



Australian Government

AHCARB504 Develop an arboricultural impact assessment report

Release: 1

AHCARB504 Develop an arboricultural impact assessment report

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to plan for and monitor the protection of trees at sites where there may be threats to the trees.

This unit applies to individuals who take personal responsibility and exercise autonomy in undertaking complex work, to analyse and synthesise information and design, and to communicate solutions to complex problems. The role involves the self-directed application of knowledge with substantial depth in some areas such as tree assessment techniques, the impact of development on trees and specialist tree protection techniques and reporting methods.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states and territories at the time of publication, and may differ according to jurisdiction. Specific determination should be sought through the relevant State or Territory. Works involving this unit of competency may be subject to local tree protection and preservation laws, and the relevant content of applicable Australian Standards such as the current AS 4970 Protection of trees on development sites.

Pre-requisite Unit

AHCARB502 Identify, select and specify trees

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Undertake assessment of trees on site	1.1 Identify and research relevant legislation and Australian Standards 1.2 Determine specific requirements of Statutory authorities in

Element	Performance criteria
	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 tree genus and species by botanical and common name 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 Consider heritage and cultural issues 2.8 Consider habitat, ecology and other matters relevant to the site 2.9 Consider location relative to existing and past site structures 2.10 Determine the retention value 2.11 Compile all tree assessment data required for report
3. Document preliminary arboricultural report	3.1 Record all trees and groups of trees suitable for retention 3.2 Determine indicative tree protection zone for each tree 3.3 Plot tree identifiers and indicative tree protection zone on survey plan 3.4 Document preliminary arboricultural report
4. Record 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 Consider 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. Determine indicative and actual tree protection zones	5.1 Assess development requirements for site access and logistics 5.2 Consider indicative tree protection zone 5.3 Determine extent of encroachment into indicative tree protection

Element	Performance criteria
	zone 5.4 Determine whether works will impact on structural root zone 5.5 Determine extent and area of structural root zone 5.6 Determine actual tree protection zone for trees to be retained 5.7 Define and record the actual tree protection zones
6. Demonstrate tree viability to major encroachment	6.1 Determine level of encroachment 6.2 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 6.3 Consider impact of major encroachment on health, physiology and structural integrity of tree 6.4 Assess soil characteristics and volume and presence of existing or past structures and design factors 6.5 Consider how site and design factors minimise impact of proposed encroachment on tree 6.6 Demonstrate that the tree would remain viable 6.7 Determine additional remedial measures required
7. Develop protection measures and advise client	7.1 Develop an evidentiary portfolio of tree protection devices, techniques, tree-sensitive design and construction measures and tree responses to development activities 7.2 Specify protection devices, techniques and systems to minimise impact of development 7.3 Determine installation and construction methods for tree protection and produce working drawings for on-site personnel for implementation 7.4 Provide advice on tree removal and tree pruning program to client
8. Document the relevant reports	8.1 Prepare draft arboricultural impact assessment report 8.2 Develop tree protection plan and tree protection plan (drawing) 8.3 Prepare and document tree management and monitoring guidelines with alternative strategies for possible problems 8.4 Consolidate relevant reports, plans and guidelines into final version of arboricultural impact assessment report in digital and print format and present to client

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is not equivalent to AHCARB504A Develop a tree protection plan.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB504 Develop an arboricultural impact assessment report

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Performance Evidence

The candidate must compile reports, plans and guidelines into an arboricultural impact assessment report and develop an evidentiary tree protection portfolio.

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence for and demonstrate:

- identifying and researching relevant legislation and Australian Standards
- determining specific requirements of statutory authorities in relation to trees on development site
- determining local government planning laws, tree protection and preservation regulations
- conducting a site assessment and identify conditions that impact tree protection program
- identifying work health and safety hazards that impact safety of staff and public, assess level of risk and apply controls
- identifying hazards, activities and circumstances that have potential to harm trees and assess the level of risk
- locating and confirming trees plotted on survey plan
- plotting trees not on plan onto survey plan
- collecting available relevant plans and documentation
- identifying and record tree genus and species by botanical and common name
- recording tree dimensions, height, crown spread and diameter-at-breast-height (DBH)
- determining age class and estimate life expectancy
- determining tree health in relation to tree physiology and pathology
- determining condition of tree structure in relation to tree anatomy
- considering heritage and cultural issues
- considering habitat, ecology and other matters relevant to the site
- considering location relative to existing and past site structures
- determining the retention value
- compiling all tree assessment data required for report
- recording all trees and groups of trees suitable for retention

