

Modification history

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 4.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

AHCARB504	Develop an arboricultural impact assessment report
Application	<p>This unit of competency describes the skills and knowledge required to decide on the appropriateness for retaining trees and to assess, plan and monitor the protection of trees on construction and development sites where trees subject to retention are exposed to potential damage.</p> <p>The unit applies to individuals who 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.</p> <p>Legislation, regulations and by-laws relating to the treatment and removal of trees apply nationally and in some states, territories and jurisdictions.</p>
Prerequisite Unit	Nil
Unit Sector	Arboriculture (ARB)

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. Undertake assessment of trees on site	1.1 Identify and research impact of legislation and Australian Standards of trees on site 1.2 Determine specific requirements of Statutory authorities in relation to trees on development site 1.3 Determine local government planning laws, tree protection and preservation regulations 1.4 Conduct a site assessment and identify conditions that impact tree protection program 1.5 Identify work health and safety hazards that impact safety of staff and public, assess level of risk and apply controls 1.6 Identify hazards, activities and circumstances that have potential to harm trees and assess the level of risk 1.7 Locate and confirm trees plotted on survey plan 1.8 Plot trees not on plan onto survey plan
2. Compile preliminary tree assessment data	2.1 Collect available relevant plans and documentation 2.2 Identify and record affected trees with botanical and common name on development and adjoining site 2.3 Record tree dimensions, height, crown spread and diameter-at-breast-height (DBH) 2.4 Determine age class and estimate life expectancy 2.5 Determine tree health in relation to tree physiology and pathology 2.6 Determine condition of tree structure in relation to tree anatomy 2.7 Assess heritage and cultural value of trees 2.8 Assess habitat, ecology and environmental impact of trees on site 2.9 Assess impact of location to existing and past site structures 2.10 Determine the retention value 2.11 Compile all tree assessment data required for report

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
3. Document preliminary arboricultural report	3.1 Record all trees and groups of trees suitable for retention 3.2 Determine indicative tree protection zone (TPZ) and structural root zone for each tree 3.3 Plot tree identifiers and indicative TPZ on survey plan 3.4 Document preliminary arboricultural report
4. Assess impact of proposed development on trees	4.1 Interpret existing plans, working drawings, terms and symbols 4.2 Interpret development and design language 4.3 Assess how development can result in mechanical and chemical damage and determine appropriate controls 4.4 Determine impact of proposed development on trees 4.5 Provide preliminary feedback to client on potential areas of improvement
5. Design Development ????	5.1 Liaise with client on design of development to minimise impact on trees 5.2 Assess constructability of design to ensure impacts on trees are minimised 5.3 Liaise with design team to develop tree sensitive design and construction methods
6. Determine indicative and actual tree protection zones (TPZ)	6.1 Assess development requirements for site access and logistics 6.2 Review indicative TPZ 6.3 Determine extent of encroachment into indicative TPZ 6.4 Determine whether works will impact on structural root zone (SRZ) 6.5 Determine extent and area of actual SRZ 6.6 Determine actual TPZ for trees to be retained 6.7 Define and record the actual TPZ
7. Demonstrate tree viability to major encroachment	7.1 Determine level of encroachment into TPZ following design development 7.2 Assess for a major encroachment: location and distribution of roots; potential loss of root mass; species tolerance to root loss; and age, health, size, lean and stability of tree 7.3 Consider impact of major encroachment on health, physiology and structural integrity of tree 7.4 Assess soil characteristics and volume and presence of existing or past structures and design factors 7.5 Consider how site and design factors minimise impact of proposed encroachment on tree 7.6 Demonstrate that the tree would remain viable 7.7 Determine additional remedial measures to protect tree viability
8. Develop protection measures and advise client	8.1 Investigate tree protection devices and techniques to mitigate development activities 8.2 Specify protection devices, techniques and systems to minimise impact of development 8.3 Specify operational access to minimise impact on trees 8.4 Produce working drawings for installation and construction of tree protection systems 8.5 Provide advice on tree removal and tree pruning program to client
9. Document the relevant reports	9.1 Prepare draft arboricultural impact assessment report 9.2 Document tree protection recommendations and drawings 9.3 Prepare and document tree management and monitoring guidelines and strategies for addressing possible problems 9.4 Consolidate reports, plans and guidelines into final arboricultural impact assessment report and present to client according to workplace procedures

Foundation Skills	
<i>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.</i>	
Skill	Description
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Unit Mapping Information			
Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB504 Develop an arboricultural impact assessment report	AHCARB504 Develop an arboricultural impact assessment report	Minor changes to Elements and Performance Criteria for clarity	Equivalent unit

