to the content of this unit standard.