

Modification history

| Release | Comments |
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| 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 | Install tree support systems |
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| Application | <p>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.</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>The arboriculture industry requires that all tree support systems work is undertaken according to current industry standards, including Minimum Industry Standard MIS309 Tree Support Systems and other relevant Minimum Industry Standards</p> <p>Legislation, regulations and by-laws relating to the treatment and removal of trees apply nationally and in some States and Territories.</p> |
| Prerequisite Unit | Nil |
| Unit Sector | Arboriculture (ARB) |

| Elements | Performance Criteria |
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| <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 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) and record and 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 |

| Elements | Performance Criteria |
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| <i>Elements describe the essential outcomes.</i> | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i> |
| 3. Install tree support system | 3.1 Select and prepare tree support system materials according to specifications 3.2 Select and 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 system 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 | |
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| <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 |
| Reading | <ul style="list-style-type: none"> Analyse and consolidate information from plans and specifications for design requirements and to prepare for the installation of tree support systems |
| Writing | <ul style="list-style-type: none"> Accurately record and complete organisational documents including Job Safety Analysis (JSA) and records using clear language, correct spelling, grammar and industry terminology |
| Numeracy | <ul style="list-style-type: none"> Interprets and calculates 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 |
| AHCARB3XX Install tree support systems | AHCARB308 Install cable and bracing | Added new Element Changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence | Equivalent unit |

| Links |
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| 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 Install tree support systems |
| 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"> • steel cable • textile/synthetic cable • bracing. <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 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 personnel protection equipment • maintained awareness of above ground hazards while performing work • identified, selected and assembled tree support system 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 tree support system installation with work team • accessed the tree safely and secured into work position • pruned tree to aid tree support system installation and accessed the tree safely and secured into work position • installed tree support system according to specifications including: <ul style="list-style-type: none"> • prepared tree stems to accept the tree support system system • prepared and installed steel cables and hardware • prepared and installed synthetic cables • prepared and installed bracing hardware • adjusted the tension of cable system • dressed and finished the cable or bracing system • removed, checked, maintained and stored tools and equipment • cleaned and sanitised equipment according to biosecurity procedures • recorded and reported completed works. <p>All tree support systems work is required to be performed according to current industry standards, including Minimum Industry Standard MIS309 Tree Support Systems and other relevant Minimum Industry Standards.</p> | |

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| 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 MIS309 Tree Support Systems and other relevant Minimum Industry Standards • the effect of pruning on tree growth, habit and form • tree anatomy and tree physiology for relative to tree support system <ul style="list-style-type: none"> • 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 system principles and techniques suited to tree species including <ul style="list-style-type: none"> • principles and techniques of steel cabling • principles and techniques of synthetic cabling • principles and techniques of bracing • impact of tree support system system on trees including: | |

| Knowledge Evidence |
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| <ul style="list-style-type: none"> • the impact on the tree's natural range of movement • the impact on the tree's strategy of flexibility • the impact on the trees formation of reactive growth • selection of tree support system materials, tools and equipment including: <ul style="list-style-type: none"> • 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 • 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 |
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| <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) • 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 tree support system equipment • current industry standards for tree support systems including Minimum Industry Standard MIS309 Tree Support Systems and other relevant Minimum Industry Standards • arboriculture hygiene and biosecurity standards • specifications for the installation of tree support system systems for specific tree defects • 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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| Links | Companion Volumes, including Implementation Guides, are available at VETNet: |
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| | https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72 |
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