

Modification history

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

AHCARB3XX	Use arborist climbing techniques
Application	<p>This unit of competency describes the skills and knowledge required to climb trees with ropes, harnesses and specialist equipment using climbing techniques for the purpose of mobility in the canopy of trees to acquire a safe work position.</p> <p>The unit applies to individuals who work 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 all climbing work is undertaken according to current industry standards, including Minimum Industry Standard MIS305 Tree Climbing and other relevant Minimum Industry Standards</p> <p>No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.</p>
Prerequisite Unit	Nil
Unit Sector	Arboriculture (ARB)

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare site and inspect equipment	1.1 Confirm access to site and scope of works according to workplace procedures 1.2 Undertake a site-specific Job Safety Analysis (JSA) and record and implement control measures according to workplace safety procedures 1.3 Confirm availability of first aid and rescue personnel, equipment and procedures 1.4 Conduct pre-operational preparations and safety checks, on ropes, harnesses, tools and equipment 1.5 Select, check and use personal protective equipment
2. Prepare to access tree	2.1 Inspect tree to determine efficient safe access route and method through discussion with work team 2.2 Select and prepare climbing equipment according to manufacturer instructions, work health and safety regulations and industry standards 2.3 Configure climbing equipment components to form functional tree climbing system appropriate to the access method selected 2.4 Tie, dress, set and finish climbing knots and hitches according to climbing system requirements 2.5 Sharpen, prepare and fit climbing spurs and gaffs for dismantling work 2.6 Conduct pre-climb checks of configured systems to ensure compatibility, safety and function according to climbing system, industry standards and manufacturer instructions

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
3. Access and work position within tree	3.1 Select suitable anchor points according to load bearing and access requirements 3.2 Install low risk anchor points using throw lines 3.3 Inspect and test remotely installed anchor points are secure before use 3.4 Ascend tree and access work positions within tree crown using climbing systems appropriate for work task and tree structure 3.5 Configure and use mechanical devices, pulleys and hitches within functional climbing systems for ascending trees and work positioning 3.6 Access work positions within tree crown by using climbing techniques for both pruning and dismantling work tasks 3.7 Communicate with work team during operations according to work site and environmental conditions using methods agreed with work team 3.8 Observe and maintain safe clearance from hazards and climbing and rigging equipment 3.9 Maintain awareness and clearances for avoiding electrical power lines according to workplace safety procedures
4. Descend from tree	4.1 Descend tree using climbing equipment in a controlled manner 4.2 Remove all climbing equipment safely in a controlled manner according to manufacturer instructions 4.3 Inspect, clean, maintain, and store climbing and safety equipment according to manufacturer instructions

Foundation Skills

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

Skill	Description
Writing	<ul style="list-style-type: none"> Accurately complete organisational documents including Job Safety Analysis and records using clear language, correct spelling, grammar and industry terminology

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB3XX Use arborist climbing techniques	AHCARB307 Undertake advanced tree climbing and AHCARB312 Use Standard climbing techniques	Redesigned unit combining AHCARB307 Undertake advanced tree climbing and AHCARB312 Use Standard climbing techniques Title changed to reflect unit outcomes. Changes to Elements, Performance Criteria. Prerequisite units deleted. Updated Performance Evidence and Knowledge Evidence	No equivalent unit

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

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TITLE	Assessment requirements for AHCARB3XX Use arborist climbing techniques
Performance Evidence	
<p>An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.</p> <p>There must be evidence that the individual has on at least one occasion demonstrated climbing techniques for pruning and dismantling work in arboriculture including:</p> <ul style="list-style-type: none"> • confirmed access to site and scope of works with client • undertook a job safety analysis (JSA) for the specific site and work activities and implemented control measures • confirmed availability of first aid and rescue personnel, equipment and procedures • conducted pre-operational safety checks, on ropes, harnesses, tools and equipment • selected and used personal protective equipment and safety equipment during works • inspected tree and determined a safe access route for tree in discussion with work team • selected and prepared climbing equipment for accessing tree • selected, prepared, fitted and used climbing spurs and gaffs for dismantling trees • ascended, navigated, assumed work positions within and descended from tree using climbing techniques, climbing systems and anchor points including: <ul style="list-style-type: none"> • moving rope technique (MRT) for access and work positioning • stationary rope technique (SRT) for access and work positioning • multiple lines for climbing and tree operations for both MRT and SRT • natural and artificial redirects • climbing spurs ensuring separation of spurs and clearance distance between spurs and ropes • configured climbing equipment components within functional climbing systems for ascending and positioning • tied, dressed, set and finished climbing knots and hitches for rigging and climbing applications according to industry standards including: <ul style="list-style-type: none"> • scaffold knot • double fisherman's knot / prusik loop • girth hitch • prusik hitch (English prusik) • Blake's hitch • marlinspike hitch • clove hitch • double-overhand stopper knot • sheet bend • slippery sheet bend • bowline knot (with a tie-off or stopper knot) • running bowline knot • bowline on a bight • alpine butterfly • klemheist • figure-8 loop • munter hitch • Flemish bend • Zeppelin bend. <p>The individual must also demonstrate at least one (1) of the following advanced climbing hitches:</p> <ul style="list-style-type: none"> • Distel hitch • Valdôtain tresse (French prusik) • Schwabisch hitch • Knut <p>There must also be evidence that the individual has:</p> <ul style="list-style-type: none"> • communicated with work team during operations using agreed communication procedures • maintained safe clearances from power lines • removed all access equipment in a controlled manner 	

