



**Australian Government**

# **AHCARB311 Tie, dress, set and finish arborist knots**

**Release: 1**

## AHCARB311 Tie, dress, set and finish arborist knots

### Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

### Application

This unit of competency describes the skills and knowledge required to tie, dress, set and finish arborist knots, hitches and bends.

This unit applies to ground based workers undertake defined activities with appropriate methods, tools and information, work in a structured context, apply knowledge and skills to demonstrate limited autonomy and judgement, and provide solutions to a limited range of predictable problems. Work is implemented with low risk work procedures and to comply with Safe Work Method Statement documentation.

Licensing, legislative, regulatory, or certification requirements apply to this unit in some states and territories at the time of publication, and may differ according to jurisdiction. Specific determination should be sought through the relevant State or Territory. Works involving this unit of competency may be subject to local tree protection and preservation laws, and the relevant content of applicable Australian Standards.

### Pre-requisite Unit

Nil.

### Unit Sector

Arboriculture (ARB)

### Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Assist in preparation of work site	1.1 Undertake a site-specific risk assessment by identifying work health and safety hazards and assessing risk 1.2 Confirm first aid and emergency equipment and procedures applicable to tree work

Element	Performance criteria
	1.3 Carry out pre-operational and safety checks on ropes and equipment 1.4 Select and use appropriate personal protective equipment 1.5 Record and implement work health, safety, site, environmental and traffic control measures
2. Tie, dress and set arborist knots	2.1 Communicate with work team during operations using voice, hand and whistle signals 2.2 Determine work application for knot for ground-based, aerial, rigging and climbing work tasks 2.3 Determine appropriate knot for locking and non-locking attributes, strength, impact on rope strength, loosening and slippage 2.4 Determine loss of rope strength in using selected knot 2.5 Determine appropriate rope for knot application 2.6 Determine requirements for secondary knots and stopper knots 2.7 Tie rope to form intended knot 2.8 Leave appropriate tail length approximately five times diameter of rope 2.9 Dress knot to align all parts of knot 2.10 Adjust knot to appropriate proportions 2.11 Set knot to 'tighten and load' knot prior to use 2.12 Finish knot with selected stopper knot, tucked tail or suitable tail length
3. Inspect and use knot	3.1 Inspect completed knot 3.2 Check knot for correctness of assembly 3.3 Confirm knot for correct work application 3.4 Maintain effective communication with work team 3.5 Install and use knot in work application 3.6 Untie knot at completion of work task
4. Complete knot operations	4.1 Clean and check ropes 4.2 Report and tag faulty or worn ropes 4.3 Clean and store personal protective equipment

## Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

## Range of Conditions

Ground-based Rigging applications must include knowledge of:

- Alpine butterfly knot
- Bowline on the bight
- Cows hitch with better half
- Clove hitch + two half hitches
- Half hitch pre knot
- Klemheist friction knot
- Marline pre knot
- Marline spike hitch
- Riggers knot + two half hitches
- Running bowline
- Sheet bend
- Slippery sheet bend
- Timber hitch
- Zeppelin bend

Above Ground applications must include knowledge of:

- Scaffold knot
- Double Fishermans Knot/Prusik loop
- Girth Hitch
- English Prusik Knot
- Marlin Spike
- Clove Hitch
- Double Overhand Stopper Knot
- Sheet bend
- Slippery Sheet Bend
- Bowline Knot
- Running Bowline Knot

Aerial Rigging applications must include knowledge of:

- Cows hitch
- Riggers knot + two half hitches
- Clove hitch + two half hitches
- Alpine butterfly knot
- Half hitch pre knot
- Marline pre knot
- Marline spike hitch
- Zeppelin bend
- Running bowline
- Bowline on the bight
- Rolling hitch

- Timber hitch
- Sheet bend
- Slippery sheet bend

## **Unit Mapping Information**

New unit - no equivalent.

## **Links**

Companion Volume implementation guides are found in VETNet -

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