



Companion Volume
User Guide:
Arboriculture

**AHC Agriculture, Horticulture,
Conservation and Land Management
Training Package**
Version 5.0.

August 2020

Disclaimer

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Contents

Disclaimer	3
Skills Impact Ltd	3
Contents	5
User Guide: Arboriculture modification history	8
Introduction	9
About this Guide	9
Training Package developer’s quality assurance process for Companion Volumes	10
Working with units of competency and assessment requirements	11
Unit of competency	11
Assessment requirements	12
Industry priorities and expectations	14
Impact of revised components	15
Arboriculture qualifications	16
AHC20520 Certificate II in Arboriculture.....	17
AHC30820 Certificate III in Arboriculture.....	17
Selecting specialisations	18
Climbing arborist.....	18
Elevated Work Platform (EWP) arborist	18
Environmental arborist.....	18
Crane arborist	18
Arborist works coordinator	19
AHC50520 Diploma of Arboriculture	19
AHC60520 Advanced Diploma of Arboriculture	20
AHC80120 Graduate Diploma of Arboriculture	21
Related fields of study	21
Summary of entry requirements for qualifications.....	22
Skill sets	23
AHCSS00103 Basic Tree Worker Skill Set	23
AHCSS00104 Introduction to Arboriculture Skill Set	23
AHCSS00105 Arborist Works Coordinator Skill Set.....	23
Legislative environment	23

Health and safety	24
Trainers and assessor competency	24
Training and assessor upskilling.....	25
Maintaining technical currency.....	25
Applying for professional development.....	26
Volume of learning.....	27
RTOs and volume of learning.....	28
Industry expectations for volume of learning	28
Industry engagement	29
Industry engagement and validation	29
Training Delivery.....	29
Integrated/holistic delivery	29
Prerequisites for units of competency.....	30
Recommended sequencing.....	31
Sequencing delivery for the Certificate III in Arboriculture units	31
AHCARB324 Use cranes to access and dismantle trees.....	31
Sequencing delivery of AHCARB317 Dismantle trees	32
Sequencing issue for the Arborist Works Coordinator Specialisation.....	32
Sequencing of delivery for AHCARB513 Examine and assess trees	33
General comments on selected units of competency.....	33
AHCARB318 Undertake aerial rescue.....	33
AHCARB316 Perform pruning operations.....	33
AHCARB408 Perform ground-based tree defect evaluation	33
Assessment of AHCARB units of competency.....	34
Assessment methods	34
Log books.....	34
Recognition of Prior Learning (RPL)	34
Assessment requirements	34
Code of Practice for Arboriculture and Vegetation Management.....	35
Preferred industry practices.....	35
Current list of Minimum industry standards (MIS) and units where relevant	36
Australian Standards.....	37

Definitions.....37
Appendix A: Arboriculture industry bodies39

User Guide: Arboriculture modification history

Release number	Release date	Author	Comments
1.0	August 2020	Skills Impact	<i>User Guide created to accompany AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 5.0.</i>

Acknowledgements

Skills Impact wishes to thank the organisations and individuals who contributed advice and feedback.

Introduction

About this Guide

This Companion Volume *User Guide: Arboriculture (User Guide)* supports the delivery and assessment of the Arboriculture suite of qualifications:

- *AHC20520 Certificate II in Arboriculture*
- *AHC30820 Certificate III in Arboriculture*
- *AHC50520 Diploma of Arboriculture*
- *AHC60520 Advanced Diploma of Arboriculture*
- *AHC80120 Graduate Diploma of Arboriculture*

It includes information about:

- interpreting the units of competency
- advice on qualifications and recommending specialisations
- maintenance of trainer and assessor competency
- delivery and sequencing advice
- use of preferred industry practices
- and other advice deemed useful.

This *User Guide* has been developed to direct and support good practice for the implementation of the arboriculture qualifications and units of competency.

In time, it can provide opportunities to showcase best practice from RTOs and act as a forum for sharing information and resources. If you have any ideas, resources, case studies or feedback to contribute to this guide, please provide your feedback via the Skills Impact Continuous Improvement Feedback Register available at <http://www.skillsimpact.com.au/contact>.

This *User Guide* should be read in conjunction with the Companion Volume Implementation Guide (Implementation Guide) for the *AHC Agriculture, Horticulture, Conservation and Land Management Training Package*. The Implementation Guide provides information about the entire Training Package, including a list of all units of competency, skill sets and qualifications. It also includes key implementation advice for use by RTOs, including:

- unit and qualification coding
- mapping between previous and current versions of the qualifications and units of competency
- key work, training and regulatory/licensing requirements in the industry
- legislation requirements for all arborists
- resources and equipment requirements
- access and equity considerations
- training pathways
- occupational outcomes of qualifications
- entry requirements for qualifications.

The Implementation Guide is available at: [https://vetnet.gov.au/Pages/Training/Packages/Agriculture Horticulture and Conservation and Land Management Training Package](https://vetnet.gov.au/Pages/Training/Packages/Agriculture%20Horticulture%20and%20Conservation%20and%20Land%20Management%20Training%20Package).

Training Package developer's quality assurance process for Companion Volumes

Companion Volumes are developed in consultation with industry representatives, trainers and assessors, and representatives of Industry Reference Committees (IRCs) and Subject Matter Experts (SMEs). These key stakeholder representatives provide and review content to ensure that information is relevant and useful.

The Companion Volumes undergo continuous improvement in response to feedback lodged on the Skills Impact website <http://www.skillsimpact.com.au/contact>.

Working with units of competency and assessment requirements

The units of competency in the AHC Package are presented in the template from the *Standards for Training Packages 2012*. The information is contained in two documents:

- Unit of Competency
- Assessment Requirements.

Unit of competency

The unit of competency is a statement of job outcome. Each unit is composed of a number of parts:

- **Application** – that briefly describes purpose of the unit.
- **Pre-requisites** – that are required for the unit
- **Elements and Performance Criteria** – which break up the job into its component parts
- **Foundation Skills** – which provide information about the skills required to complete the job that are not explicit in the Elements and Performance Criteria

The following examples show an arboriculture unit of competency and its associated assessment requirements and explain the information contained in each.

Identifies the work context and who the unit applies to.	AHCARB318	Undertake aerial rescue	A statement in the application field identifies important licensing/regulatory requirements.
Prerequisite units must be assessed <u>before</u> the main unit is assessed.	Application	<p>This unit of competency describes the skills and knowledge required to perform an aerial rescue where an injured or trapped climber is safely brought to ground from the tree. It is likely to be undertaken in an emergency situation.</p> <p>The unit applies to individuals who work in arboriculture under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.</p> <p>The arboriculture industry requires that tree rescue work is undertaken according to preferred industry practices (as outlined in the Companion Volume).</p> <p>No licensing, legislative or certification requirements apply to this unit at the time of publication.</p>	
	Prerequisite Unit	<p>The prerequisite units of competency for this unit are:</p> <ul style="list-style-type: none"> • HLTAID003 Provide first aid • AHCARB319 Use arborist climbing techniques. 	
	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. Plan for aerial rescue	1.1 Confirm emergency communication system is working 1.2 Confirm emergency services contact numbers are documented 1.3 Select, prepare and check first aid equipment and rescue kit 1.4 Position rescue and first aid equipment for easy access 1.5 Clarify own role in rescue situations 1.6 Confirm first aid, rescue personnel and equipment with work team prior to undertaking rescue 1.7 Select, check and use personal protective equipment 1.8 Communicate with work team during operations using agreed communication method for the site and activity being undertaken
2. Assess and respond to an aerial emergency situation	2.1 Follow emergency response protocol according to workplace and industry procedures 2.2 Stop all work activity and ensure other workers are aware of the incident 2.3 Attempt communication with casualty 2.4 Activate emergency plan and request assistance from work team and public according to rescue plan 2.5 Obtain emergency assistance according to rescue plan 2.6 Inspect site and tree for hazards associated with rescue, assess risks and implement controls 2.7 Assess if rescue can be conducted safely within work team capability 2.8 Seek assistance from emergency rescue services when safe rescue is not possible

Elements define the essential outcome of the job task covered in the unit.

