

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.

AHCARB308	Install cable and bracing
Application	<p>This unit of competency describes the skills and knowledge required to install cable and bracing hardware into the structure of a tree.</p> <p>The unit applies to individuals who have a range of skills to select and apply a specialised range of methods, tools, equipment and information to complete routine activities and provide and transmit solutions to predictable and sometimes unpredictable problems.</p> <p>Legislation, regulations and by-laws relating to the treatment and removal of trees apply nationally and in some states, territories and jurisdictions.</p>
Prerequisite Unit	Nil
Unit Sector	Arboriculture (ARB)

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for work	1.1 Read and interpret arborists plans and specifications for cable and bracing for specified tree 1.2 Determine materials required for installing cable and bracing 1.3 Undertake a site-specific Job Safety Analysis (JSA) and record and implement site-specific control measures 1.4 Select cable and bracing tools and equipment for cable and bracing activity 1.5 Select, check and use personal protective equipment 1.6 Confirm availability of first aid and emergency personnel, equipment and procedures 1.7 Assemble and position tools equipment and materials for ease of access during installation
2. Prepare trees for cable and bracing	2.1 Locate tree stems and position of cable and bracing according to specifications 2.2 Assess structural integrity of tree and select low-risk access for cable and bracing installation 2.3 Determine a safe procedure for installation and confirm approach with work team 2.4 Access tree safely and secure into work position on stable anchor points 2.5 Maintain inspection of tree for above-ground hazards throughout installation activities 2.6 Examine stems to be braced for defects to ensure cable and bracing will comply with specifications 2.7 Undertake pruning activities to aid cable and bracing installation according to current industry standards

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
3. Install cable and bracing	3.1 Select and prepare cable and bracing materials according to specifications 3.2 Select and prepare the stems to be braced according to cable and bracing design 3.3 Install cable and bracing components according to arborist specifications and manufacturer instructions 3.4 Adjust cables and braces to specified tension 3.5 Dress cable and bracing components for neat finish 3.6 Remove tools equipment and waste from canopy 3.7 Descend and remove equipment
4. Finalise cable and bracing activity	4.1 Clean and sanitize tools and equipment according to workplace and biosecurity procedures 4.2 Check, maintain and store tools and equipment according to workplace procedures and manufacturer instructions 4.3 Record and report completed works according to workplace procedures

Foundation Skills	
<i>This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.</i>	
Skill	Description
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Unit Mapping Information			
Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB308 Install cable and bracing	AHCARB308 Install cable and bracing	Addition of element and changes to performance criteria for clarity	Equivalent unit

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

TITLE	Assessment requirements for AHCARB308 Install cable and bracing
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 installed 3 different types of cabling and bracing including:</p> <ul style="list-style-type: none"> • static cable • dynamic cable • brace. <p>There must also be evidence that the individual has:</p> <ul style="list-style-type: none"> • interpreted plans and specifications and determined the materials required for cable and bracing work • identified health, safety and environmental hazard and risks and implemented controls for the installation including: <ul style="list-style-type: none"> • conducted and prepared a job safety analysis (JSA) • prepared and used personnel protection equipment • maintained awareness of above ground hazards while performing work • identified, selected and assembled cable and bracing materials, tools and equipment from specifications ready for installation • examined structural integrity of the tree and determined and confirmed the safest access to location of the cable and bracing installation with work team • pruned tree to aid cable and bracing installation and accessed the tree safely and secured into work position • installed cable and bracing according to specifications including: <ul style="list-style-type: none"> • prepared tree stems to accept the cable and bracing system • prepared and installed static cables and hardware • prepared and installed dynamic cables • prepared and installed bracing hardware • adjusted the tension of cable and bracing system • dressed and finished the cable and bracing system • removed, checked, maintained and stored tools and equipment • cleaned and sanitised equipment according to biosecurity procedures • recorded and reported completed works. 	
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"> • the effect of pruning on tree growth, habit and form • tree anatomy and tree physiology for relative to cable and bracing <ul style="list-style-type: none"> • pruning techniques appropriate to tree species and their response • sustainable growth requirements of trees • natural habit and form of trees • visual tree assessment • tree defects and cable and bracing solutions • cable and bracing principles and techniques suited to tree species including <ul style="list-style-type: none"> • principles and techniques of static cabling • principles and techniques of dynamic cabling • principles and techniques of bracing • selection of cable and bracing materials, tools and equipment including: <ul style="list-style-type: none"> • preparation of static cabling systems and terminations including, eyes, swaging, wire whipping • components and preparation of dynamic cabling systems • hardware including installation requirements for eye bolts, lag hooks, wire stops and grips • cable types and sizes, tensile strength and selection criteria as related to arborist specifications • preparation of bracing components including, types of rod, threading, terminations and tensile strength 	

Knowledge Evidence
<ul style="list-style-type: none"> • cable and bracing tension and tensioning methods • finishing techniques of cables for aesthetics and function • finishing techniques for bracing for safety, aesthetics and function • identification of work health and safety hazards, risk assessment and risk control application <ul style="list-style-type: none"> • selection of suitable personal protective equipment • completing a job safety analysis (JSA) • first aid and rescue personnel, equipment and procedures applicable to tree work • monitoring and managing above ground hazards • electrical safety • principles of Compartmentalisation of Decay in Trees (CODIT) in relation to the installation of cables and bracing • hygiene practices and biosecurity when cable bracing including: <ul style="list-style-type: none"> • reasons for managing hygiene • biosecurity principles and procedures • record keeping and reporting procedures for cable bracing.

Assessment Conditions
<p>Assessment of skills must take place under the following conditions:</p> <ul style="list-style-type: none"> • physical conditions: <ul style="list-style-type: none"> • access to trees with defects requiring static and dynamic cabling and bracing • resources, equipment and materials: <ul style="list-style-type: none"> • equipment to access a working position for installation of cables and bracing • personal protective equipment (PPE) • access to safety equipment including, first aid, emergency and rescue kits • tools and equipment for preparing wire ropes, attaching cables to trees and installation of braces • specifications: <ul style="list-style-type: none"> • workplace and manufacturer documentation and instructions for safe operation, cleaning and storage of cable and bracing equipment • access to current industry standards for cable and bracing and pruning • access to arboriculture hygiene and biosecurity standards • specifications for the installation of cable and bracing systems for specific tree defects. <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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