



Australian Government

Assessment Requirements for AHCARB317 Dismantle trees

Release: 1

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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 completely dismantled at least 2 trees in close proximity to structures or other assets. For each tree, the individual must have planned, communicated, prepared, conducted and completed each step of the dismantling process in the correct sequence within a timeframe expected by industry.

Each tree must be a minimum of 15 metres in height and have a minimum canopy spread of 10 metres. There must be a drop zone of no more than 4 square metres available with no access within the remaining drip line of the tree representing structures or other assets to be protected.

There must also be evidence that for each tree the individual has:

- controlled the process from start to finish
- devised a plan, communicated the plan and executed the plan
- selected and implemented an appropriate rigging strategy and sequence including:
 - balancing and lifting of lateral branches
 - negative rigging of timber and heads
- dismantled the tree safely and without damage to assets including:
 - selected appropriate tree components and attached rope correctly
 - made accurate and appropriate cuts from safe working positions
 - maintained constant communication with work team

There must also be evidence that the individual has:

- identified workplace health, safety and environmental hazard and risks and implemented controls for the site, including:
 - conducted and completed a job safety analysis (JSA) or safe work method statement (SWMS)
 - prepared and used personal protective equipment
 - protected site and environmental assets

- controlled vehicular and foot traffic, including erected signage, barriers, and warning devices
- identified above and below ground services
- identified site and tree hazards and risks, and adjusted work method or implemented control measures
- assessed size, characteristics and defects of tree and determined dismantling strategy
- confirmed access to emergency response resources and procedures
- selected, prepared, checked and used tools and equipment for rigging and dismantling work, including:
 - identified working load limits of equipment components
 - configured compatible equipment components into appropriate rigging systems
 - identified force that will be applied to components in configured system during planned rigging operations
 - estimated mass of load and ensured force applied during rigging operations did not exceed working load limit of equipment
 - adjusted rigging systems as required to limit force applied to rigging system and tree structure
 - cleaned, inspected, maintained and stored tools and equipment according to workplace procedures
- installed rigging equipment to industry standards including selected and tied the following knots:
 - bowline
 - bowline on a bight
 - clove hitch and two half hitches
 - cows hitch
 - Flemish bend
 - girth hitch
 - half hitch pre knot
 - marlinspike hitch
 - round turn and two half hitches
 - rolling hitch
 - running bowline
 - sheet bend
 - slippery sheet bend
 - timber hitch
 - twin bowline bend
 - zeppelin bend
- used at least one of the following methods to safely access the tree according to dismantling method and strategy:
 - climbing technique
 - elevated work platform (EWP)

- dismantled trees using rigging techniques to ensure no damage to assets, using all of the following methods:
 - cut and drop into designated drop zone
 - cut and lower using rigging and devices
 - step cut, hold and throw
 - directional felling techniques
 - tip lowering, butt lowering, lifting and balancing
 - negative rigging techniques for leaders and vertical timber
 - the use of multiple anchor points
 - floating anchor rigging (simple floating anchor or highline)
 - running anchor rigging ('cradle' rigging or speed line)
- made accurate cuts according to industry standards, including:
 - making cuts from a safe and secure work position
 - selecting appropriate cuts for the desired outcome
 - accurately cutting scarfs, step cuts and back cuts.

All tree dismantling 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:

- anatomy and physiology of tree species and tree removal strategies
- weather conditions and impact on planning and dismantling procedures, including the effect of wind direction and speed
- site and tree hazards that might be encountered, including:
 - identification and evaluation of structural defects in trees
 - above and below ground services and effect on tree removal procedures
- selection of tree removal methods for trees in close proximity to structures and other assets
- methods for accessing trees for dismantling, including:
 - climbing techniques
 - elevated work platform (EWP) for tree removal
- handling and using ropes for rigging and dismantling trees, including:
 - selecting, tying, dressing, setting and finishing arborist knots for rigging and dismantling trees
- common problems and hazards with rigging and their potential consequences and solutions
- dismantling techniques, including:
 - cut and drop
 - cut and lower

- step cuts
- directional felling
- rigging techniques, including:
 - butt lowering, tip lowering and balancing
 - negative rigging techniques for leaders and trunk sections
 - floating anchor techniques (highlines and floating anchors)
 - running anchor techniques (cradle rigging and speed lines)
 - applying friction at the point of cut
- rigging equipment selection configuration and use for tree dismantling work, including:
 - friction devices
 - pulleys, blocks, connectors and other hardware
 - dead-eye slings, loopie slings and whoopie slings
 - ropes for rigging and dismantling (tag or pulling lines)
 - configuration of equipment into rigging systems
 - impact of force, breaking strength, safety factors and cycles to failure
 - safe working limits on rigging and lowering equipment
- calculation and estimation of tree dimensions and forces in rigging, including:
 - density of tree sections
 - methods of estimating mass of tree sections
 - estimation of force magnitude and direction applied during rigging operations
 - tree structural limitations and defects and impact on rigging and dismantling operations
 - ensuring force applied does not exceed working load limit of equipment components
 - mass dampening effect of rigging systems
- methods of minimising environmental impact
- preferred industry practices (as outlined in the Companion Volume) relating to dismantling of trees
- legislation, regulations and local government laws governing tree removal, including:
 - permits and approvals
 - stakeholder notifications
- site safety controls, including:
 - first aid and rescue personnel
 - equipment and procedures applicable to tree work
 - barriers and traffic control
 - signage and warning devices
 - responsibility for protecting property and assets in work areas and methods to prevent damage
- considerations in developing a tree dismantling process, including:
 - drop zones
 - lowering zones

- locating tools and equipment
- communication requirements for tree dismantling work, including:
 - communicating with clients, residents and authorities
 - communicating with team members
 - coordinating and scheduling work teams
- effective communication strategies during tree removal work, including the impact of:
 - noise
 - environmental conditions
 - communications resources
 - visibility
- tools, equipment and resources required for dismantling trees, including:
 - safe use and operation
 - care and maintenance
 - cleaning and storing
- inspecting equipment for signs of defects, including:
 - defective ropes and equipment
 - legal responsibility for maintaining equipment
 - tagging, replacing and reporting defective equipment
- workplace record keeping and reporting procedures.

Assessment Conditions

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

- physical conditions:
 - the two trees to be dismantled as stipulated in the performance evidence requirements
- resources, equipment and materials:
 - rigging equipment
 - height access equipment (climbing equipment or EWP)
 - personal protective equipment
 - chainsaws
 - first aid and emergency response equipment
 - traffic management kit and signage
- specifications:
 - workplace procedures and instructions related to dismantling trees
 - legislation, regulations, codes of practice and preferred industry practices (as outlined in the Companion Volume) relating to dismantling work
- 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>