Performance criteria specify the performance needed to demonstrate achievement of the element.

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
Writing	<ul style="list-style-type: none"> Accurately record and complete incident reports and workplace records
Oral communication	<ul style="list-style-type: none"> Explain detailed information to emergency services and rescue team Communicate effectively with casualty and with other crew members involved in rescue
Get the work done	<ul style="list-style-type: none"> Accept responsibility and ownership for conducting the rescue, and make decisions on rescue parameters and coordination of others

Foundation skills highlight the skills that are not explicit in the performance criteria, but essential to the job task described in the unit

Assessment requirements

The assessment requirements include:

- **Performance Evidence** – what individuals must do to show that they can competently perform the requirements of the unit of competency, including information about the frequency and/or volume of the tasks to be performed
- **Knowledge Evidence** – what individuals need to know to be able to perform the task effectively
- **Assessment Conditions** – that specify physical conditions, resources, specifications, and relationships that must be in place for the assessment to take place.

Performance evidence describes the practical tasks that must be demonstrated for assessment.

TITLE	Assessment requirements for AHCARB318 Undertake aerial rescue
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 conducted an aerial rescue for each of the following scenarios in a tree that is a minimum of 5 metres in height:</p> <ul style="list-style-type: none"> • a pole top rescue, where the casualty must be safely lowered to the ground without the assistance of other crew members and: <ul style="list-style-type: none"> • is attached within 0.5 metres of the top of the pole • is at least 5 metres from the ground • a pick-off rescue without the assistance of other crew members in which the casualty must: <ul style="list-style-type: none"> • be lifted out of their compromised or non-functioning climbing system • be transferred to be lowered down on the rescuer's system or on another climbing system • be at least 8 metres from the ground • be lifted at least 1 metre prior to beginning descent • a rescue where: <ul style="list-style-type: none"> • the casualty is away from the main trunk of the tree, toward the end of a branch or in a different stem from the primary anchor point • the rope angle between the casualty and the primary anchor point must be at least 30° • the rescuer must either control the movement of the casualty back under the primary anchor point or redirect the casualty's line to bring the casualty directly to the ground. <p>There must also be evidence that the individual has:</p> <ul style="list-style-type: none"> • confirmed resources for emergency rescue, including: <ul style="list-style-type: none"> • communications for emergency services and work team • first aid equipment, personnel, equipment and procedures • emergency rescue and first aid equipment, protocols and procedures • conducted a pre assessment of the rescue, including: <ul style="list-style-type: none"> • attempted communication with casualty 	

Describes the volume of the assessment, i.e. 'is at least 5 metres from the ground'

Knowledge evidence is what individuals need to know to be able to perform the job task effectively.

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"> • preferred industry practices (as outlined in the Companion Volume) for aerial rescue • emergency procedures for aerial rescues, including: <ul style="list-style-type: none"> • planning for the event of an emergency • dealing with emergencies • emergency protocol, including stop work, activate rescue plan, inspect site for tree hazards, delegate crew roles, access tree, install anchor points, reach casualty, lower casualty, and transfer to emergency services • accessing trees in emergency situations • accessing and utilising emergency services • assessing site-specific safety in emergency situations, including: <ul style="list-style-type: none"> • methods for identifying risks • risk control measures • safety and procedures when conducting a rescue near overhead power lines, including: <ul style="list-style-type: none"> • basics of electrocution • power line types and insulation • approach distances and safety zones, voltage and arcing • tools, equipment, personnel and power line contact • personal protective equipment • administering first aid in an aerial rescue environment, including: <ul style="list-style-type: none"> • first aid procedures • contents and use of a first aid kit • first aid in an aerial environment • assessing neck and back injuries and procedures • first aid on the ground following rescue • importance of communication and reassurance of casualty • communications in a rescue situation, including: <ul style="list-style-type: none"> • emergency services communication systems • emergency services contact numbers • work team communication methods 	

Assessment conditions specify the mandatory conditions under which

Assessment Conditions
Assessment of skills must take place under the following conditions:
<ul style="list-style-type: none">• physical conditions:<ul style="list-style-type: none">• the trees in which the types of rescue required for assessment can be demonstrated as stipulated in the performance evidence• resources, equipment and materials:<ul style="list-style-type: none">• full arborist climbing kit• emergency communications equipment• personal protective equipment• first aid and emergency response equipment• specifications:<ul style="list-style-type: none">• workplace and manufacturer instructions for safe operation, cleaning and storing of rescue equipment• preferred industry practices (as outlined in the Companion Volume) for aerial rescue• relationship:<ul style="list-style-type: none">• work team• worker or rescue dummy as stipulated in the performance evidence.
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:
<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.

The mandatory assessor requirements and any other information required for assessment

Arboriculture sector overview

Arborists work in private and government positions to foster the economic, ecological, environmental, health and social benefits of trees and professional tree care. They operate in a range of environments including domestic, commercial, community, rural and natural. Arborists provide professional care and management of trees in conservation and tree preservation roles, tree maintenance, and the diverse operations of vegetation management, power line clearance, professional tree management and urban forestry.

Consulting arborists conduct professional consulting, expert witness, research and academic roles in diagnostic testing, tree assessment, urban forestry and management of trees in utility easements.

The arboriculture industry is dynamic and challenging. Arboriculture is a rapidly evolving industry with many opportunities for rewarding careers and the ability to contribute positively to the liveability of our urban environments.

Workplace health and safety is at the forefront of many aspects of the industry operations.

There are significant high-risk work activities, such as working at heights, working in the vicinity of power lines or working with and in close proximity to machinery. This requires coordination between team members and the operation of equipment with precision and productivity in accordance with workplace systems that foster safe working environments.

A key focus of the industry is the planting and retention of trees within the urban landscape for the positive contributions that trees bring to urban communities, for example, health and wellbeing, economic and environmental benefits. Arborists are currently on the National Skills Needs List and employers are facing severe challenges in attracting skilled staff. It is expected this shortage will continue as result of increased tree planting by many government agencies in the past 15 years.

Industry priorities and expectations

The redesign and development of the arboriculture components in this training package has been driven by industry stakeholders to ensure that the components of the training package are aligned to contemporary job profiles and industry practices.

The quality implementation of the revised qualifications and units of competency is a high priority to address industry needs.

Industry expects the following benefits to flow from the take-up of the revised arboriculture qualifications:

- reduction of industry injuries and deaths
- sustainable employment outcomes at all levels of the industry
- quality training outcomes providing consistency of employment capability
- defined focus on the essential job functions in work practices
- graduates who have achieved industry competency
- increased technical capability of supervisory workers
- foundation skilling for future management job roles
- increase in core industry research in all fields of arboriculture
- evolution of the arboriculture industry from the trades into academic and professional roles
- parity with professionals in comparable industries
- future business opportunities in urban forest planning
- industry recognition within collaborative partnerships.

Impact of revised components

To assist RTOs with the delivery of training and assessment, the arboriculture industry has complemented the AHC Implementation Guide with this industry-specific User Guide.

The high-risk nature of the arboriculture industry demands a high level of:

- specificity within the arboriculture components of the Training Package
- quality training and assessment, and
- compliance with the Standards for RTOs.

