



Australian Government

Department of Education, Employment and Workplace Relations

AHCARB304A Fell trees with advanced techniques

Release: 1

AHCARB304A Fell trees with advanced techniques

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of felling trees with advanced techniques and defines the standard required to: conduct a site and tree hazard identification and risk control assessment; prepare materials and equipment to specifications; set up safe fall and exclusion zones; use low risk dismantling procedures to fell a tree; fell wind thrown and suspended trees; use documented low risk work procedures and record worksite activities according to documented guidelines.
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Application of the Unit

Application of the unit	This unit applies to the process of removal of trees of substantial height, of complex nature or in complex situations in an urban environment.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA

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1. Prepare for tree removal	<p>1.1. Trees are assessed for size, structural defects, weight distribution, spread/width, wind loading and canopy.</p> <p>1.2. The fall site is assessed considering wind speed and direction, topography, safe fall zone, exclusion zone, any potential danger to the public or property, and environmental implications.</p> <p>1.3. Tools, equipment and machinery are selected according to appropriate removal methods.</p> <p>1.4. Pre-operational and safety checks are carried out on tools, equipment and machinery according to manufacturers specifications and enterprise guidelines.</p> <p>1.5. OHS hazards are identified, risks assessed and risk controls are implemented.</p> <p>1.6. Risk controls selected determine work method to cut and drop, or use rigging techniques.</p> <p>1.7. Suitable safety equipment and Personal Protective Equipment (PPE) is selected, used and maintained.</p>
2. Coordinate site preparation	<p>2.1. A safe fall zone and exclusion zone are determined considering tree characteristics, degree of lean of tree, and site, environmental, and safety assessments.</p> <p>2.2. A planned escape route, noting debris and other potential hazards is determined.</p> <p>2.3. Fall zone and escape route are cleared and surrounding features/structures are protected from damage.</p> <p>2.4. Exclusion zone is identified, appropriate safety barriers erected and safety procedures implemented and monitored.</p>
3. Dismantle branches	<p>3.1. Weights of tree branches are ascertained so that they do not exceed the safe working limit of equipment.</p> <p>3.2. Branches are dismantled using the "cut and drop" method, or cut and lowered by ropes in accordance with accepted rigging techniques.</p> <p>3.3. Dismantling techniques are employed to ensure branches fall or are lowered safely into the determined drop zone with no damage to property and equipment, or injury to personnel.</p>
4. Dismantle tree	<p>4.1. A safety lanyard and climbing spurs are used to ascend tree to perform sectional felling.</p> <p>4.2. An elevated platform is used for access to assist sectional felling.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>4.3. Sections are cut and thrown using a directional scarf and back cut with an accepted industry method.</p> <p>4.4. Sections are cut and dropped using a horizontal cut and appropriate hinge wood.</p> <p>4.5. A pull rope is used to control fall of tree sections.</p> <p>4.6. Industry standard hitches and knots are used in rope lowering of cut tree sections.</p>
5. Fell wind thrown and suspended trees	<p>5.1. The risk potential of wind thrown or suspended tree is assessed.</p> <p>5.2. Safe work methods which apply to the removal of wind thrown or suspended trees are adopted.</p> <p>5.3. Hand or power winches are used to pull out the suspended tree as necessary.</p> <p>5.4. The root system of a wind thrown tree lying on the ground is propped.</p> <p>5.5. Wind thrown tree is crosscut in correct position to reduce trunk movement and prepare it for removal.</p>
6. Complete felling operations	<p>6.1. Felled trunks and branches are crosscut and trimmed to manoeuvrable lengths ready for disposal.</p> <p>6.2. The site is cleared of trunk, branches and tree debris.</p> <p>6.3. Timber disposal methods and equipment are used in accordance with the manufacturer's specifications and documented low risk work procedures.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- identify site and tree hazards and assess and control risk
- select low risk tree removal methods
- interpret felling plans, work procedure documents, and survey symbols and information
- select and tie appropriate knots
- use advanced climbing, rope handling and rigging techniques or an EWP
- calculate tree dimensions, angles of direction, mass of tree section and balance of load

REQUIRED SKILLS AND KNOWLEDGE

- coordinate and sequence the work team activities
- use personal protection equipment
- rescue techniques
- operate lowering devices where required by low risk work method statements
- operate elevated work platforms where required by low risk work method statements
- operate a chainsaw
- use literacy skills to read, interpret and follow organisational policies and procedures, follow sequenced written instructions, record accurately and legible information collected and select and apply procedures for a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning techniques, active listening, clarifying information and consulting with supervisors as required
- use numeracy skills to estimate, calculate and record routine workplace measures
- use interpersonal skills to work with and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- safe tree removal methods based on results of tree, site and safety assessments
- maintenance, operation and Safe Working Loads of the tools, equipment and machinery required for given removal methods
- safe working practices for chainsaw operation
- safety procedures and potential hazards for working safely in the amenity tree industry
- emergency and first aid procedures
- environmental implications of tree removal, including National, State and local legislation and/or regulations
- natural heritage, cultural heritage and community use issues that impact on tree removal programs
- principles and methods of inspecting trees to identify structural defects.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • conduct a site and tree hazard identification and risk control assessment • prepare materials and equipment to specifications • set up safe fall and exclusion zones • use low risk dismantling procedures to fell a tree • fell wind thrown and suspended trees • use documented low risk work procedures • record worksite activities according to documented guidelines.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Removal methods may include:	<ul style="list-style-type: none"> • felling • dismantling.
Impacting factors may include:	<ul style="list-style-type: none"> • site and location plans • site assessment details • tree characteristics • special instructions and/or conditions • Occupational Health and Safety (OHS) risks

RANGE STATEMENT

	and controls <ul style="list-style-type: none"> • environmental considerations • removal methods and techniques • tools, equipment and machinery requirements • access and exit details • personnel requirements • waste, organic waste and debris disposal • recycling and re-use guidelines • traffic control and management.
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Unit Sector(s)

Unit sector	Arboriculture
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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