



Australian Government

Department of Education, Employment and Workplace Relations

FPIFGM3205A Fall trees manually (advanced)

Release: 1

FPIFGM3205A Fall trees manually (advanced)

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit specifies the outcomes required to assess, plan and safely carry out advanced tree falling operations. This unit is intended for use in situations where the production of timber is not the primary focus of the activity. Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIFGM112A Fall trees manually - advanced (non-commercial/non-production)

Application of the Unit

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This unit supports the attainment of skills and knowledge required for competent workplace performance in forest and forest products operations of all sizes. The unit applies to a forest environment and involves application of skills and knowledge at a tradesperson level. These skills and knowledge are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Not Applicable

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare and maintain falling equipment	1.1 Applicable Occupational Health and Safety (OHS), legislative and organisational requirements relevant to falling trees are identified and complied with 1.2 Site environmental protection measures are adhered to in accordance with relevant legislation and regulations 1.3 Work plan is reviewed and checked as required 1.4 Tools and equipment are selected appropriate to work requirements and checked for operational effectiveness in accordance with manufacturer's recommendations 1.5 Blunt or damaged chainsaw is detected, rectified and reported in accordance with workplace procedures 1.6 Operational effectiveness of chainsaw is monitored to maintain falling safety and productivity 1.7 Communication with others is established and maintained in accordance with OHS requirements
2 Assess conditions and surroundings	2.1 Site environmental concerns are identified and complied with in accordance with relevant national, state, and local legislation or regulations 2.2 Environmental conditions are identified and assessed in accordance with work plan requirements 2.3 Awareness of environmental conditions and other personnel activity in the work area is maintained and falling activity modified 2.4 General factors affecting falling requirements are assessed and specific forest or site risks and hazards identified and controlled
3 Assess tree and plan falling	3.1 General falling direction and working face are planned to minimise danger and damage to self, others and the environment 3.2 Tree falling sequence for individual trees is assessed and progressively planned 3.3 Tree to be felled is located and growth is cleared to enable a visual assessment of falling characteristics 3.4 Required falling direction and degree of allowable error is assessed and checked 3.5 Sequence of cuts to fall tree is planned in accordance with standard falling procedures 3.6 Suitable escape route is selected and cleared of growth and other obstacles in accordance with environmental

ELEMENT**PERFORMANCE CRITERIA**

- care principles and statutory requirements
- 3.7 Personal **limitations** in safely falling trees with own skills are assessed and **assistance** sought from appropriate personnel
- 4 Fall tree
- 4.1 All work is conducted using established safe operating practices and in accordance with site procedures
- 4.2 Location and activity of other personnel in the work area is noted and monitored
- 4.3 Cutting techniques used are appropriate for advanced tree falling operations
- 4.4 Unexpected characteristics of tree and other problems are assessed, assistance sought and planning reviewed
- 4.5 Planned escape route is used when tree starts to fall and the fall and movement of tree on ground is monitored until stability is determined
- 4.6 Chainsaw is monitored for operational effectiveness and any faults, malfunctions or problems are reported in accordance with site procedures

Required Skills and Knowledge**REQUIRED SKILLS AND KNOWLEDGE**

This describes the essential skills and knowledge and their level, required for this unit

- Required skills include:**
- comply with legislation, regulations, standards, codes of practice and established safe practices and procedures relating to advanced tree falling operations
 - use and maintain relevant tools, machinery and equipment including chainsaws
 - identify problems and equipment faults and demonstrate appropriate response procedures
 - use appropriate communication and interpersonal techniques and methods with colleagues and others
 - accurately record and report workplace information, and maintain documentation
 - use hand signals with other operators to maintain effective and safe tree falling
 - recognise own limitations in assessing conditions and trees for falling

Required knowledge and understanding includes:

- contribute to a tree assessment and plan and fall trees within the range of variables for trees and conditions including techniques for control of falling direction consistent with this range
- recognise common diseases, pests and nutrition deficiencies
- calculate slopes and weights in the metric system
- applicable Commonwealth, State or Territory licensing, legislative, regulatory or certification requirements and codes of practice relevant to advanced tree falling operations
- organisational and site standards, requirements, policies and procedures relating to advanced tree falling operations
- principles of cultural diversity and access and equity
- environmental protection requirements, including the safe disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance
- identification and evaluation of structural defects in trees
- types and purposes of a range of cuts to fall trees
- hazards of operating a chainsaw and falling trees
- operational principles and limitations of a chainsaw
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

KEY COMPETENCIES

The seven key competencies represent generic skills considered necessary for effective participation by an individual in the workplace

