



Australian Government

FWPHAR3209 Harvest trees manually (advanced)

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 knowledge and skills required to assess harvest sites and trees to be harvested and to plan and safely harvest trees 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 advanced practical felling skills.

Individuals competent in this unit should be able to effectively fell trees of any size, species and condition, including those with significant defects and characteristics that cause excessive felling complexity, that are deemed safe to fell.

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

- lean and weight distribution that adds significant complexity yet can be assessed and adapted to site requirements
- large diameter trees, but not exclusively, that can be safely felled with complex felling heavy forward lean
- lean in a direction away from the fall zone or side-leaning to the available fall zone
- damage or defect that requires complex felling techniques, including trees with visible lightning damage, burnt out trees and those with fire damaged butts
- hung up trees that can be removed safely
- multi legged, hollow butts, culls, stags
- species prone to free splitting and adverse reactions during falling
- complex multi stems
- diameter of tree greater than chainsaw bar length
- terrain, slope and an environment that can add significant complexity to the operation.

The unit applies to individuals who fell advanced 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 tree and plan felling	3.1 Assess tree visually to identify felling characteristics 3.2 Confirm tree is safe to fell 3.3 Assess and check required falling direction and possible deviation 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 suitable escape routes and clear of growth and other obstacles according to environmental care principles and workplace procedures 3.7 Identify trees considered outside own skill level and seek assistance from appropriate personnel where required 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 planned and appropriate cutting and directional falling techniques according to current Australian Standards and industry codes 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 in line with environmental and operational requirements
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 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 and diameter of felled trees

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FWPHAR3209 Harvest trees manually (advanced)	FWPHAR3221 Harvest trees manually (advanced)	Clarified Application Updated and added new Performance Criteria Updated Foundation Skills, Performance Evidence, Knowledge Evidence and Assessment	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Conditions	

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 FWPHAR3209 Harvest trees manually (advanced)

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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 assessed, planned and conducted the felling of six advanced 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
- optimisation in tree felling operations:
 - time
 - value recovery
 - manageable removal of sections
- types and purposes of cuts to fall advanced trees:
 - scarf cutting
 - back cutting using different methods to provide hinge-wood and wedges to maintain control of tree
- typical tree defects and how they affect tree felling activities
- methods to identify advanced trees:
 - trees that contain hazards and are deemed unsafe to fell
 - trees 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
 - personal protective equipment required in tree felling operations
 - communication system
- specifications:
 - access to workplace safety and environmental protection policies and procedures applicable to tree felling and chainsaw operations
 - access to harvesting plans
 - 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>