



Australian Government

FWPCOT3351 Fell trees manually (advanced)

Release: 1

FWPCOT3351 Fell trees manually (advanced)

Modification History

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 9.0.

Application

This unit of competency describes the skills and knowledge required to assess, plan and safely carry out manual felling of trees with advanced characteristics using a chainsaw. This unit covers the felling procedures for advanced trees with a level of complexity that requires significant tree assessment and advanced practical felling skills.

The unit applies to individuals who possess existing proficiency in operating a chainsaw and are required to fell advanced trees as part of arboriculture, forestry, agriculture, conservation and land management, local government, emergency services and other government agency operations. With the exception of minor forest produce, this unit does not apply to commercial harvesting operations.

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 with 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 techniques
- 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 and stags
- species prone to free splitting and adverse reactions during felling
- complex multi-stems
- terrain, slope and environment that can add significant complexity to the operation.

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

Common Technical (COT)

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 felling	1.1 Determine job requirements from work order or instruction and, where required, seek clarification from appropriate personnel 1.2 Confirm workplace health and safety and environmental protection practices and/or procedures for task 1.3 Identify hazards, assess risks, determine appropriate control measures and record findings to mitigate risks and hazards associated with felling advanced trees by conducting a documented risk assessment according to workplace procedures 1.4 Identify, assess and determine felling requirements of trees to fell according to work order or instruction 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
2. Assess site conditions and surroundings	2.1 Inspect site for conditions likely to affect safe implementation of felling activities 2.2 Identify and report site environmental conditions to appropriate personnel 2.3 Determine fall zone and implement control measures to minimise risks and hazards in the zone according to safe work procedures 2.4 Monitor location and activity of other personnel on the work site, and implement control measures according to workplace safety procedures

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 Identify trees considered outside own skill level, and seek assistance from appropriate personnel where required 3.2 Assess tree visually to identify felling characteristics 3.3 Assess trees and site to determine complexity of felling requirements 3.4 Confirm tree is safe to fell 3.5 Assess and progressively plan tree-felling sequence for individual trees 3.6 Assess and check required felling direction and possible deviation 3.7 Plan suitable escape routes, and clear routes of growth and other obstacles according to environmental care, workplace and regulatory requirements 3.8 Plan sequence of cuts to fell tree according to standard felling procedures 3.9 Assess need, safety and suitability of an industry approved technique and associated equipment to control tree fall 3.10 Confirm planned escape route according to workplace procedures
4. Apply tree-felling techniques	4.1 Fell individual trees using planned and appropriate techniques according to current Australian Standards and industry codes of practice at a safe distance from other personnel, machinery, infrastructure and other assets in the work area 4.2 Apply an industry approved technique and equipment to ensure that the tree falls in the direction of the scarf 4.3 Adjust cutting technique in response to movement and condition of tree 4.4 Use planned escape route when tree starts to fall, and monitor the fall of the tree until all movement has stopped 4.5 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 4.6 Identify procedures for removal of trees that are hung-up if safe to do so 4.7 Dispose of waste materials according to workplace environmental protection and operational practices and/or procedures
5. Maintain chainsaw	5.1 Follow workplace health and safety procedures and manufacturer

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
and cutting attachments	instructions to deactivate and isolate 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 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 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
FWPCOT3351 Fell trees manually (advanced)	FWPCOT3348 Fell trees manually (advanced)	Information added to Application Updates to Performance	Not equivalent

		Criteria New criteria added to Performance Evidence to address industry needs Information added to Knowledge Evidence to enhance clarity	
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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 FWPCOT3351 Fell trees manually (advanced)

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Release	Comments
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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 conducted a complete hazard and risk assessment of site, surroundings, and trees, planned risk control measures, selected appropriate cutting techniques and felled a minimum of six trees with advanced characteristics following workplace policies and procedures and current workplace health and safety legislation and regulations.

The trees must be chosen according to the following criteria:

- at least one tree to be selected from:
 - tree with a lean and a weight distribution that adds significant complexity, yet can be assessed and adapted to site requirements
 - tree leaning in a direction away from the fall zone, or side-leaning towards the available fall zone
- at least one tree with a heavy forward lean
- at least one tree that can be safely felled using one of the following complex felling techniques:
 - centre scarf technique
 - executing cuts from both sides of the tree during the scarf and back cut
- at least one tree exhibiting damage, defect or complex structure that requires complex felling techniques to be selected from the following:
 - tree with visible lightning damage
 - tree that is burnt out or has a fire-damaged butt
 - trees with complex multi-stems
 - tree with multi-legged growth or large multiple leaders
 - tree with a hollow
 - tree that is stag-dead or alive but in an advanced stage of decay
 - tree with complex large low branches.

There must also be evidence that the individual has documented a risk assessment for at least one of the felled trees. This documentation must detail localised hazards and risks associated with tree felling and specify methods to minimise these risks.

In completing this work, the individual must demonstrate correct use of personal protective equipment and that, for each tree, the felling technique used was appropriate and consistent with current Australian Standards and industry codes of practice applicable to tree felling operations.

There must also be evidence that the individual has sharpened one chain, 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
- hazards and risks related to felling trees with chainsaws, and methods to minimise associated risks, including:
 - physical conditions of the site
 - unsafe/hazardous trees
 - fire and other emergency situations
 - overhead and underground services
 - nearby structures
 - standing vegetation in the intended direction of fall
 - falling branches
 - weather conditions
 - impediments of escape routes
 - vehicle and traffic access
 - people on or near worksite
 - machinery on or near worksite
 - carrying and transporting a chainsaw
 - user fatigue
- hazards related to maintaining chainsaws, and methods to minimise associated risks
- features of unsafe/hazardous advanced trees and defects of trees and how they affect tree felling activities
- types and purposes of cuts to fell advanced trees:
 - scarf cut
 - back cut using different methods to provide hinge wood and wedges to maintain control of tree
- characteristics of advanced trees, considering features or factors that include:
 - lean and weight distribution
 - heavy forward lean

- lean direction relative to fall zone
- tree diameter
- trees that have fallen but remain caught on other trees or structures
- damage or defects to trees from lightning, fire, or other causes
- structural particularities in trees
- species prone to splitting or reacting unpredictably during felling
- physical environment, including the terrain and slope where the tree is situated
- methods used to identify advanced trees, including those:
 - that contain hazards and are deemed unsafe to fell
 - that are considered outside own skill level
 - where cuts made may lead to loss of control of tree in felling
- methods used to remove trees that are hung up, and procedures for removal
- methods for assessing chain condition
- types, safe use, operation and maintenance of chainsaws, support tools and attachments
- workplace procedures specific to felling trees with chainsaws, including:
 - health and safety, with particular emphasis on deactivating and isolating equipment, use of personal protective equipment (PPE), safe manual handling and fire prevention measures
 - communication reporting lines
 - recording and reporting repairs, maintenance activities and equipment faults
- environmental protection requirements and practices that meet legal obligations and requirements of the industry, state and local standards and/or codes of practice for felling trees with chainsaws, including:
 - protection of natural and cultural assets
 - cleaning plant, tools and equipment
 - disposing of, recycling and reusing materials
 - disposing of hazardous substances.

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 the workplace 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:
 - workplace health and safety and environmental protection policies and/or procedures applicable to tree felling and chainsaw operations
 - 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

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