



Australian Government

AHCARB320 Install tree support systems

Release: 1

AHCARB320 Install tree support systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Application

This unit of competency describes the skills and knowledge required to install tree support systems including cable and bracing hardware into the structure of a tree.

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.

The arboriculture industry requires that all tree support systems work is undertaken according to preferred industry practices (as outlined in the Companion Volume).

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

Pre-requisite Unit

Nil

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

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 arborist plans and specifications for tree support system for specified tree 1.2 Determine and obtain materials required for installing tree support system 1.3 Undertake a site-specific job safety analysis (JSA), record and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	implement control measures according to workplace safety procedures 1.4 Select tree support system tools and equipment for tree support system 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 tree support system	2.1 Locate tree stems and position of tree support system according to specifications 2.2 Assess structural integrity of tree and select low-risk access method for tree support system installation 2.3 Determine a safe procedure for installation and confirm approach with work team 2.4 Access tree safely and attain secure work positions to conduct installation 2.5 Maintain inspection of tree for above-ground hazards throughout installation activities 2.6 Examine stems to be braced for defects to ensure tree support system will comply with specifications 2.7 Undertake pruning activities prior to tree support system installation according to current industry standards
3. Install tree support system	3.1 Select and prepare tree support system materials according to specifications 3.2 Prepare the stems to be braced according to tree support system design 3.3 Install tree support system components according to arborist specifications and manufacturer instructions 3.4 Adjust cables and braces to specified tension 3.5 Dress tree support system components for neat finish 3.6 Remove tools, equipment and waste from canopy 3.7 Descend and remove equipment
4. Finalise tree support	4.1 Clean and sanitise tools and equipment according to workplace

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
system activity	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

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
Reading	Interpret and consolidate information from plans and specifications for design requirements and prepare for the installation of tree support systems
Writing	Accurately record and complete organisational documents, including job safety analysis (JSA) and records, using clear language and correct spelling, grammar and industry terminology
Numeracy	Interpret and calculate numerical information from specifications to determine the size and dimensions of materials required to construct tree support systems

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCARB320 Install tree support systems	AHCARB308 Install cable and bracing	Title changed Element added Performance criteria clarified Foundation skills added Assessment requirements	Equivalent

		updated	
--	--	---------	--

Links

Companion Volumes, including Implementation Guides, are available at VETNet: Companion Volumes, including Implementation Guides, are available at VETNet: -

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

Assessment Requirements for AHCARB320 Install tree support systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has installed three different types of tree support systems according to a specification, including:

- steel cable
- textile or synthetic cable
- bracing.

There must also be evidence that the individual has:

- interpreted plans and specifications and determined the materials, tools and equipment required for tree support system work
- identified health, safety and environmental hazard and risks and implemented controls for the installation, including:
 - conducted and completed a job safety analysis (JSA)
 - prepared and used personal protective equipment (PPE)
 - maintained awareness of above-ground hazards while performing work
- assembled tree support system ready for installation
- examined structural integrity of the tree
- determined and confirmed the safest access to location of the tree support system
- pruned tree to aid tree support system installation
- accessed the tree safely and secured into work position
- removed, checked, maintained, cleaned, sanitised and stored tools and equipment according to biosecurity procedures
- recorded and reported completed works.

All tree support systems work is required to be performed according to preferred industry practices (as outlined in the Companion Volume).

Knowledge Evidence

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:

- preferred industry practices (as outlined in the Companion Volume) for tree support systems
- the effect of pruning on tree growth, habit and form
- tree anatomy and tree physiology related to tree support systems, including:
 - pruning techniques appropriate to tree species and their response
 - natural habit and form of trees
 - visual tree assessment
 - tree defects and tree support system solutions
- tree support systems principles and techniques suited to tree species, including:
 - steel cabling
 - synthetic cabling
 - bracing
- impact of tree support system on trees, including:
 - the impact on the tree's natural range of movement
 - the impact on the tree's strategy of flexibility
 - the impact on the tree's formation of reactive growth
- tree support system materials, tools and equipment, including:
 - preparation of steel cabling systems and terminations, including eyes, swaging, wire whipping
 - components and preparation of synthetic 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
 - cable tension and tensioning methods
 - finishing techniques of cables for aesthetics and function
 - finishing techniques of bracing for safety, aesthetics and function
 - checks and adjustments to installed systems over time
- identification of workplace health and safety hazards, risk assessment and risk control application
 - selection of suitable PPE
 - 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:
 - reasons for managing hygiene
 - biosecurity principles and procedures
- record keeping and reporting procedures for cable bracing.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - trees with defects requiring cabling and bracing as stipulated in the performance evidence
- resources, equipment and materials:
 - equipment to access a working position for installation of cables and bracing
 - PPE
 - safety equipment, including first aid and emergency response equipment
 - tools and equipment for preparing wire and synthetic ropes, attaching cables to trees and installation of braces
- specifications:
 - workplace and manufacturer documentation for safe operation, cleaning and storage of tree support system equipment
 - preferred industry practices (as outlined in the Companion Volume) for tree support systems
 - arboriculture hygiene and biosecurity standards
 - specifications for the installation of tree support system for specific tree defects
- relationships:
 - work team.

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.

Links

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