The arboriculture industry has an expectation of seamless integration of the above three points in order to achieve quality training outcomes. This User Guide has been developed to provide tailored industry advice to the training system to reflect industry requirements for training and assessment.

To ensure the effective implementation of the new and revised qualifications, RTOs are required by *Standards for Registered Training Organisations (RTOs) 2015*, to validate their training and assessment through their engagement with industry and are encouraged to liaise with peak industry organisations.

This validation process aims to:

- review the outcomes of unpacking the components of the qualifications and provide feedback
- establish the relationship of Performance Evidence and Knowledge Evidence with the Performance Criteria and the implications for training resource development
- clarify the mandatory requirements of the Assessment Conditions and the implications for these assessment events on the knowledge and performance levels required of a candidate
- seek confirmation of delivery and assessment strategies and assessment tools and models of delivery for the qualifications

- ensure that all trainers are familiar with current industry best practice, and that it is applied and demonstrated throughout all training environments
- ensure the Principles of Assessment and Rules of Evidence are met.

RTOs delivering the arboriculture qualifications must have the mandatory resources to support delivery and assessment. These mandatory requirements are listed in the Assessment Conditions in each unit of competency.

Some of the qualifications may present staffing challenges for RTOs. RTOs will need to review the vocational competencies and currency of their trainers and assessors. They may also need to up-skill existing staff, or employ additional staff who possess the vocational competence, to deliver and assess the new training components. See 'Maintaining Currency' section later in the guide.

RTOs will need to consider the potential high-risk nature of arboriculture work when formulating their delivery and assessment strategies.

This guide will elaborate on each of these topics in a little more detail.

Arboriculture qualifications

The Arboriculture sector have identified 5 specific qualifications, each providing a distinct employment outcome.

Qualification Code	Qualification Title	Employment outcome
AHC20520	Certificate II in Arboriculture	Ground-based tree workers. Entry level qualification for new entrants into the arboriculture industry that is suitable for a pre-apprenticeship or a senior secondary school based program
AHC30820	Certificate III in Arboriculture	Trade-level arborists with at least one specialisation
AHC50520	Diploma of Arboriculture	Senior arborist employed as consultants or manager for roles including: Consulting arborists, tree managers and urban forest managers
AHC60520	Advanced Diploma of Arboriculture	Specialist consulting arborists including: Senior consulting arborist and senior tree managers
AHC80120	Graduate Diploma of Arboriculture	Specialist in arboriculture and research including:

		Specialist senior consulting arborists, senior technical and research arborists and senior tree manager
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AHC20520 Certificate II in Arboriculture

This qualification provides individuals with the skills and knowledge required for ground-based tree workers, which are entry level roles in the arboriculture industry. These workers carry out routine work under supervision in tree maintenance and tree removal environments, including:

- assisting arborists with ground-based activities
- supporting the dismantling and disposal of trees and tree stumps
- safe operation of commonly used arborist equipment and machinery including chainsaws, stump grinders and chippers
- basic support of applying treatments to trees
- performing ground-based tree felling and dismantling work.

AHC20520 Certificate II in Arboriculture has no entry requirements and is suitable as a pre-apprenticeship or school-based program for introduction to the arboriculture industry. There is no expectation that commencement of the Certificate III requires completion of the Certificate II. However, where individuals are unsure of their career pathway, completion of the Certificate II is an option to ascertain their interest in the industry before embarking on a Certificate III apprenticeship/traineeship which they may not subsequently complete.

AHC30820 Certificate III in Arboriculture

The qualification provides individuals with a broad range of knowledge and skills to undertake trade-level roles including tree care, maintenance and removal activities for the arboriculture industry, and as a pathway for further learning required for management and consulting roles in the industry.

The operational roles require workers to apply their technical skills and knowledge in varied contexts for different trees and in different landscape environments using techniques to access trees and perform pruning and removal activities safely following industry standards.

As with the Certificate II in Arboriculture there are no entry requirements. Where individuals show a clear interest in employment in the arboriculture industry they should be encouraged to seek and commence an apprenticeship/traineeship or direct entry into the Certificate III in arboriculture.

The Certificate III provides specialisations to enable individuals to focus on areas of the trade that they or their employer deem important to their business. The specialisations are:

- Certificate III in Arboriculture (Climbing arborist)
- Certificate III in Arboriculture (Crane specialist)
- Certificate III in Arboriculture (Elevated Work Platform arborist)
- Certificate III in Arboriculture (Environmental arborist)
- Certificate III in Arboriculture (Arborist works coordinator)

Selecting specialisations

RTOs should discuss specialisations with individuals at the time of developing the contract of training.

The arboriculture industry is, by its very nature, involved with the culture of trees and this generally involves the need to work in the canopy of trees above the ground.

Some tree work can be performed as a ground-based arborist particularly in support of the arborists working aloft in the canopy. This ground-based tree work typically aligns to Certificate II trained workers.

Where apprenticeships or traineeships are commencing, the individual's training plan should be negotiated between the employer, employee and RTO as part of the enrolment process. In particular, the individual's specialisation or specialisations and elective units should be selected in agreement by all three parties. At least one of the following specialisations must be selected, and as many as three specialisations can be achieved as part of the Certificate III:

- Certificate III in Arboriculture (Climbing arborist)
- Certificate III in Arboriculture (Crane specialist)
- Certificate III in Arboriculture (Elevated Work Platform – EWP)
- Certificate III in Arboriculture (Environmental arborist)
- Certificate III in Arboriculture (Arborist works coordinator)

The first four of these specialisations are focussed on working aloft in the tree canopy. They assume that the individual will be comfortable and physically capable of climbing trees to perform work within the canopy of trees.

Climbing arborist

The **climbing arborist** will use specialist climbing equipment including wearing harnesses and other safety equipment to attach and navigate themselves through a tree canopy using ropes. This will require the individual to possess a degree of confidence and the physical and mental capacity to perform well. A fear of height and or a physical impediment may restrict the ability of the individual to perform well in these environments and this specialisation may not be a good selection for these individuals.

Elevated Work Platform (EWP) arborist

The **EWP arborist** operates above the ground but requires less physicality, since access to the tree using the EWP will negate much of the physical challenge faced by the climbing arborist. However, working above the ground still requires the mental attributes best suited to individuals who do not fear heights.

Environmental arborist

The **environmental arborist** is a new specialisation of climbing arborist who work in the canopy of trees to create, install and maintain habitat and refuges for wildlife. This specialisation is suited to the arborist whose goal is to focus on conservation and ecology aspects of the environment and the manipulation of trees to assist in this endeavour.

Crane arborist

The **crane arborist** is a new specialisation designed for the arborist who is permitted to access trees and/or dismantle trees using a crane. This specialisation is an extension to the climbing arborist or the EWP arborist who work at heights.

Arborist works coordinator

The **arborist works coordinator** specialisation has been designed to support workers transferring from an arboriculture-related field, such as forestry, or for those who have developed skills as a ground-based arborist either with a Certificate II in Arboriculture or with significant experience working in the industry. Employers should consider the capabilities and experience of the individual before recommending this specialisation to employees.

While it is possible to select this specialisation without climbing or EWP skills, a key concern raised by industry in the development of this specialisation was the need for individuals to have a thorough understanding of all aspects of arboriculture, including the intricacies of safe climbing and EWP operation, in order to comply with the supervisory requirements of this specialisation.

