

Title	Conduct visual tree assessments in arboriculture situations		
Level	4	Credits	3

Purpose	People credited with this unit standard are able to: identify symptoms of mechanical defects in a tree that requires further inspection; and demonstrate knowledge of stress distribution and shape optimisation in trees.
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Classification	Horticulture > Arboriculture
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Available grade	Achieved
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Guidance Information

1 Legislation, standards and references relevant to this unit standard include but are not limited to:

- Resource Management Act 1991.
- Health and Safety at Work Act 2015;
- BS 3998:2010, *Tree work. Recommendations*, available from www.britishstandard.org.uk;
- WorkSafe New Zealand, *Approved Code of Practice Safety and Health in Arboriculture* (2012), available from 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* (1996), available from www.worksafe.govt.nz/worksafe;
- 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; and any subsequent amendments.

2 Definitions

Visual tree assessment – a method of tree assessment based on the principles of tree biomechanics. As trees grow, they adapt their growth to maintain a uniform distribution of the stress load to avoid points of high stress that could lead to the structural failure of the tree.

Workplace procedures – the policies and procedures on safety and operation set down by the employer or organisation. 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.
- candidates need to know how to recognise symptoms of trees that have the potential for mechanical failure. However, the process and principles of complete tree inspection are not assessed by this unit standard at Level 4. Full visual tree inspection is assessed at Level 5.

Outcomes and performance criteria

Outcome 1

Identify symptoms of mechanical defects in a tree that requires further inspection.

Range branch inclusions, swelling associated with cavities, inward bark folds, branches under high stress points, bark indications of stress points.

Performance criteria

- 1.1 Identify and record defects.
- 1.2 Identify the risks of tree defects for climbing arborists and describe how to manage these risks.
- 1.3 Identify the risks of tree defects for tree rigging operations and describe how to manage these risks.

Outcome 2

Demonstrate knowledge of stress distribution and shape optimisation in trees.

Performance criteria

- 2.1 Describe how trees distribute stress uniformly throughout their structure.
- 2.2 Identify instances of shape optimisation in a tree.

Range evidence of at least five examples is required.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 April 2018	31 December 2023
Review	2	25 March 2021	N/A

Consent and Moderation Requirements (CMR) reference	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 if you wish to suggest changes to the content of this unit standard.