



Australian Government

AHCARB513 Examine and assess trees

Release: 1

AHCARB513 Examine and assess trees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to examine and assess tree health, structure, age, taxonomy, risk, amenity value and significance, and compile a tree assessment report.

The unit applies to individuals who work in arboriculture and analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

Legislation, regulations and by-laws relating to the treatment and removal of trees apply in some states and territories.

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for tree assessment	1.1 Identify scope of survey according to client brief 1.2 Select, check and use personal protective equipment 1.3 Locate tree and document tree position according to client brief 1.4 Identify and record tree species and determine implications on brief

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.5 Assess and consider tree health that impacts on brief 1.6 Estimate age of tree, tree parts and defects
2. Acquire data for valuation	2.1 Determine and record tree dimensions according to client brief 2.2 Investigate and assess tree for indicators of habitat and ecological significance 2.3 Investigate and assess tree for historical and cultural significance 2.4 Investigate statutory controls on tree 2.5 Record outcomes of investigation of tree significance and restrictions
3. Assess value of trees	3.1 Select and compare amenity tree valuation methods 3.2 Collect and collate unit values and data required for selected tree valuation methods 3.3 Calculate and record amenity value of individual trees 3.4 Compare results and account for different values for selected methods 3.5 Consider and communicate value of trees captured by amenity valuation
4. Acquire data for tree risk assessment	4.1 Assess relationship of tree to potential targets 4.2 Inspect tree for visual indicators of likely failure of tree or tree parts 4.3 Use basic diagnostic tools to confirm presence and extent of hazards 4.4 Assess likely impact of wind loading on potential for failure of tree 4.5 Assess hazards and determine likelihood of failure
5. Undertake tree risk assessment calculations	5.1 Select tree risk assessment methods and determine their limitations 5.2 Determine target of concern and occupation rate 5.3 Determine tree components of concern and their likelihood of failure 5.4 Determine likelihood of impact of tree on target 5.5 Determine likely consequence of impact of target and tree components

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.6 Calculate and document determinations and level of risk according to client brief
6. Document and communicate tree risk assessment	6.1 Provide client with benchmarks and context for risk assessment results 6.2 Determine and document potential risk mitigation controls and estimate residual risk of each control 6.3 Recommend timeframe for implementation of risk mitigation controls 6.4 Recommend follow-up inspection type and timeframe 6.5 Consider risk against value of tree 6.6 Produce a tree risk assessment report

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Writing	Create logical, accurate and succinct reports with recommendations that include complex issues for risks and valuation of trees
Numeracy	Identify numerical information for use in complex formulae for calculating the value of trees

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB513 Examine and assess trees	AHCARB601 Examine and assess trees	Code changed to reflect AQF alignment Removed prerequisite units	Equivalent

		Elements and performance criteria clarified Foundation skills added Assessment requirements updated	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB513 Examine and assess trees

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has examined and assessed at least two different trees, including:

- identified scope and purpose of assessment from client brief
- selected, checked and used personal protective equipment
- located tree and documented position
- identified and recorded tree species and determined implication on brief
- assessed and considered tree health and impact on brief
- estimated age of tree, tree parts and defects
- determined and recorded tree dimensions, which must include:
 - tree height
 - tree spread
 - diameter-at-breast-height (DBH)
 - trunk circumference
 - diameter at base
- investigated, assessed and recorded the following indicators of value:
 - habitat and ecological significance
 - historical and cultural significance
 - statutory controls
- selected and compared amenity tree for at least 2 different valuation methods
- collected unit values and data required by the valuation method selected
- calculated and recorded amenity value of at least 2 different trees
- compared results of different valuation methods and accounted for differences
- considered and communicated value of trees captured for valuation
- inspected tree for visual indicators of likely failure of tree or tree parts
- assessed relationship of tree to potential targets

- assessed likely impact of wind loading on potential for failure
- used basic diagnostic tools to confirm presence and extent of hazards
- assessed hazards and determined likelihood of failure
- selected tree risk assessment methods and determined their limitations
- determined target of concern and occupation rate
- determined tree components of concern and their likelihood of failure
- determined likelihood of impact and consequence of tree failure on target
- calculated and documented determinations and level of risk
- provided client with benchmarks and context for risk assessment
- determined and documented potential risk mitigation controls and estimated residual risk
- recommended timeframes for implementation of risk mitigation controls and follow-up inspections
- considered risk against value of tree
- produced a tree risk assessment report.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- areas to address in a client brief and developing the scope of assessment, including:
 - purpose of assessment
 - owner/client and address
 - who requested the assessment
 - reasons for assessments to be requested
 - client risk thresholds
 - data capture procedures
 - requirements for assessment
 - tree assessment and measuring equipment
- trees and surveying their location on a site, including:
 - methods for locating trees on devices, drawings, plans or aerial images
 - techniques to position tree on site from boundaries and structures
- tree identification, biology and physiology
- assessing tree health, including:
 - signs and symptoms of disease
 - methods of detecting decay and structural defects in trees
 - use of basic diagnostic tools
 - testing equipment to detect decay, disease and scope of tree problems
 - factors affecting the likelihood of tree failure
 - use of diagnostic tools
- computations and estimating tree dimensions and their relevance to tree assessment, including:

- tree height and spread
- trunk circumference
- DBH
- diameter at ground level
- assessing structure and symmetry of the canopy, including:
 - symmetrical and asymmetrical canopy structure and consequences on tree stability and health
 - trunk inclination and calculating the lean
 - impact of wind loading on trees and tree structures
 - estimating and calculating wind loading
- relationship and responsiveness of form of crown to surrounding trees and structures
- tree age and health issues and their estimation, including:
 - uninodal and multinodal tree species as an indicator of age
 - growth increments, including bud scars, sympodial growth and flush marks
 - checking age estimations using documented images
- valuation methods of amenity trees, including:
 - a range of tree valuation methods and their application
 - legal and statutory controls and protection of trees
 - indicators of habitat use
 - ecological value and significance
 - cultural value and significance
 - historical value and significance
 - preservation orders and local environmental protection laws
 - calculating amenity tree value of individual trees
- visual tree assessment (VTA) techniques and procedures, including:
 - visual indications and symptoms of disease and health issues
 - tests and checking the extent of disease and health issues
 - assessment of impact of tree disease and health issues on tree safety
 - the purpose and use of basic diagnostic tools
- methods of determining and mitigating levels of risk, including:
 - a range of tree risk assessment methods and their application
 - identification and extent of tree hazards
 - causes of instability, decay, damage and stress in trees
 - quantification and qualification of tree risk
 - risk benchmarks from non-arboricultural activities
 - controls available to mitigate risks
 - remedial action of tree problems
- determining the consequence of risk, including:
 - why most likely outcomes are used and not worst case
 - abbreviated injury index/scale

- possible targets associated with tree risk, including:
 - persons, property, interruptions to community activity, interruptions to services
 - occupation rates
- tree assessment reporting procedures, including images.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - an arboriculture site with the trees stipulated in the performance evidence
- resources, equipment and materials:
 - computer with software for word processing
 - digital imaging equipment
 - personal protective equipment
 - diagnostic tools, including sounding hammer, trowel, probe, cordless drill
 - measuring equipment for tree dimensions, locating trees on site
 - samples of cross-sectioned defects and diseases
 - field tree inspection equipment, including hand lenses, probes, binoculars, containers for sample collection
- specifications:
 - legislation and regulations relevant to arboriculture
 - client brief and specifications for tree assessment task
- relationships:
 - client.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. In particular, assessors must have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed.

Links

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