RTOs should consider the capability and employability of individuals before recommending direct enrolment into this specialisation, particularly for school leavers who will lack work experience, technical knowledge and practical skills to supplement their competency development. Employers will be seeking arborist works coordinators who possess a solid foundation in most aspects of arboriculture when employing someone at this level. Industry therefore strongly recommends that RTOs only deliver the units in any of the specialisations after a learner has achieved competence in the nine core units of the Certificate III. This advice is provided to allow adequate time for individuals to develop important arborist skills and build an understanding of safe practices on the job. More advice is provided on the recommended sequencing of training later in this User Guide.

AHC50520 Diploma of Arboriculture

This qualification provides individuals with a broad range of specialised knowledge and skills in varied contexts to undertake manager and technical consulting roles in the arboriculture industry and as a pathway for further learning required for specialist technical consulting roles in the industry.

The tree manager and consultants' roles include a range of specialised skilled and varied activities including:

- assessing trees
- producing reports and documentation attesting to the health and risks related to trees
- diagnosing tree disorders and defects
- documenting and communicating recommendations for tree establishment, canopy management, tree remediation, environmental and habitat development and tree removals
- operating within a legislative and regulatory framework.

AHC50520 Diploma of Arboriculture is a managerial-level qualification for the arboriculture industry and provides graduates with a pathway into *AHC60520 Advanced diploma in arboriculture* and tertiary qualifications in horticulture and the environment for greater specialisation or academic research.

The Diploma of Arboriculture is a post-trade qualification into management and/or consulting arborist roles. This requires the individual to have a fundamental understanding of arboriculture and its practices.

Industry recognises that there are individuals from related horticultural fields who may wish to enter this qualification. To assist these learners to succeed, entry requirements

have been added to the diploma, which are the three units of competency below or their equivalent:

- *AHCARB314 Implement a tree maintenance program,*
- *AHCARB316 Perform pruning operations*
- *AHCARB323 Identify trees.*

Industry also recommended that individuals have a level of understanding of the complexity of the industry and suggest RTOs advise entrants that they can enhance the outcomes of their studies by broadening their understanding and skills in the applied art of arboriculture by any of the following:

- gaining additional hands on experience while completing the three units above that form the entry requirement for the Diploma
- seek work experience with an arborist during their Diploma studies
- seek part-time employment in the sector while completing the Diploma.

It should be noted that the three units above are in the core of the revised Certificate III and have also been packaged in to the new *AHCSS00104 Introduction to Arboriculture Skill Set*. People undertaking this skill set from non-arboriculture backgrounds may choose to enrol in the Diploma or decide to complete the Certificate III prior to embarking on the Diploma. Whichever pathway an individual decides to take, industry will now have the confidence that these individuals have the necessary skills and experience to complete the Diploma and become competent consultants or tree managers.

AHC60520 Advanced Diploma of Arboriculture

This qualification provides individuals with a broad range of specialised knowledge and skills in varied contexts to undertake senior manager and specialist consulting roles in the arboriculture industry and as a pathway for further learning required for specialist technical consulting and legal expertise in the industry.

The specialist consulting and expertise roles include a range of skilled and varied activities including:

- understanding and interpreting tree and forest diagnostic tests
- managing and improving urban forest performance
- providing expert testimony within a legal framework
- planning and managing trees in a range of contexts.

These skills are supplemented with units of competency that support these roles and activities by providing managerial competencies in business planning, strategic development and contract management and technical competence in basic field research, specialist arboriculture practices and technologies.

AHC60520 Advanced Diploma of Arboriculture is a senior managerial and consulting qualification and provides graduates with a pathway into graduate studies at a tertiary qualification level in arboriculture, earth sciences and environmental studies for greater specialisation or academic research.

The qualification has an entry requirement of a diploma in arboriculture or a diploma or higher qualification in a field related to arboriculture. Refer to the section below for more information on related fields for the entry requirements of the AQF level 6 and 8 qualifications.

Entry into the qualification also requires at least 2 years current work experience as a consulting arborist or a municipal tree manager.

AHC80120 Graduate Diploma of Arboriculture

This qualification provides individuals with a narrow specific range of highly specialised skills in a discipline selected by the individual. Graduates of this qualification will conduct research and development to further advance the knowledge base of the arboriculture industry.

Individuals with *AHC80120 Graduate Diploma of Arboriculture* will employ specialised skills in researching aspects of arboriculture and convey and communicate the researched outcomes to the broader industry through a range of mechanisms and job roles including:

- extension services supporting the arboriculture industry
- research reports and papers distributed through research organisations
- presentations at conferences and symposia
- publication in peer reviewed and referenced industry journals.

AHC80120 Graduate Diploma of Arboriculture is an advanced research qualification for the arboriculture industry and may provide graduates with a pathway into tertiary qualifications in horticulture, environmental, and earth sciences for greater specialisation or academic research at PhD level.

The qualification has the following entry requirements:

- an advanced diploma of arboriculture
- or
- an advanced diploma or higher qualification in a field related to arboriculture
 - plus 3 years current work experience as senior consulting arborist or a municipal tree manager.

Related fields of study

For the AQF level 6 and 8 qualifications in arboriculture there is the potential to meet the entry requirements by completion of a qualification of a related field of study to arboriculture.

The following are examples, but are not limited to, related fields of study deemed applicable for entry into the qualifications including:

- agronomy
- arboriculture
- biomechanics
- economics
- engineering
- entomology
- forestry
- mycology
- soil science
- conservation and land management
- biology
- botany
- environmental science
- ecology
- landscape architecture

Summary of entry requirements for qualifications

AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 5.0 qualifications with entry requirements		
Qualification	Entry requirements	Reason for inclusion.
AHC50520 Diploma of Arboriculture	To commence this qualification an individual must have achieved the following units of competency or their equivalent: <ul style="list-style-type: none"> • AHCARB314 Implement a tree maintenance program, • AHCARB316 Perform pruning operations • AHCARB323 Identify trees. 	Industry stated that this qualification required essential foundation skills and knowledge before commencement.
AHC60520 Advanced Diploma of Arboriculture	Prior to commencing the qualification, an individual must have: <ul style="list-style-type: none"> • a diploma of arboriculture or <ul style="list-style-type: none"> • a diploma or higher qualification in a field related to arboriculture plus 2 years current work experience as a consulting arborist or a municipal tree manager. 	This qualification builds on specialist skills and knowledge acquired through learning and experience from working in the arboriculture industry.
AHC80120 Graduate Diploma of Arboriculture	Prior to commencing the qualification, an individual must have: <ul style="list-style-type: none"> • an advanced diploma of arboriculture or <ul style="list-style-type: none"> • an advanced diploma or higher qualification in a field related to arboriculture plus 3 years current work experience as senior consulting arborist or a municipal tree manager. 	This is a post graduate qualification that builds on prior experiences and studies in a related discipline.

Skill sets

Three skill sets were also developed for the Arboriculture industry to provide additional methods of upskilling existing workers or provide a pathway for new entrants into the arboriculture industry. These skills sets are:

- *AHCSS00103 Basic Tree Worker Skill Set*
- *AHCSS00104 Introduction to Arboriculture Skill Set*
- *AHCSS00105 Arborist Works Coordinator Skill Set*

AHCSS00103 Basic Tree Worker Skill Set

This skill set is designed to provide individuals with a pathway to enter the arboriculture sector without a formal qualification. It is suitable for individuals seeking to gain employment in entry level work in the industry. The skill set provides the basic requirements to safely perform a range of common ground-based arborist activities using commonly available equipment and techniques.

AHCSS00104 Introduction to Arboriculture Skill Set

This skill set is designed to provide non-arborists with the minimum introductory skills and knowledge required for entry into *AHC50520 Diploma of Arboriculture*. Completion of this skill set provides individuals with a strong basic knowledge of trees and their identification, the maintenance requirements of trees and the practicalities of pruning and shaping of trees and related physiological responses.

