Modification history

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

| AHCARB3XX | Manage vegetation to create and maintain habitat refuges |
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| Application | This unit describes the skills and knowledge required to create and maintain habitat refuges. It involves the construction and installation of burrows, ground level refuges and nesting boxes and the use of pruning techniques for natural fracture pruning and coronet cutting for habitat hollow and cavity creation in vegetation.  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.  No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication. |
| Prerequisite Unit | Nil |
| Unit Sector | Arboriculture (ARB) |

| Elements | Performance Criteria |
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| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
| 1. Prepare site and inspect equipment | 1.1 Interpret and confirm target area work instruction with supervisor  1.2 Select, check and use personal protective equipment  1.3 Conduct pre-operational preparations and safety checks, on ropes, harnesses, tools and equipment  1.4 Undertake a site-specific Job Safety Analysis (JSA) and record and implement control measures according to workplace safety procedures |
| 2. Retain and stabilise trees and standing vegetation for wood habitat | 2.1 Identify vegetation with existing viable hollows  2.2 Plan retention of standing vegetation with viable hollows and defects  2.3 Identify pruning points to accommodate retention or formation of hollows  2.4 Determine length limb to be retained according to weight, size and natural fracture points  2.5 Identify and retain branch stubs and residual epicormic growth on lower limb sections  2.6 Implement pruning cuts to tension side of wood to weaken branch at desired point  2.7 Apply physical force to create natural fracture and breakage of branch at desired point  2.8 Undertake coronet cutting using equipment that minimises contaminants on cut surface  2.9 Use materials and equipment to protect the environment from residues according to workplace and environmental procedures |
| 3. Implement vegetation management techniques to create habitat | 3.1 Identify and select vegetation suitable for habitat creation work  3.2 Apply natural fracture pruning techniques consistent with natural branch failure  3.3 Implement coronet cuts on branches or stub with a diameter of no less than 20 cm  3.4 Prune and remove excess branches safely at a natural breakage point leaving stub to specified length according to job requirements  3.5 Prepare habitat hollows and cavities with an angled faceplate to prevent ingress of water  3.6 Remove internal wood from hollows and cavities and install or repair faceplate and entrance holes according to job requirements  3.7 Construct and install burrows to size and depth specific to fauna habitat requirements  3.8 Construct and install ground refuges using dimensions and materials specific to fauna habitat requirements  3.9 Construct and install nesting boxes to replace or create new habitat |
| 4. Clean worksite and store equipment | 4.1 Inspect, clean, maintain, and store equipment according to manufacturer instructions and workplace procedures  4.2 Collect and dispose of waste materials according to industry, workplace and environmental procedures and practices  4.3 Clean and restore site to condition according to workplace procedures and instructions |

| Foundation Skills (Note - FS will be added on agreement of PC's)  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. | |
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| Skill | Description |
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| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| AHCARB3XX Manage vegetation to create and maintain habitat refuges | New unit |  | No equivalent unit |

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| 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 AHCARB3XX Manage vegetation to create and maintain habitat refuges |
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| 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 on at least one occasion managed vegetation to create and maintain habitat refuges and has:   * interpreted and confirmed target area and work instructions with supervisor * selected, checked and used personal protective equipment * conducted pre-operational preparation and checks on ropes harnesses, tools and equipment * completed a job safety analysis, recorded and implemented controls measures * identified vegetation with viable hollows * planned the retention of vegetation with viable hollow and defects * identified pruning points to retain or create new hollows * determined length of limb to be retained * identified and retained branch stubs and epimoric growth on lower limbs * implemented pruning cuts to weaken branches and applied force to fracture branches at desired point * undertook coronet pruning and prevented contamination of cuts * used materials and equipment to protect the environment from residues * identified and selected vegetation suitable for habitat creation * applied pruning techniques including: * natural fractures * coronet cuts * pruned and removed excess branches within specification * prepared habitat hollows and cavities including: * angled faceplate to prevent water inundation * removed internal wood * installed or repaired faceplate and entrance hole * constructed and installed the following: * burrows * ground refuges * nesting boxes * inspected, cleaned, maintained and stored equipment according to workplace requirements * collected and disposed of waste material according to workplace and environmental procedures * restored the site according to workplace procedures and instructions. | |

