



Australian Government

FWPHAR3205 Harvest trees manually (intermediate)

Release: 1

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Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to assess harvest sites and trees to be harvested and to plan and safely carry out manual tree-felling using a chainsaw as part of a commercial forestry operation. The unit covers the felling procedures for trees with a level of complexity that requires significant tree assessment and practical felling skills.

Individuals competent in this unit should be able to effectively fell most trees except very large trees, and/or those with significant defects and/or characteristics that cause excessive complexity.

Trees typical to the scope of this unit may have some of the following characteristics:

- lean and weight distribution that can be assessed and readily adapted to falling direction with the use of wedges and/or control with hinge-wood
- limited visible damage and/or defect
- multi-stems
- forward lean, backward lean or side lean
- small or medium size diameter that can be safely felled with intermediate felling techniques
- dead trees with minimal visible damage or defects that do not add significant complexity to the cutting technique
- various dimensions relative to other trees when working in a forest environment
- in local site conditions that add additional complexity to the felling operation, including site conditions that impact the working position of the operator or the natural direction of fall of the tree.

The unit applies to individuals who fell intermediate trees as part of commercial forestry operations.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Harvesting and Haulage (HAR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for harvesting	1.1 Determine job and product quality requirements from work order or instruction and, where required, seek clarification from appropriate personnel 1.2 Confirm safety and environmental protection requirements for the task according to workplace procedures and harvesting plan 1.3 Identify, assess and take actions to mitigate risks and hazards associated with felling trees 1.4 Plan tree harvesting activities according to work order or instruction and environmental conditions 1.5 Consult and maintain communication with team members and other appropriate personnel to ensure that work is coordinated effectively with others in the workplace 1.6 Select, fit and use personal protective equipment 1.7 Obtain tools and equipment needed for the work, and check for correct operation and safety 1.8 Sharpen and adjust chainsaw or change components according to manufacturer recommendations
2. Assess harvest site	2.1 Assess location and stability of harvest site for conditions likely to affect harvesting activities 2.2 Identify and assess environmental conditions according to harvest plan 2.3 Identify trees to be felled according to harvest plan 2.4 Identify log extraction method and requirements 2.5 Determine harvesting requirements and plan tree felling sequence and general falling directions 2.6 Assess factors affecting harvesting requirements and detect and control specific forest or site risks and hazards

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
3. Assess trees and plan felling	3.1 Assess tree visually to identify felling characteristics 3.2 Confirm tree is safe to fell 3.3 Check planned falling direction and propose deviation if required 3.4 Select cutting pattern to optimise time, value recovery and manageable removal of sections 3.5 Plan sequence of cuts to fell tree according to standard felling procedures and log quality requirements 3.6 Identify trees considered outside own skill level and seek assistance from appropriate personnel where required 3.7 Identify suitable escape routes and clear of growth and other obstacles according to environmental care principles and workplace procedures 3.8 Note and monitor location and activity of other personnel in the work area and modify activity where required
4. Fell trees	4.1 Fell individual trees using selected cutting and directional falling techniques according to current Australian Standard and industry code of practice 4.2 Adjust cutting and directional falling techniques in response to movement and condition of tree 4.3 Use planned escape route when tree starts to fall and monitor the fall of the tree until all movement has stopped 4.4 Delay movement back into the felling area until all tree material, including from adjacent tree crowns, has fallen or is stable enough to allow safe access back into the felling area 4.5 Identify procedures for removal of trees that are hung-up if safe to do so 4.6 Fell trees to meet production levels, log extraction methods and site requirements 4.7 Dispose of waste materials according to environmental requirements and workplace procedures
5. Maintain chainsaw and cutting attachments	5.1 Follow workplace health and safety procedures and manufacturer instructions to lock out equipment 5.2 Inspect chainsaw on completion of activities 5.3 Inspect for damage to chainsaw and cutting attachments and tag for repair, service or replacement according to workplace

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	requirements and manufacturer recommendations if required 5.4 Remove, clean, adjust, sharpen or replace chain and other components according to workplace requirements and manufacturer recommendations

Foundation Skills

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.