AHCSS00105 Arborist Works Coordinator Skill Set

This skill set provides qualified arborists with the practical skills and knowledge required to function as an arborist works coordinator on an arboriculture work site to ensure pruning operations are performed according to specifications, audit tree operations and conduct and evaluate the work site safety.

Legislative environment

Compliance with federal, state and/or territory legislation is a significant requirement for all enterprises. The arboriculture industry is no exception and is affected by a range of legislative requirements for the ownership and impact of trees in our society and may involve state, territory or local government regulations involving the tree for their heritage, cultural, environmental, conservation and aesthetic values.

The application of some arboriculture units of competency includes the following statement:

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

It is important that when implementing training and assessment in different environments that the individuals are made aware of the significance and regulatory compliance requirements for the trees on which they are working. Users should check with the relevant authority for any legislative requirements that apply before commencing tree work or treatments.

Health and safety

The arboriculture industry is a work sector with high occupational risks and therefore, health and safety training is key to reducing these risks. Work health and safety requirements have been incorporated at a unit of competency level. The term 'work health and safety' (lower case) is used throughout the AHC Training Package to allow application of National Model WHS Legislation or individual state based Occupational Health and Safety (OHS) legislation as required.

The term Job Safety Analysis or JSA has been adopted consistently in the arboriculture units of competency to indicate the need to conduct and document a safety analysis on each site prior to commencement of work. This approach ensures that as the job site changes due to changed working conditions, for example the removal of trees or the accumulation of debris from work performed, that the site is constantly monitored, and safe working conditions are monitored and maintained.

It is therefore recommended that at the beginning of each day, a JSA is performed by the individuals to emphasise the need for safety and prepare them for safe operation, consistent with industry standards, while training or being assessed.

Trainers and assessor competency

RTOs and their trainers and assessors must meet the requirements of the *Standards for Registered Training Organisations (RTOs) 2015*.

The arboriculture training products were developed and reviewed with extensive industry consultation. This consultation confirmed that industry expects trainers and assessors to have current skills and knowledge relevant to the arboriculture industry sector.

The assessor requirements for an arboriculture (coded AHCARB) unit of competency are stated explicitly in the Assessment Conditions of the units Assessment Requirements:

“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”

RTOs are responsible for ensuring that trainers and assessors maintain their currency through supporting professional development for:

- learning and assessment competence in vocational education and training
- and
- vocational competence in the field in which they train and/or assess.

Industry recognises that RTOs are best placed to upskill their trainers and assessors in the profession of teaching, learning and assessment.

However, vocational competency is equally important in order to ensure graduates are competent in current industry skills and practices.

Training and assessor upskilling

The arboriculture industry is constantly changing in the methods and technologies required to perform work. Trainers and assessors who are no longer active in the industry as professional operators or consultants, may soon find their skills and knowledge are no longer reflective of current practices and may be delivering substandard training or assessing to an outdated performance level.

The arboriculture industry has identified a lack of competence and currency in the arboriculture trainer/assessor cohort as being a significant and ongoing risk to high quality training and compliance with industry expectations. RTOs are responsible for ensuring their trainers and assessors meet these industry expectations.

Maintaining technical currency

The arboriculture industry provides the following advice for trainers and assessors seeking to upskill and maintain their performance in their technical competency.

It is recommended that all trainers and assessors delivering arboriculture units of competency should seek professional development in their technical skills and knowledge at least annually.

Professional development may take many forms and can be undertaken in the arboriculture industry in the various ways. Below are some suggestions from industry.

- undertake a minimum two weeks 'return to industry' working in either government or private enterprise to hone their skills and experience new technology.
- demonstrations and/or training on new equipment by manufacturers and suppliers.
- trainers and assessors of Arboriculture qualifications at AQF levels 5 to 8 should attend at least one advanced arboriculture training event or conference each year to gain exposure to advances in arboriculture.
- trainers and assessors of new training components, such as a new unit of competency, should seek industry experience or external independent training and assessment in the new unit before delivery of the unit to learners. The RTO may wish to enrol the trainer and have the training recognised through formal or informal assessment models.
- invite and promote guest speakers and trainers from leading training organisations, professional associations, research organisations and businesses where the learners, trainers and assessors gain valuable insights.

Professional development may also take the form of methods such as:

- membership of professional arboriculture associations (see list in Appendix A), Memberships usually provide newsletters and magazines and the opportunity to attend training events.
- volunteer to assist professional associations in their training events, competitions and other activities that promote and develop new technologies and standards.
- subscriptions to arboriculture magazines, websites and social media sites to ensure access to current and leading technologies and methods.

Applying for professional development

It is usual to make an application to the organisation for professional development support and funding when there is a cost or a disruption to normal duties. Therefore, it is important that the applicant can justify the need for such development work.

When seeking professional development, it is necessary to demonstrate the need. This may be difficult if a current skills assessment has not been made to identify the skills shortfalls, so this should be the first step.

When researching current and future technologies in the Arboriculture industry it is likely that deficiencies will be found in experiences and understanding. It is helpful to discuss current trends and technologies with employers, arboriculture associations, colleagues and in many instances students who may work in the industry, to help identify what development is needed and to help formulate a rationale for the application.

Once the development needs have been identified, the process for the application should be followed. Informal methods are normally easier to arrange where cost or disruption to work is minimal. Formal professional development will typically involve costs related to travel, work placement. Formal studies may cause disruption to everyday work and is likely to impact on the organisation as an additional cost, either in loss of training days or temporary replacement of staff.

A key consideration in the application is to document the benefits of the professional development to the organisation. This may simply be improvement to delivery and assessment with relevant and current industry best practice. It may also be important to demonstrate how the professional development can contribute to the ongoing benefit of other trainers and assessors through passing on the knowledge and skills acquired.

Each organisation will have their own formal procedures and processes for applying for professional development. It is therefore important that these procedures are followed.

In short, the process usually requires the applicant to:

- identify skills deficiencies and relate them back to the training and assessment work.
- qualify shortfalls with supporting documentation such as letters of support from industry or prominent members of staff.
- determine the professional development activity and document the benefits to personal and organisational improvements.
- quantify the consequence of the professional development activity in terms of cost and time absence from duties or other disruptions; and propose strategies to help mitigate these issues (e.g. undertake professional development during non-teaching/assessment time).
- seek out and follow the organisations professional development applications process.

States, territories and the federal government all make grants available regularly throughout the year for many types of professional development. Applications for these grants are likely to require organisational support. If a cost effective solution for professional development has been identified it is more likely to gain support from senior managers. A simple web search should find a range of grants available to support the professional development aims.

Volume of learning

Training and assessment are distinctly different processes. Training is required for individuals to build their skills and knowledge prior to assessment. RTOs are required to provide adequate training, as stated in ASQA's *User's Guide to the Standards for RTOs 2015*, which includes:

- the development and implementation of approaches, including the provision and access to suitable resources, facilities and trainers, that ensure individuals gain all relevant skills and knowledge
- the RTO is required to comply with the Australian Qualifications Framework (AQF) in applying the volume of learning to training programs and must develop and implement strategies for training and assessment that are consistent with the AQF.