- determining indicative tree protection zone for each tree
- plotting tree identifiers and indicative tree protection zone on survey plan
- documenting preliminary arboricultural report
- interpreting existing plans, working drawings, terms and symbols
- interpreting development and design language
- considering how development can result in mechanical and chemical damage and determine appropriate controls
- determining impact of proposed development on trees
- providing preliminary feedback to client on potential areas of improvement
- assessing development requirements for site access and logistics
- considering indicative tree protection zone
- determining extent of encroachment into indicative tree protection zone
- determining whether works will impact on structural root zone
- determining extent and area of structural root zone
- determining actual tree protection zone for trees to be retained
- defining and recording the actual tree protection zones
- determining level of encroachment
- assessing 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
- considering impact of major encroachment on health, physiology and structural integrity of tree
- assessing soil characteristics and volume and presence of existing or past structures and design factors
- considering how site and design factors minimise impact of proposed encroachment on tree
- demonstrating that the tree would remain viable
- determining additional remedial measures required
- developing an evidentiary portfolio of tree protection devices, techniques, tree-sensitive design and construction measures and tree responses to development activities
- specifying protection devices, techniques and systems to minimise impact of development
- determining installation and construction methods for tree protection and produce working drawings for on-site personnel for implementation
- providing advice on tree removal and tree pruning program to client
- preparing draft arboricultural impact assessment report
- developing tree protection plan and tree protection plan (drawing)
- preparing and documenting tree management and monitoring guidelines with alternative strategies for possible problems
- consolidating relevant reports, plans and guidelines into final version of arboricultural impact assessment report in digital and print format and presenting to client.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- relevant legislation and Australian Standards
- specific requirements of statutory authorities in relation to trees on development site
- local government tree protection and preservation regulations
- site assessment and conditions that impact tree protection programs
- plotting trees/ tree identifiers onto survey plans
- tree genus and species by botanical and common name
- tree dimensions, height, crown spread and diameter-at-breast-height (DBH)
- age class and estimate life expectancy
- tree health in relation to tree physiology and pathology
- heritage and cultural issues
- habitat, ecology and other matters relevant to the site
- methods of calculation of retention value
- indicative tree protection zones
- preliminary arboricultural reports
- interpretation of existing plans, working drawings, terms and symbols
- development and design language
- principles and methods of mechanical and chemical damage control
- impact of proposed development on trees
- structural root zone
- actual tree protection zones
- level of encroachment
- assessment of 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
- soil assessment of characteristics and volume
- viability of a tree
- evidentiary portfolio of tree protection devices, techniques, tree-sensitive design and construction measures and tree responses to development activities
- principles and techniques of tree protection devices, methods and systems
- installation and construction methods for tree protection
- principles and methods relating to protecting trees from human activities
- working drawings for on-site personnel for implementation
- methods of documentation of tree management and monitoring guidelines
- draft arboricultural impact assessment report
- anatomy, physiology and pathology of trees
- interpretation of plans and working drawings
- tree protection plan and tree protection plan (drawing)
- documentation of tree management and monitoring guidelines
- final version of arboricultural impact assessment report
- digital and print formats.

Assessment Conditions

Assessment must be demonstrated consistently over time in a suitable range of contexts and have a productivity-based outcome. No single assessment event or report is sufficient to achieve competency in this unit.

Assessment may be conducted in a simulated or real work environment, however determination of competency requires the application of work practices under work conditions.

The mandatory equipment and materials used to gather evidence for assessment include:

- equipment:
 - computer
 - word processing software
 - internet connection
 - personal protective equipment (PPE)
 - digital camera/phone camera
 - loupe
 - basic diagnostic tools including sounding hammer, trowel, probe, cordless drill
 - basic soil testing equipment
 - trees
- materials:
 - preliminary arboriculture report
 - arboricultural impact assessment report

Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.

Assessment must be conducted only by persons who 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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