Skill	Description
Reading	Interpret workplace documentation to determine work requirements
Writing	Use technical and workplace specific vocabulary to accurately and legibly complete workplace records and forms
Oral communication	- Select and use appropriate spoken communication strategies with work colleagues and other personnel on site when felling trees - Interpret hand signals with other operators to ensure safe tree felling
Numeracy	Complete routine calculations and report on size, length, diameter of felled trees

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPHAR3205 Harvest trees manually (intermediate)	FWPHAR3220 Harvest trees manually (intermediate)	Clarified Application Deleted and added new Element Updated and added new Performance Criteria Updated Foundation Skills, Performance	Equivalent

		Evidence, Knowledge Evidence and Assessment Conditions	
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Links

Companion Volumes, including Implementation Guides, are available at VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>

Assessment Requirements for FWPHAR3205 Harvest trees manually (intermediate)

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Release 1	This version released with FWP Forest and Wood Products Training Package Version 6.0.

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 assessed, planned and conducted the felling of six intermediate trees with a chainsaw, optimising time, value recovery and manageable removal of sections.

In completing this work, the individual must demonstrate that, for each tree, the falling technique was consistent with current Australian Standards and industry codes of practice applicable to tree felling operations.

There must also be evidence that the individual has inspected and carried out routine maintenance on one chainsaw and its cutting attachments on one occasion according to manufacturer requirements.

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:

- Australian Standards and codes of practice applicable to tree felling operations
- workplace health and safety requirements applicable to tree felling operations:
 - personal protective equipment (PPE) and clothing
 - safety equipment
 - first aid equipment
 - firefighting equipment
 - hazard and risk control procedures
 - fatigue management procedures
 - appropriate signage
 - elimination of hazardous materials and substances procedures
 - safe forest practices, including required actions relating to fire

- techniques for manual handling (shifting, lifting and carrying)
- state/territory forest codes of practice applicable to tree felling operations
- types and purposes of cuts to fell trees:
 - scarf cutting
 - back cutting using different methods to provide hinge-wood and wedges to maintain control of tree
- optimisation in tree felling operations:
 - time
 - value recovery
 - manageable removal of sections
- typical tree defects and how they affect tree felling activities
- methods used to identify intermediate trees:
 - trees that contain hazards and are deemed unsafe to fell
 - trees that are considered outside own skill level
 - where cuts made may lead to loss of control of tree in felling
- hazards and risks related to falling trees with chainsaws and methods to minimise associated risks
- methods used to remove trees that are hung up, and procedures for removal
- methods for assessing chain condition
- cutting patterns used to optimise time to fell trees
- environmental protection measures that meet legal obligations and requirements of the industry, state and local standards and/or codes of practice for falling trees with chainsaws:
 - protection of natural and cultural assets
 - cleaning plant, tools and equipment
 - disposing of, recycling and reusing materials
- types, safe use, operation and maintenance of chainsaws, support tools and attachments
- components of a harvesting plan:
 - extraction plan
 - traffic plan
 - environmental requirements
 - restricted areas
 - identified hazards
 - product volumes
- log extraction methods (skidding, forwarding, using cable or shovel logging)
- work order information regarding:
 - tree felling requirements
 - requirements for product quality
- harvesting plan.

Assessment Conditions

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

- physical conditions:
 - skills must be demonstrated in a workplace location or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - chainsaw and accessories
 - suitable trees to fell
 - tools and equipment to fell trees
 - PPE required in tree felling operations
 - communication system
- specifications:
 - access to safety and environmental protection workplace policies and procedures applicable to tree felling and chainsaw operations
 - access to harvesting plan
 - access to workplace standard operating procedures or operator manual for chainsaws.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47>