The recommended volume of learning for the arboriculture qualifications are set out in the following table:

Qualification	AQF Volume of learning	Recommended volume of learning
AHC20520 Certificate II in Arboriculture	The volume of learning of a Certificate II is typically 0.5 – 1 year	1 year part time vocational school based programs.
AHC30820 Certificate III in Arboriculture	The volume of learning of a Certificate III is typically 1 to 2 years. Up to 4 years may be required to achieve learning the learning outcomes through a program of indentured training/employment	3 years part time as an apprenticeship or traineeship.
AHC50520 Diploma of Arboriculture	The volume of learning of a Diploma is typically 1 – 2 years	Between 1 to 2 years.
AHC60520 Advanced Diploma of Arboriculture	The volume of learning of an Advanced Diploma is typically 1.5 – 2 years	Between 1 to 2 years.
AHC80120 Graduate Diploma of Arboriculture	The volume of learning of a Graduate Diploma is typically 1 – 2 years	Between 1 to 2 years.

RTOs and volume of learning

According to the AQF the volume of learning range is considered to be a starting point for RTOs in determining the 'amount of training' required to deliver a particular qualification.

It is acknowledged that in a competency-based training environment individuals training is not time-based learning, and so it may take longer or shorter periods of time to meet the assessment requirements for competency.

RTOs must be able to identify and explain significant variations from the time periods described in the AQF. The delivery and assessment must ensure that the integrity of the qualification is maintained.

Delivery of training must allow individuals time to absorb the knowledge and to practise the skills required under different conditions and apply the skills and knowledge in varied environments that the 'real world' offers, **before** being assessed.

Training and assessment programs structured to complete quicker than that described in the AQF will require a rationale on how a specific individual or student cohort has the characteristics to achieve the required rigour and depth of training and can meet all of the competency requirements in the shorter timeframe.

Industry expectations for volume of learning

Many arborists transition from other careers and may work in industry for some time before seeking formal training and assessment. Individuals and student cohorts in arboriculture programs could include many experienced workers who require less time to acquire the skills and knowledge and be assessed. However, there are others who require significantly more time for skills and knowledge acquisition before being deemed competent.

Industry has expressed concerns that the outcomes of many qualifications and courses in arboriculture do not meet industry expectations of competency, and that key skill and knowledge components are being poorly delivered. With many high-risk job roles at trade level, and with a per-capita fatality rate up to 37 times the all-industry average, a lack of key skills and an inability to competently perform essential work tasks places graduates at significant risk.

Industry recommends that RTOs consider the following in the developing training and assessment programs that provide sufficient volume of learning to ensure quality outcomes:

- The design of training and assessment programs in arboriculture should consider carefully how they will ensure and justify the integrity of the qualification outcomes if choosing to vary from the time periods described in the AQF.
- Training and assessment modelled on workplace learning or mentorship must ensure that students have time to attain the skills and knowledge required for the units of competency. They must also have access to ongoing workplace mentors and exposure to valid work practices which meet industry expectations for safety, competence and current practices.

Industry engagement

The Standards for Registered Training Organisations (RTOs) (2015) require industry engagement through Standard 1 Clause 1.5 and 1.6.

Industry engagement describes the ongoing dialogue between RTOs and industry to ensure that training reflects the needs of industry and that outcomes align with industry expectations for competency.

Industry engagement also provides for the review of training and assessment materials, trainers and assessors and their relevance and currency.

Industry engagement is an ongoing activity and evidence for engagement must be maintained to demonstrate that engagement has occurred.

Industry engagement and validation

It is critical that robust and ongoing industry engagement is conducted by RTOs delivering arboriculture qualifications and training.

The arboriculture industry recommends that **independent** industry representatives be consulted when seeking validation or review of training and assessment practices. Validating training and assessment materials and practices with representatives from independent industry bodies also ensures that the RTO will meet industry demand for local skills providing stronger opportunities for the employment of graduates.

RTOs delivering AHCARB units of competency should treat this requirement for industry engagement and validation as being an opportunity to:

- ensure the accuracy, currency and relevance of training and assessment resources and materials
- ensure the currency and competency of trainers who are delivering and assessing AHCARB units of competency and arrange professional development
- achieve compliance with the *Standards for Registered Training Organisations (RTOs) 2015*.

See **Appendix A** for a list of arboriculture industry organisations who may be able to assist in locating industry representatives and organisations who are prepared to participate in validation activities.

Training Delivery

Integrated/holistic delivery

The arboriculture qualifications have units of competency that may be integrated (clustered) into a holistic delivery and assessment strategy which may achieve the following:

- provide a more realistic assessment of actual job functions, as separate smaller job tasks can be coordinated into a sequenced flow of work activities
- is a more efficient way of delivering and assessing a number of units, compared with a unit-by-unit approach
- avoids delivery and assessment of repetitious content and associated recordkeeping.

Many arboriculture units of competency contain common Performance Criteria (PC), Performance Evidence (PE) and Knowledge Evidence (KE) requirements. Combining these related units of competency into a cluster may provide delivery and assessment efficiencies and add relevance to the learner.

The units of competency to be clustered will depend on those in which the individual or cohort of students are enrolled and the sequence of planned delivery. See Recommended Sequencing later in the guide.

Clustering can be based on practical skills development such as the mechanical and machinery units, or the knowledge evidence may also provide a focus for clustered delivery where the underpinning knowledge for trees and their biological processes are often common.

For example, the following core units of competency may form clusters in delivery in the Certificate II in Arboriculture:

Common mechanical principles for heavy machinery:

- *AHCARB212 Operate and maintain stump grinding machines*
- *FWPHAR2206 Operate a mobile chipper/mulcher.*

Common tree biological principles and knowledge:

- *AHCARB214 Recognise trees*
- *AHCARB211 Apply treatments to trees.*

Common pruning activities:

- *AHCARB316 Perform pruning operations*
- *FWPCOT3238 Operate a pole saw.*

Common tree felling and ground-based chainsaw work:

- *FWPCOT2236 Fall trees manually (basic)*
- *FWPCOT2237 Maintain chainsaws*
- *FWPCOT2239 Trim and cut felled trees.*

Each cluster can be structured into a job activity and delivered as a project with delivery and assessment combined into the project outcomes.

These are only simple examples to illustrate how integrated or holistic delivery and assessment can be structured.

Prerequisites for units of competency

Some arboriculture units of competency have prerequisite units. A prerequisite unit is a unit in which the candidate must be deemed competent in **before** the determination of competency in the unit that lists the prerequisite.

The following arboriculture units of competency have prerequisites that must be delivered, assessed and signed off on before the unit of competency for which the prerequisites apply.

AHCARB318 Undertake aerial rescue	HLTAID003 Provide first aid AHCARB319 Use arborists climbing techniques
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AHCARB324 Use cranes to access and dismantle trees	CPCCDO3011A Perform dogging and CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry
AHCARB809 Develop an urban forest management framework	AHCARB806 Research urban forest performance
AHCARB810 Analyse edaphic interactions of trees and structures	AHCARB804 Analyse tree structure and biomechanics

For example, the unit, *AHCARB318 Undertake aerial rescue* has two prerequisites: *AHCARB319 Use Arborist Climbing Techniques* and *HLTAID003 Provide first aid*.

Both AHCARB units have common assessment requirements for tree inspection, preparation for an emergency, equipment and PPE preparation.

It is acceptable to gather evidence for use in both units as long as *AHCARB319 Use Arborist Climbing Techniques* (the prerequisite), is fully completed and assessed for competence, prior to the final assessment for competence of *AHCARB318 Undertake aerial rescue*.

During this process, numerous performance assessment requirements for both units can be met and practical assessment components can be undertaken, such as the completion of site setup and preparations to conduct climbing work.

Recommended sequencing

The sequencing for the delivery and assessment of units of competency are not mandated but consideration of sequencing is important to ensure learners are able to grasp the concepts required in the foundation units before progressing to more advanced skills and knowledge.