TITLE	Assessment requirements for AHCARB3XX Use arborist climbing techniques
Performance Evidence	
<ul style="list-style-type: none"> inspected, cleaned maintained and stored climbing and personal protection equipment according to manufacturer's instructions. <p>All arborist tree climbing work is required to be performed according to current industry standards, including Minimum Industry Standard MIS305 Tree Climbing and other relevant Minimum Industry Standards.</p>	

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"> current industry standards, including Minimum Industry Standard MIS305 Tree Climbing and other relevant Minimum Industry Standards assessing and selecting methods for climbing trees and methods of tree access <ul style="list-style-type: none"> selecting a climb plan or work strategy to achieve a scope of works selecting climbing systems which are safe, simple, efficient and ergonomic identifying tree hazards and selecting low-risk work methods assessing work health, safety, site, environmental and traffic control measures including: <ul style="list-style-type: none"> completing JSAs for site-specific risks purpose of first aid and rescue personnel, equipment and procedures pre-operational and safety checks, on ropes, harnesses, tools and equipment personal protective equipment used when climbing arborist climbing equipment, use and maintenance including: <ul style="list-style-type: none"> ropes and their materials, construction and characteristics uses of climbing ropes and lanyards types of climbing ropes harnesses triple locking carabiners and other connectors climbing hardware including ascenders, descenders, mechanical friction devices, false crotches and artificial redirects climbing spurs and gaffs, their preparation and use for climbing trees maintaining separation between spurs, rigging equipment and ropes purpose, function, selection, tying, dressing, setting and finishing of arborist knots used for climbing techniques safety when climbing trees including: <ul style="list-style-type: none"> safe working limits ropes and equipment defects in ropes, tools and equipment controlled descent operations controlled removal of access equipment forces applied to anchor points during access and work positioning using MRT and SRT forces applied at primary anchor points and at redirects hazards to avoid when climbing within the tree canopy including: <ul style="list-style-type: none"> power line safe approach distances and vegetation clearances tree structural defects animals or insects hangers or suspended loads deciding on low risk access routes limits, advantages and disadvantages of friction hitches including: <ul style="list-style-type: none"> Blake's hitch Prusik hitch (English prusik) klemheist specialised variations including Distel hitch, Valdôtain tresse (French prusik), Schwabisch hitch, Knut 	

Knowledge Evidence
<ul style="list-style-type: none"> • selecting appropriate knots suited for rigging or climbing applications and equipment including: <ul style="list-style-type: none"> • loss of rope strength • appropriate knot for application • requirements for secondary knots and stopper knots • arborist knots <ul style="list-style-type: none"> • knot type and tying procedure • dressing • setting • finishing • communications strategies used in arboriculture including: <ul style="list-style-type: none"> • voice • hand • whistle signals • electronic communications • assessing tree access routes, techniques and equipment and evaluating risk <ul style="list-style-type: none"> • moving and stationary rope techniques (MRT and SRT) • use of climbing spikes of various lengths • transitions between points of attachment • natural and artificial redirects • use of multiple lines to access trees and tree parts • low risk anchor points • inspecting, cleaning, maintaining and storing climbing equipment.

Assessment Conditions
<p>Assessment of skills must take place under the following conditions:</p> <ul style="list-style-type: none"> • physical conditions: <ul style="list-style-type: none"> • access trees for individuals to demonstrate different climbing and manoeuvring techniques • resources, equipment and materials: <ul style="list-style-type: none"> • full arborists climbing kit • climbing spurs • communications equipment agreed by work crew • personal protective equipment (PPE) • first aid and emergency kit • rescue kit • traffic management kit • specifications: <ul style="list-style-type: none"> • workplace and manufacturer instructions for safe operation, cleaning and storing of the equipment specified in the Assessment Conditions • industry standards for arborist climbing including, Minimum Industry Standard MIS305 Tree Climbing and other relevant Minimum Industry Standards. • relationships: <ul style="list-style-type: none"> • work team. <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p> <p>In addition, the following specific assessor requirements apply to this unit:</p> <ul style="list-style-type: none"> • arboriculture vocational competencies at least to the level being assessed • current arboriculture industry skills directly relevant to the unit of competency being assessed.

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