Performance Level 1 - at this level, the candidate is required to undertake tasks effectively

Performance Level 2 - at this level, the candidate is required to manage tasks

Performance Level 3 - at this level, the candidate is required to use concepts for evaluating and reshaping tasks

Key Competency	Example of Application	Performance Level
How are ideas and	By communicating in simple language	2

information communicated?	to confirm work requirements, convey information to colleagues, and report outcomes relating to falling trees	
How can information be collected, analysed and organised?	By collecting, organising and understanding information required to plan and undertake tree falling	2
How are activities planned and organised?	By organising and conducting tree falling activities in the correct sequence to complete within the designated timeframes	2
How is team work used?	By using effective communication and interpersonal techniques with colleagues and others to maximise confidence, satisfaction and productivity during tree falling operations	2
How are mathematical ideas and techniques used?	By calculating slopes, wind speed and direction time to complete tasks	2
How are problem solving skills applied?	By establishing safe and effective tree falling procedures and processes which anticipate likely problems to avoid wastage and downtime	2
How is the use of technology applied?	By accessing and locating applicable legislative, regulatory and environmental guidelines relevant to tree falling operations	2

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, the Range Statement and the Assessment Guidelines for this Training Package

Overview of assessment

- A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently assess, plan and conduct advanced tree falling operations in accordance with environmental and organisational requirements

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice, including OHS, environmental and organisational policies and procedures, relevant to advanced tree falling operations
- Comply with applicable licensing or certification requirements
- Communicate effectively and work safely with others including maintaining an awareness of other personnel activity in the work area
- Contribute to a tree assessment, plan and undertake advanced tree falling within the range of variables for trees and conditions

Context of and specific resources for assessment

- Visually assess trees and determine falling characteristics
- Determine and plan falling sequence for individual trees
- Select and maintain appropriate tools and equipment and recognise faults, problems or malfunctions
- Safely operate and maintain a chainsaw
- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to advanced tree falling operations
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI05 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment must be by direct observation of tasks, with

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- questioning on underpinning knowledge and it must also reinforce the integration of key competencies
- Assessment methods must confirm the ability to access and correctly interpret and apply the essential underpinning knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below

- | | |
|---|---|
| <p>OHS requirements are to be in accordance with Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures. Requirements may</p> | <ul style="list-style-type: none"> • the use of personal protective equipment and clothing • safety equipment • first aid equipment • fire fighting equipment • hazard and risk control • elimination of hazardous materials and substances • safe forest practices including required actions relating to forest fire |
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include:	• manual handling including shifting, lifting and carrying
Legislative requirements are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include:	• award and enterprise agreements • industrial relations • Australian Standards • confidentiality and privacy • OHS • the environment • equal opportunity • anti-discrimination • relevant industry codes of practice • duty of care • heritage and traditional land owner issues
Organisational requirements	• may include legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Falling	• may require the use of multiple back-cuts and/or boring techniques and will be undertaken in all conditions for which it is safe including slopes up to the maximum allowed by relevant regulations
Trees	• selected for falling include those of any size and condition that are determined can be safely fallen
Environmental protection measures	• may include noise, ground growth, canopy, general forest lean, wind speed and direction, fallen trees, density of trees, ground slope, soil and water protection, ground hazards, obstacles. Measures may also include contingencies for modifying operations during wet or other adverse weather conditions
Work plan	• is to include information and instructions relevant to tree falling operations including processing location details and trees to be felled and retained. Information may also include general environmental requirements, site plan and environmental features

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Tools and equipment	may include warning signs, chainsaw and components, personal protective equipment and clothing, first aid equipment, maintenance requirements, fuel
Maintenance	of chainsaw and components may include sharpening and making adjustments as required
Communication	may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language, hand signals
Environmental conditions	may relate to ground growth, canopy, general forest lean, ground slope, ground hazards, wind speed and direction
Limitations	may relate to job role and responsibilities, own competency level, industry requirements, own understanding of risk identification processes, own interpretation of legislation, regulations and procedures, complying with OHS requirements
Assistance	may be required in situations where cuts made may lead to loss of control of tree in falling, to confirm and adjust cutting techniques in response to movement and condition of tree, to help clear trees that hang up during falling
Visual assessment	of tree may cover size, weight distribution, lean, species, multi leaders, soundness of timber, growth characteristics and stresses
Escape route	clearance may require the assistance from a dozer or other machine

Unit Sector(s)

Not Applicable

Competency Field

Competency Field

Forest Growing and Management