The arboriculture industry recommends the following sequencing:

Sequencing delivery for the Certificate III in Arboriculture units

The Arboriculture Industry strongly recommend that **no specialisation** should be assessed until the **core units have been achieved**. This ensures that individuals have a good grasp of the fundamentals before they are required to pursue more complex tasks.

AHCARB324 Use cranes to access and dismantle trees.

The unit also has *CPCCDO3011A Perform dogging* as a prerequisite, which in turn has *CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry* as a prerequisite. Therefore, *AHCARB324 Use cranes to access and dismantle trees* can only be assessed after these two CPC units have been achieved.

Industry strongly recommends that *AHCARB324 Use cranes to access and dismantle trees* be trained and assessed at the conclusion of any one of the following specialisations:

Climbing specialist:

- *AHCARB317 Dismantle trees*
- *AHCARB318 Undertake aerial rescue*
- *AHCARB319 Use arborist climbing techniques*

or

Elevated Work Platform (EWP) specialist:

- *AHCARB317 Dismantle trees*
- *TLILIC0005 Licence to operate a boom-type elevating work platform (boom length 11 metres or more)*
- *UETDRRF03B Perform EWP rescue (with HLTAID001 Provide cardiopulmonary resuscitation)*
- *UETDRRF08B Perform EWP controlled descent escape*

Sequencing delivery of AHCARB317 Dismantle trees

The performance evidence of *AHCARB317 Dismantle trees* requires the arborist to access the tree in order to perform the outcomes required for assessment.

This infers that before *AHCARB317 Dismantle trees* commences, competency has been met by the individual for either:

- *AHCARB319 Use arborist climbing techniques*

or

- *TLILIC0005 Licence to operate a boom-type elevating work platform (boom length 11 metres or more)*

Sequencing issue for the Arborist Works Coordinator Specialisation

As discussed earlier the arborist works coordinator specialisation is a supervisory role and is generally designed for individuals who may be entering the arboriculture sector from a related field e.g. forest worker or those who are not qualified but have prior experience in this sector. (See Certificate III in Arboriculture for more detail).

The specialisation units of competency include three units of competency that reflect AQF level 4:

- *AHCARB407 Supervise and audit tree operations*
- *AHCARB408 Perform ground-based tree defect evaluation*
- *AHCARB409 Conduct a safety audit*

These units of competency require the knowledge and skills of many units of competency that reflect AQF level 3, and related experience working in the arboriculture environment to be effectively assessed.

This specialisation should not be sequenced for delivery until successful completion of the core units of competency.

Sequencing of delivery for AHCARB513 Examine and assess trees

The unit *AHCARB513 Examine and assess trees* has a requirement that individuals should be able to identify trees and assess tree health in Element 1.

It is recommended that before commencing *AHCARB513 Examine and assess trees* that:

- *AHCARB514 Diagnose tree diseases*
and
- *AHCARB508 Identify, select and specify trees*

are completed first or are studied concurrently to gain the most out of this unit of competency.

General comments on selected units of competency

AHCARB318 Undertake aerial rescue

Industry received feedback that *AHCARB318 Undertake aerial rescue* is an important unit that should have a time limit and that a refresher course should be mandated by the industry.

While this is beyond the scope of the current training package, industry considered that RTOs may offer this unit as a refresher course with greatly reduced delivery to help the industry maintain a safe working environment.

AHCARB316 Perform pruning operations

This unit of competency does not require climbing or EWP in order to develop the skills required to successfully complete the assessment requirements. It is accepted that accessing the tree canopy may be required by non-climbing or non-EWP arborists in order to demonstrate competency.

It is common practice to use pole saws and EWP equipment of less than 11 metres to perform tree pruning operations and this equipment should be made available to individuals where the height of the tree demands working above ground. Adequate training in the use of this equipment is imperative if they are to be used.

AHCARB408 Perform ground-based tree defect evaluation

Industry recommend that at least one of the tree defect evaluation reports required in the performance evidence be assessed by, or performed in the presence of, a consulting arborist to ensure current practices are being followed and the standard of work performed meet industry best practice.

Assessment of AHCARB units of competency

Assessment methods

Units of competency and assessment requirements do not specify the method of assessment to be used to collect evidence. Assessment methods are determined by an RTO and its assessors when designing their training and assessment strategy, which is validated by industry through the RTO's industry engagement process.

RTOs must select the most appropriate method for collecting performance evidence, which may include direct observation, supplementary evidence from supervisors and/or challenge tests.

Knowledge evidence can be assessed in several ways, including through oral questioning, or through written assessment.

Log books

Log books are no longer required in the arboriculture sector as part of the assessment process. RTOs are responsible for monitoring a trainee's performance during training and must provide sufficient practice for them to develop competency. The number of hours accumulated in order to demonstrate competence is immaterial since trainees will progress towards competency at their own rate.

It is understood that time and practice hones the skills of trainees and that sufficient time for practice should be provided by the training organisation, which is particularly true for those who are **not** employed. Time for practice for trainees/apprentices with a contract of employment should be provided on the job as a condition of their normal work.

Recognition of Prior Learning (RPL)

Where an individual has the required skills and experience to undertake an RPL assessment the RTO must ensure that the candidate provides sufficient, valid, current and authentic evidence to address requirements specified in the performance and knowledge evidence.

RTOs will need to undertake verification processes to ensure the evidence provided by the candidate is authentic and current. Challenge tests and knowledge assessments are recommended to support and confirm evidence supplied by the candidate.

Assessment requirements

All units covered by this User Guide are in the template required to meet the *Standards for Training Packages 2012*. The template clearly specifies required **Performance Evidence** and **Knowledge Evidence**.

Wording to specify volume and/or frequency requirements in the performance evidence for arboriculture units is included in each unit of competency and must be adhered to as part of the assessment.

The **assessment conditions** section of the unit specifies the conditions under which the assessment must take place and generally covers:

- physical conditions
- resources, equipment and materials
- specifications
- relationships (internal/external)

- timeframes.

Code of Practice for Arboriculture and Vegetation Management.

The industry is currently in consultation with Safe Work Australia with the aim to create a Code of Practice for Arboriculture and Vegetation Management. In the meantime, the industry have identified a series of preferred industry practices. Examples of documents used by industry to establish these national industry standards include:

- AS4373 - 2007 Pruning of amenity trees as published by Australian Standards (AS)
- Guide to managing risks of tree trimming and removal work as published by Safe Work Australia.
- Minimum Industry Standard (MIS) - MIS308 Tree Pruning as published by Arboriculture Australia Ltd.

Preferred industry practices

Some arboriculture units of competency refer to specific Australian Standards (AS), (see information below). There is also a set of industry standards recognised by the arboriculture industry known as the Minimum Industry Standards (MISs), see table below. These are standards that have completed an industry validation process and are recognised nationally by the arboriculture industry.

The MISs are administered by Arboriculture Australia (the national peak body) but were developed in partnership with all of the State and Territory industry bodies. The MISs have been reviewed and validated by the industry sector and are a representation of the minimum standard expected for a task; however, they are not a comprehensive list of methods and/or equipment to use.

The MISs make a useful resource for training and it may be relevant for each student to possess copies of the MISs for each unit, where an MIS exists for that activity. Please see the table below.

MISs are available from Arboriculture Australia, selected state and territory organisations, and selected arboriculture equipment retailers and suppliers. Applicable MISs are available at no charge for arboriculture students. Contact Arboriculture Australia (see Appendix A) for further details.

MISs and units of competency

A key driver for the development of the MISs is their use to support training aligned to the arboriculture industry sector-specific units of competency. Using the MISs in training of these units offers the following benefits:

- Standardisation and normalisation of equipment, techniques, terminology and work practices
- Standardisation of outcomes for arboriculture training.

