

<b>Title</b>	<b>Demonstrate advanced tree climbing for arborists, and undertake a simulated aerial rescue</b>		
<b>Level</b>	<b>5</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	People credited with this unit standard are able to: tie, dress and use knots and friction hitches for tree climbing; install, use, and compare anchor points and hardware; use the static rope ascending system to safely ascend to at least 15 metres and descend safely to the ground; undertake a simulated aerial rescue in an arboriculture situation where the casualty is on a static rope ascending system; describe and use work positioning single rope techniques (SRT) to ascend a tree; describe, demonstrate, install and use a retrievable redirect system; and undertake an aerial rescue in a simulated arboriculture situation using the counterweight method.
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<b>Classification</b>	Horticulture > Arboriculture
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<b>Available grade</b>	Achieved
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## Guidance Information

- 1 Legislation and references relevant to this standard include but are not limited to:
  - Health and Safety at Work Act 2015;
  - Health and Safety Regulations 2016;
  - Resource Management Act 1991;
  - BS 3998:2010, *Tree work. Recommendations*, available from [www.britishstandard.org.uk](http://www.britishstandard.org.uk);
  - ANSI A300, *Standards for Tree Care Operations* (Parts 1 – 7) and their subsequent amendments, available from [www.isa-arbor.com](http://www.isa-arbor.com);
  - WorkSafe New Zealand, *Approved Code of Practice Safety and Health in Arboriculture* (2012), available from [www.worksafe.govt.nz/worksafe](http://www.worksafe.govt.nz/worksafe);
  - WorkSafe New Zealand, *Approved Code of Practice for Safety and Health in Tree Work Part 2: Maintenance of trees around power lines* (2017), available from [www.worksafe.govt.nz/worksafe](http://www.worksafe.govt.nz/worksafe);
  - New Zealand Transport Agency (NZTA), *Code of Practice for Temporary Traffic Management (COPTTM): Part 8 of the Traffic Control Devices Manual (TCD Manual)* (2012), available from [www.nzta.govt.nz](http://www.nzta.govt.nz);
  - New Zealand Arboricultural Association Inc. (NZ Arb), *Best Practice Guide (BPG) for Safety Requirements in New Zealand Arboricultural Operations* (2017), available from [www.nzarb.org.nz](http://www.nzarb.org.nz); and any subsequent amendments.

## 2 Definitions

*Aerial rescue* refers to systems or procedures for retrieving an incapacitated arborist using skill appropriate methodologies.

*Workplace procedures* refer to the policies and procedures on safety and operation set down by the employer or organisation. Workplace procedures should reflect industry best practice, the BPG, equipment manufacturers' requirements, and current legislation.

- 3 For the purposes of assessment evidence must be presented in accordance with workplace procedures.

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## Outcomes and performance criteria

### Outcome 1

Tie, dress and use knots and friction hitches for tree climbing.

Range may include but is not limited to – endline knot - double fisherman's knot, Schwabisch, Distel, klemheist, Valdotain Tresse, alpine butterfly.

### Performance criteria

1.1 Tie and dress knots.

Range evidence of at least three different types of knots and friction hitches is required.

1.2 Use appropriate knots in tree climbing situations.

Range evidence of one friction hitch and one endline knot is required.

### Outcome 2

Install, use, and compare anchor points and hardware in arboriculture situations.

Range anchor points may include but are not limited to – double ringed cambium savers, rope guide, pulley carabiner; evidence of two is required.

### Performance criteria

2.1 Install and use anchor points and hardware.

2.2 Compare anchor point components in terms of the advantages and disadvantages.

### Outcome 3

Use the static rope ascending system to ascend safely to at least 15 metres and descend safely to the ground.

### Performance criteria

- 3.1 Use the static rope ascending system to ascend to 15 metres safely.
- 3.2 Use the static rope ascending system to descend to the ground in a controlled and smooth manner.

#### Outcome 4

Undertake an aerial rescue in a simulated arboriculture situation, where the casualty is on a static rope ascending system.

##### Performance criteria

- 4.1 Evaluate the situation and determine the need for emergency services.
- 4.2 Assess the casualty and their equipment to determine if it is appropriate to move the casualty to the ground or whether medical assistance is needed in situ.
- Range casualty – position, presence of injury, consciousness, coherence;  
equipment – condition of line, anchor point, other hazards.
- 4.3 Use an ascending method to reach the casualty and provide verbal assurance throughout the process.
- 4.4 Perform immediate first aid to the casualty in situ.
- 4.5 Assist the casualty to the ground in a safe and controlled manner.

#### Outcome 5

Describe and use work positioning single rope techniques (SRT) to ascend a tree.

Range climbing equipment must be compliant and compatible with manufacturer's specifications.

##### Performance criteria

- 5.1 Identify and select equipment and their combinations for work positioning SRT tree ascending.
- Range may include but is not limited to – ascenders, kroll, pantene, grigory, petzl stop, handle ascenders, figure eight, ascenders, descenders, friction device;  
evidence of five is required.
- 5.2 Identify and describe anchor and rope point in terms of their limitations.
- 5.3 Use single rope technique for work positioning to 10 metres.
- 5.4 Describe single rope technique in terms of the advantages for ascending a tree.

#### Outcome 6

Describe, demonstrate, install and use a retrievable redirect system.

### Performance criteria

- 6.1 Describe and demonstrate the configuration of a retrievable redirect system.
- 6.2 Identify appropriate positions to install the retrievable redirect system.
- 6.3 Install, use, and retrieve the retrievable redirect system efficiently.

### Outcome 7

Undertake an aerial rescue in a simulated arboriculture situation using the counterweight method.

Range when the casualty is 5-7 metres lateral from the rescuer's tie-in position.

### Performance criteria

- 7.1 Establish a re-direct to reposition the climber and the casualty.
- 7.2 Manipulate the casualty through the tree in a safe and secure manner.
- 7.3 Descend safely with the casualty to the ground.

<b>Planned review date</b>	31 December 2026
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### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	11 December 2009	31 December 2023
Review	2	24 June 2021	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0032
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

### Comments on this unit standard

Please contact the Primary ITO [standards@primaryito.ac.nz](mailto:standards@primaryito.ac.nz) if you wish to suggest changes to the content of this unit standard.