Links	Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72
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TITLE	Assessment requirements for AHCARB504 Develop an arboricultural impact assessment report
Performance Evidence	
<p>An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.</p> <p>There must be evidence that the individual has on at least one occasion developed an arboricultural impact assessment report for a development site and has:</p> <ul style="list-style-type: none"> • identified and researched the impact and specific requirements of legislation, Australian Standards, and local government laws for trees on development site • conducted site assessment and identified conditions that impact tree protection program • identified work health and safety hazards, assess risk and applied controls for site • identified hazards and assessed the risk that harm trees • located, confirmed and plotted all trees on survey plan • collected plans and documentation • identified and recorded tree by botanical and common name and included a record of: <ul style="list-style-type: none"> • tree dimensions, height, crown spread and diameter-at-breast-height (DBH) and diameter at ground level • age class and estimate life expectancy • tree health in relation to tree physiology and pathology • condition of tree structure in relation to tree anatomy • assessed the following values for trees: <ul style="list-style-type: none"> • heritage and cultural • habitat, ecological and environmental • location of tree to existing and past site structures • determined the tree retention value • compiled tree assessment data for report • recorded all trees suitable for retention • determined and plotted indicative tree protection zone (TPZ), tree identifiers for each tree on survey plan • documented preliminary arboricultural report • interpreted plans, designs, working drawings, terms, symbols and language for development • assessed and determined controls for mechanical and chemical damage affecting trees • provided client with preliminary feedback for potential improvements • liaised with client on design development and assessed impact of construction on trees • liaised with design team to develop tree sensitive design and construction methods • assessed development requirements for site access and logistics • reviewed indicative tree protection zone and determined: <ul style="list-style-type: none"> • extent of encroachment into indicative TPZ • impact of works on structural root zone (SRZ) • determined extent and area of SRZ • determined and recorded level of encroachment and actual TPZ for trees to be retained • assessed the following factors affecting tree viability for a major encroachment: <ul style="list-style-type: none"> • location and distribution of roots • potential loss of root mass • species tolerance to root loss • age, health, size, lean and stability of tree • assessed impact of encroachment on health, physiology and structural integrity of tree • assessed impact of soil characteristics, soil volume and presence of existing or past structures and design factors • considered site and design factors to minimise impact of proposed encroachment • rationalised all factors to decide on the viability of the tree • determined remedial measures to protect the tree • investigated, specified and produced installation and construction drawings for tree protection devices and systems to mitigate tree damage • provided advice to client on tree removal and tree pruning program • prepared a draft arboriculture impact assessment report 	

TITLE	Assessment requirements for AHCARB504 Develop an arboricultural impact assessment report
Performance Evidence	
<ul style="list-style-type: none"> • developed a tree protection plan and drawings • prepared, documented tree management and monitoring including strategies to handle problems • consolidated reports, plans and guidelines into final arboricultural impact assessment report in both: <ul style="list-style-type: none"> • digital format • and print format • presented report to client. 	

Knowledge Evidence	
<p>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:</p> <ul style="list-style-type: none"> • legislative and regulatory framework for trees on development sites including: <ul style="list-style-type: none"> • role of Australian Standards • specific requirements of statutory authorities • local government tree protection and preservation regulations • working with construction plans and documentation including: <ul style="list-style-type: none"> • types of drawings • terms, symbols and language used in development • version control of drawings including revision and issue dates • working and communicating with clients and development design personnel • conducting site assessment and conditions that impact tree protection programs including: <ul style="list-style-type: none"> • development site safety and safe access procedures • plotting trees/ tree identifiers onto survey plans • naming and recording tree by botanical and common name • methods for estimating tree dimensions, height, crown spread and diameter-at-breast-height (DBH) • age class and estimated life expectancy • tree health in relation to tree physiology and pathology • assessing and determining the viability of a trees • soil volume and characteristics on development sites • tree values and importance in society including: <ul style="list-style-type: none"> • heritage and cultural values • habitat, ecological value • environmental values • methods of determining retention value • the principles of tree protection zones (TPZ) including: <ul style="list-style-type: none"> • methods of mechanical and chemical damage to trees on development sites • impact of proposed development on trees • structural root zone (SRZ) • levels of tolerance to encroachment and potential loss of root mass • species tolerance to root loss • report writing and structure of specific types of tree impact assessments including: <ul style="list-style-type: none"> • purpose and structure of preliminary arboricultural report • purpose and structure of arboriculture assessment report • use and interpretation of development plans and documentation • drawing techniques for illustration in reports and plans including digital images • tree protection plans and drawings • purpose and structure of tree management and monitoring guidelines • presenting reports in digital or paper based formats • principles and techniques of tree protection devices, methods and systems including: <ul style="list-style-type: none"> • designs and their purpose • tree response to tree protection systems • installation and construction methods for tree protection. 	

Assessment Conditions	
<p>Assessment of skills must take place under the following conditions:</p> <ul style="list-style-type: none"> • physical conditions: <ul style="list-style-type: none"> • access to a development worksite with existing trees or environment that accurately represents workplace conditions • resources, equipment and materials: <ul style="list-style-type: none"> • computer with word processing and drawing software • internet connection • digital image capture device • personal protective equipment (PPE) • basic diagnostic tools including sounding hammer, trowel, probe, cordless drill • basic soil testing equipment • trees • specifications: <ul style="list-style-type: none"> • workplace safety policies and procedures • client brief and instruction for safety audit objectives • access and use of industry standards AS2303, AS2223 and AS3743 • relationships: <ul style="list-style-type: none"> • client. <p>Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.</p> <p>Assessment must be conducted only by persons who have:</p> <ul style="list-style-type: none"> • arboriculture vocational competencies at least to the level being assessed • current arboriculture industry skills directly relevant to the unit of competency being assessed. 	
Links	Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72