In developing a training and assessment strategy for each unit of competency, the Minimum Industry Standards may be used as a supplementary guide for industry terminology, practices and norms. Terminology and practices delivered in training and in

training materials should align with those described in the relevant MIS. RTOs may use the relevant MIS document as a supplementary guide for industry expectations when conducting training or designing assessment instruments.

It should be noted that techniques and/or equipment should be taught and/or assessed as appropriate and according to acceptable preferred industry practices and the unit of competency's Assessment Requirements.

Current list of Minimum industry standards (MIS) and units where relevant

MIS Code and title	Units where relevant
MIS300 Safe Tree Work	AHCARB213 Perform ground-based rigging AHCARB316 Perform pruning operations AHCARB317 Dismantle Trees AHCARB319 Use arborist climbing techniques AHCARB322 Access tree for inspection AHCARB324 Use cranes to access and dismantle trees
MIS301 Arborist Knots	AHCARB213 Perform ground-based rigging AHCARB317 Dismantle Trees AHCARB319 Use arborist climbing techniques AHCARB322 Access tree for inspection
MIS302 Arborist Ropes	AHCARB213 Perform ground-based rigging AHCARB317 Dismantle Trees AHCARB319 Use arborist climbing techniques AHCARB322 Access tree for inspection
MIS303 Tree Dismantling	AHCARB213 Perform ground-based rigging AHCARB317 Dismantle Trees AHCARB324 Use cranes to access and dismantle trees
MIS304 Aerial Rescue	AHCARB318 Undertake aerial rescue
MIS305 Tree Climbing	AHCARB317 Dismantle Trees AHCARB319 Use arborist climbing techniques AHCARB322 Access tree for inspection (The basics of this MIS only)
MIS306 Tree Inspection for Access and Work	AHCARB315 Inspect trees for access and work
MIS307 Crane Use for Tree Work	AHCARB324 Use cranes to access and dismantle trees
MIS308 Tree Pruning	AHCARB316 Perform pruning operations AHCARB406 Verify pruning specifications
MIS309 Equipment Inspection	AHCARB409 Conduct a safety audit
MIS310 Tree Support Systems	AHCARB320 Install tree support systems
MIS311 Stump Grinding	AHCARB212 Operate and maintain stump grinding machines
MIS312 Environmental Arboriculture	AHCARB325 Manage trees to create and maintain habitat refuges
MIS313 Tree Health and Maintenance	AHCARB314 Implement a tree maintenance program
MIS314 Utility Tree Work	Not applicable to AHCARB units

MIS Code and title	Units where relevant
MIS315 Chainsaw Operation and Tree Falling	FWPCOT2237 Maintain chainsaws FWPCOT2238 Fall trees manually (intermediate) FWPCOT2239 Trim and cut felled trees. AHCARB317 Dismantle Trees
MIS316 Chipper Operation	FWP HAR2206 Operate a mobile chipper/mulcher.
MIS500 Tree Inspection	AHCARB513 Examine and assess trees
MIS501 Tree Risk Assessment	AHCARB408 Perform a ground-based tree defect evaluation AHCARB513 Examine and assess trees
MIS502 Tree Protection	AHCARB509 Develop an arboricultural impact assessment report
MIS503 Arboricultural Reports	AHCARB511 Prepare arborist reports

Australian Standards

The following Australian Standards (AS) are specified in relevant units of competency. The AS codes have been used in the units of competency without their title or date for the sake of brevity and prevent the need to update changes to titles and dates subsequent to Australian Standards reviews.

The AS Codes in the units of competency refer to the following standards at the time of the User Guide publication:

- *AS1891.4 - 2009 Industrial fall-arrest systems and devices Selection, use and maintenance*
- *AS2223 - 1978 Garden soils for domestic use (SAI Archived document)*
- *AS2303 - 2018 Tree stock for landscape use*
- *AS3743 - 2003 Potting Mixes*
- *AS4373 - 2007 Pruning of amenity trees*
- *AS4970 - 2009 Protection of trees on development sites*

Definitions

The following definitions are provided to explain the meaning of selected words and phrases used in the Arboriculture units of competency.

Word or Phrase	Definition/explanation
Climbing irons	See spurs
Climbing spikes	See spurs
DDRT	Dynamic Double Rope Technique (Outdated usage, now MRT)
DRT	Double Rope Technique (Outdated usage, now MRT)
Emergency communications equipment	Any equipment capable of contacting the emergency services. This equipment should be on hand. Generally mobile phones are the accepted equipment. However, in isolated locations this could be UHF, VHF or other citizen band radio equipment.

Word or Phrase	Definition/explanation
Full arborist climbing kit	Refers to ropes, harnesses and climbing equipment required to access and navigate within a tree canopy. While this definition is broad, industry recognises that climbing equipment is based on personal preference. RTOs should have as broad a range of current climbing gear available to expose climbers to the range of possible equipment and performance capabilities.
JSA	For the purpose of this sector the term JSA or Job Safety Analysis has been used as an inclusive statement for job specific hazard assessment and includes site-specific SWMS (Safe work method statements), JSEAs, HACs or other site-specific risk assessment procedures.
MRT	Moving Rope Technique
Spurs	The term 'spurs' has been used throughout these units of competency as a common term used also for climbing spikes, gaffs or climbing irons
SRT	Stationary Rope Technique; also, Single Rope Technique (previous usage)
STOP_AID_AIR_LOWER_TRANSFER	This acronym has been used in MIS304 Aerial Rescue and relates to the following: Stop work, Activate rescue plan, Inspect site for tree hazards, Delegate crew roles, Access tree, Install anchor points, Reach casualty, Lower casualty, Transfer to emergency services
Target	In relation to safety and risk assessment - Target = the thing that's going to get damaged/injured from a falling limb, tree etc.

Appendix A: Arboriculture industry bodies

RTOs are required to validate their training and assessment strategies with industry who can provide unbiased feedback and recommendations on current resource requirements and assessment support.

The following table provides a list of current industry bodies:

Organisation	Detail	Contact
Arboriculture Australia	National peak body representing the industry in Australia	http://trees.org.au/
Australian Capital Tree Community	Industry body for arboriculture in the Australian Capital Territory	https://trees.org.au/about-us/committees/australian-capital-tree-community
Institute of Australian Consulting Arborists	IACA a national organisation for professional Consulting Arborists.	https://www.iaca.org.au/
Northern Territory Arboriculture Association	Industry body for arboriculture in the Northern Territory	https://trees.org.au/about-us/committees/northern-territory-arboriculture-association
Queensland Arboricultural Association	An organisation representing arborists in Queensland with an aim to preserve, protect, maintain and enhance the value of trees	https://qaa.net.au/
South Australia Society of Arborists	SASA is a non-for-profit organisation of professional arborists in South Australia	https://www.facebook.com/pg/South-Australian-Society-of-Arboriculture-407411203421891/about/?ref=page_internal
Tasmanian Arboricultural Organisation (TAO)	Industry body for arboriculture in Tasmania	https://trees.org.au/about-us/committees/tasmanian-arboricultural-organisation
The Tree Guild of Western Australia (TGWA)	An organisation of tree contractors dedicated to improving the professionalism of the tree industry in Western Australia.	http://treeguildwa.asn.au/

Organisation	Detail	Contact
Tree Contractors Association of Australia	A peak body representing tree contractors who's mission is to promote professional tree services of safety, experience and trust	https://www.tcaa.com.au/
Utility Arborist Association Australia	A peak body for the utility arborists structured to represent utility arborists and vegetation managers	https://trees.org.au/about-us/committees/UAAA-committee