



Australian Government

AHCARB408 Perform a ground-based tree defect evaluation

Release: 1

AHCARB408 Perform a ground-based tree defect evaluation

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 trees from the ground, assess and test them for defects, evaluate the potential risk of failure, secure the site and report the condition to specialist arborist for a tree risk assessment.

The unit applies to individuals who work in arboriculture and apply specialist skills to provide solutions to technical and unpredictable problems. They work autonomously, instruct and monitor the work of others within a team. They use discretion and judgment in the selection, allocation and use of available resources.

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. Determine evaluation requirements	1.1 Confirm trees to be evaluated according to client brief 1.2 Undertake a site-specific job safety analysis (JSA) and record and implement control measures 1.3 Determine tree health and hazard benchmarks for project according to industry standards

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Examine tree visually for indicators of potential failure	2.1 Examine tree for indicators of general poor health 2.2 Examine tree for visual defects 2.3 Examine tree for indication of damage from organisms 2.4 Assess examination outcomes to determine potential for structural failure of tree components according to industry benchmarks
3. Undertake basic testing of tree for indicators of potential failure	3.1 Conduct tests for cavities according to visual indicators 3.2 Expose root crown and examine for concealed root defects according to visual examination outcomes 3.3 Remove loose bark and examine stems for concealed defects according to visual examination outcomes 3.4 Assess test outcomes for potential impact on tree health and structural integrity according to industry benchmarks
4. Record tree attributes and indicators	4.1 Capture images and record botanical name, dimensions and location of tree under evaluation 4.2 Document the results of examinations and tests conducted for tree under evaluation 4.3 Capture images, location and visual indicators of defects in tree for inclusion in documentation 4.4 Estimate and record dimensions of defect and affected tree component
5. Assess and mitigate potential risk, and document actions	5.1 Identify possible targets affected by tree under evaluation from client brief 5.2 Assess identified defective tree components for structural integrity and potential risk on possible targets 5.3 Validate assessment of severe defects on structural integrity of tree with consulting arborist 5.4 Advise client of outcomes of tree defect evaluation where a heightened potential risk to targets is identified 5.5 Take action to mitigate potential risk according to client advice and workplace policies and procedures 5.6 Document action taken to mitigate potential risk on target
6. Document and report hazards and	6.1 Review and assess tree defect evaluation results, and consider options for resolving any unmitigated risk

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
recommendations	6.2 Identify and document recommended options for client approval 6.3 Compile records, results and recommendations, and document tree defect evaluation report according to workplace procedures and industry standards 6.4 Submit tree defect evaluation report to client according to workplace procedures

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, edit and proofread tree defect evaluation report and recommendations to ensure clarity of meaning, and accuracy and consistency of information
Oral communication	Present complex information about tree defects to client using clear and convincing language, tone and pace appropriate to the client's understanding

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB408 Perform a ground-based tree defect evaluation	AHCARB403 Perform a ground-based tree defect evaluation	Prerequisite units removed Elements and performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent

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 AHCARB408 Perform a ground-based tree defect evaluation

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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 conducted a whole-of-tree defect evaluation from the ground for at least 20 individual trees with defects, from at least 10 different species.

There must also be evidence that the individual has:

- performed a site-specific job safety analysis (JSA) and recorded and implemented control measures
- determined tree hazard benchmarks for the project
- considered relationship between tree species, defects and potential risk
- examined trees for indicators of the following defects:
 - tree health
 - visible physical defects
 - damage from organisms
- assessed examination results to determine potential structural failure
- conducted tests to determine visual and concealed defects, including:
 - sounding accessible visual and concealed defects
 - probing accessible cavities
 - exposing and examining root crown
 - removing loose bark and examining for defects
- assessed test results for structural integrity against tree hazard benchmarks
- recorded details of tree under defect evaluation, including:
 - captured images of tree
 - identified tree to genus, species and common name
 - estimated approximate dimensions of tree
 - identified geographical location of tree
- recorded the following attributes of the defects:
 - image of the defect

- location within the tree canopy
- visual indicators of the defect
- estimated the dimensions of defect and affected tree component
- identified potential target from client brief and assessed consequences of tree defects on structural integrity and risk to target
- advised client on outcomes of tree defect evaluation
- implemented action to mitigate tree hazard according to client and workplace procedures
- documented actions taken to mitigate risk
- reviewed tree defect evaluation results and assessed possible options for controlling hazard
- identified and recommended action for client approval
- compiled all results, records and recommendations, and documented in tree defect evaluation report according to workplace procedures
- submitted tree defect evaluation report to client according to workplace procedures.

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:

- work health, safety and environmental hazards, assessing risk and the role of a JSA
- preferred industry practices (as outlined in the Companion Volume) relating to tree defects and effect on structural integrity
- structure and function of client briefs and their interpretation, including:
 - targets and the role of targets in tree risk assessment
 - industry and client tree hazard benchmarks
- work health, safety and environmental hazards, assessing risk and the role of a JSA
- noting and specifying tree under evaluation, including recording:
 - plant naming conventions
 - estimating tree dimensions from the ground
 - specifying geographic location on maps, pictures and global positioning systems (GPS)
- tree examination procedures and methods from the ground, including:
 - signs and symptoms of health of trees
 - methods for determining tree health
 - tree anatomy and morphology relating to structural failures
- tools and equipment required to assist in tree examinations, including:
 - cameras and digital imaging
 - sounding mallet and probing tools
 - materials
- recognising visual indicators of tree defects, their causes and effect on structural failure, including:
 - visible and concealed defects, including cavities, cracks and included bark

- common symptoms of diseases (e.g. rot, fungal growth, loose bark)
- common signs of organisms (e.g. holes, frass, live organisms, loose bark)
- testing procedures for confirming visual indicators of tree health and structural defects, including:
 - sounding and probing techniques for defects
 - loose bark removal and signs of defects
 - exposure of root crown to identify root and crown defects
- health and approximate dimensions of the tree and affected tree part and defect
- documentation of the tree defect evaluation, including:
 - digital imaging and photographs
 - reports and reporting styles and industry best practice
- assessing tree hazards and likelihood of failure, including:
 - potential consequences
 - measures to rectify
 - types of potential target
 - urgency for notifications and gauging imminent threat
 - isolation of hazardous trees
 - moving potential target
 - size of tree and its defects
- considerations for remedial action arising from defect evaluation, including:
 - aerial inspection
 - load testing
 - role of a consulting arborist, and seeking further advice from consulting arborist
 - laboratory testing
- documenting and presenting reports to clients.

Assessment Conditions

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

- physical conditions:
 - 20 trees from 10 different species as stipulated in the performance evidence
- resources, equipment and materials:
 - cross-sectioned tree components representing visual indicators of tree defects
 - computer and computer software
 - digital image capture device
- specifications:
 - workplace procedures, instructions and client brief for trees requiring evaluation
 - preferred industry practices (as outlined in the Companion Volume) relating to tree defects and effect on structural integrity
- relationships:

- client and consulting arborist.

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.

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