| Knowledge Evidence |
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| 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:   * importance of living and dead vegetation in the environment including: * habitat and refuges * public safety and environmental hazard and removal * risk management * common vegetation features providing an ecological habitat including: * stubs, snags, tears and scars * fungi * dead wood volumes * hollows, cavities and small holes * animal/insect damage and food * defective branch union * bird damage * extent and quality of fungus rot and colonising organisms * tree response to infection and compartmentalisation of decay in trees (CODIT) * conservation values of a dead wood habitat and a live wood habitat * removal or reduction of dead wood or living wood to prevent breakage including: * natural fracture pruning * coronet cutting * different types of ground level refuges including: * vegetation * soil * artificial * the nature and role of habitat trees including: * characteristics and essential components of plant and animal life cycles * features associated with ageing * value or potential value * hollows, cavities and roosting branches * removal and replacement of hollows or cavities * heritage or protected vegetation, environmental overlays and regulated vegetation including: * historical and cultural aspects of vegetation * Aboriginal and Torres Strait Island mortuary and sacred/cultural trees * pruning techniques for habitat development including: * weakening branches to ensure pruning cut protrudes into the wood of not more than 30% of the diameter at the cut point * wood not weakened to break at the desired fracture point * cutting with a 15 degree opening on the compression side of the wood to allow the vegetation to fracture * use of ropes and pulleys to apply the sufficient force to assist the breakage * removal of excess branches and importance of leaving stub lengths of at least 20 cm * importance of retaining and creating variations in dead wood habitat niches * natural fracture pruning techniques including: * when to apply to branches <20 cm in diameter * fibre separation, along the grain and splintering * fibre separation in various planes, linear, radial and circumferential * natural fracture points * appropriate use of hand saws and equipment * approved chainsaw use and bar oil to avoid contamination of pruning cuts * relevant statutory and local authority requirements * work place health and safety policies, procedures * personal protective equipment must include: * chaps or chainsaw pants * hand tools such as shovels, saws, drills, screwdrivers, hammers * ear protection * full face helmet/visor or safety glasses * harness and full body for EWP or work position harness for tree climber * gloves * safety helmet * steel-cap boots * potential hazards may include: * density * incorrect and unsafe pruning methods used by self and others * incorrect and unsafe approaches to staking severed trunks or limbs * power lines and utilities * unsafe tree climbing methods * unsafe use of EWP * unstable ground for equipment * codes of practice and industry standards for vegetation management * structural integrity and defects within vegetation that poses a threat to infrastructure, persons in and using the immediate area and tree health including: * broken branches * cankers * cracks * dead wood * decay/fungi * poor branch unions * poor vegetation architecture * root problems * torsional fractures * environmental and biodiversity values * when to use natural fracture pruning, coronet cutting or habitat hollow and cavity creation including: * alternatives to felling trees to render then safe and retain dead wood habitat. |

| Assessment Conditions |
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| Assessment of skills must take place under the following conditions:   * physical conditions: * access to an appropriate site with a range of vegetation requiring natural fracture pruning, coronet cutting, and habitat and cavity creation * an appropriate site where branch habitat hollows and cavities in branches can be created, nesting boxes can be constructed and installed, and burrows and ground level refuges can be created * resources, equipment and materials: * arborist climbing kit * personal protection equipment * tools, equipment and materials for pruning, constructing and installing habitat, burrows and nesting boxes * specifications: * workplace policies, procedures, operations manuals and instructions related to pruning vegetation to manage habitat * regulations, codes of practice that relate to pruning vegetation to manage habitat * plans, diagrams and specifications for constructing nesting boxes * specification for fauna habitat * relationships: * supervisor   Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.  In addition, the following specific assessor requirements apply to this unit:   * 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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