



Australian Government

Department of Education, Employment and Workplace Relations

FPIHAR3212A Harvest trees manually (advanced)

Release: 1

FPIHAR3212A Harvest 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 harvesting operations using a chainsaw. Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIH3041 Harvest trees manually - advanced

Application of the Unit

Application of the Unit

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 Plan falling operation	1.1 Applicable Occupational Health and Safety (OHS), legislative and organisational requirements relevant to harvesting trees are identified and complied with 1.2 Work plan is reviewed and checked as required with appropriate personnel 1.3 Falling requirements are identified and assessed for safe working conditions and environmental protection measures 1.4 Potential and existing risks and hazards in the work area are assessed and controlled 1.5 Trees to be felled and retained are identified and working face and general falling direction are checked 1.6 Log extraction method and requirements for landings and snig tracks or cable anchor points are located 1.7 Tree falling sequence for individual trees is assessed and progressively planned 1.8 Communication with others is established and maintained in accordance with OHS requirements
2 Prepare and maintain falling equipment	2.1 Chainsaw and components are selected appropriate to work requirements and checked for operational effectiveness in accordance with manufacturer's recommendations 2.2 Tools and equipment are selected to support work requirements and prepared in accordance with workplace procedures 2.3 Blunt or damaged saw chain is detected, rectified and reported in accordance with workplace procedures 2.4 Chainsaw is sharpened and adjusted or components changed 2.5 Chainsaw set up is assessed and adjusted in response to changing falling conditions 2.6 Chainsaw performance is systematically monitored to ensure and maintain efficient operations
3 Assess tree and plan falling	3.1 Tree to be felled is located and surrounding growth cleared to enable a visual assessment of falling characteristics 3.2 Required falling direction and degree of allowable error is assessed 3.3 Trees considered too dangerous to fall are marked and reported in accordance with site procedures 3.4 Sequence of cuts to fall tree is planned in accordance

ELEMENT**PERFORMANCE CRITERIA**

with standard *falling procedures*

- | | |
|---|---|
| 4 | <p>Fall tree</p> <p>3.5 Suitable escape route is selected and cleared of growth and other obstacles in accordance with environmental care principles and site procedures</p> <p>4.1 Movement and whereabouts of other personnel is monitored and work modified to be in accordance with OHS requirements</p> <p>4.2 Tree falling operations are safely undertaken appropriate to site conditions and in accordance with OHS and fire safety policies and procedures</p> <p>4.3 Additional leaders are removed and cleared in accordance with falling plan</p> <p>4.4 Unexpected characteristics of tree and other problems are assessed and planning reviewed</p> <p>4.5 Cutting technique is adjusted in response to movement and condition of tree</p> <p>4.6 Planned escape route is used when tree starts to fall and the movement of tree on ground is monitored until determined stable</p> <p>4.7 Trees that hang up are assessed and cleared in accordance with site requirements</p> |
|---|---|

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 for harvesting trees
 - use and maintain relevant tools, machinery and equipment
 - identify falling problems and equipment faults and demonstrate appropriate response procedures
 - use appropriate interpersonal and communication techniques and methods with colleagues and others
 - interpret, apply and convey information in written, diagrammatic and verbal form
 - assess, plan and fall the range of trees and conditions including control of falling direction consistent with this range

Required knowledge and understanding includes:

- plan work to site requirements and extraction methods
- efficiently and safely harvest trees using a variety of falling techniques
- effectively use unconventional, non-standard and/or multiple back cuts
- applicable Commonwealth, State or Territory licensing, legislative, regulatory or certification requirements and codes of practice relevant to the full range of processes for harvesting trees
- organisational and site standards, requirements, policies and procedures for harvesting trees
- 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, material and equipment and procedures for their safe use, operation and maintenance
- process of assessment, planning and falling for the range of trees and conditions including control of falling direction consistent with this range
- chainsaw equipment operational procedures, technical capability and limitations
- procedures for recording, reporting and maintaining 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 information communicated?	By communicating in simple language to confirm work requirements, convey information and requests to colleagues	2

	and report and record outcomes	
How can information be collected, analysed and organised?	By collecting, organising and understanding information required to conduct tree harvesting operations	2
How are activities planned and organised?	By organising and conducting work activities in the correct sequence for tree harvesting operations to be completed 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 harvesting operations	1
How are mathematical ideas and techniques used?	By calculating time to complete tasks and estimating tools, equipment and material requirements	1
How are problem solving skills applied?	By establishing safe and effective processes for tree harvesting operations which anticipate likely problems to avoid wastage and downtime	2
How is the use of technology applied?	By selecting and using equipment to harvest trees	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 use a chainsaw to carry out advanced tree harvesting operations using a variety of falling techniques in a forest environment

Critical aspects for assessment and evidence

- Comply with applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of

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

required to demonstrate competency in this unit	practice, including OHS, environmental and organisational policies and procedures, relevant to advanced tree harvesting operations • Comply with applicable licensing or certification requirements • Communicate effectively and work safely with others in the work area • Safely and efficiently fall trees without damage to personnel, equipment or surrounding environment • Assess, plan and conduct advanced harvesting of trees using a variety of falling techniques • Plan falling sequence and prepare surroundings for harvesting operations • Prepare, operate and maintain chainsaw and other falling equipment
Context of and specific resources for assessment	• 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 tree harvesting 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 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

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

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

OHS requirements are to be in accordance with Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures. Requirements may include:

- the use of personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- erection of signs
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

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

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)
Trees	• are those of any size, species and condition which can be safely fallen • may include multilegged, hollowbutts, multiple leaders, heavy forward and side leans, stags, culls
Work plan	• is to include information and instructions relevant to tree harvesting operations including processing location details, trees to be felled and retained, extraction methods, and environmental care principles. Information may also include general coupe/compartments and environmental requirements, site plan and environmental features
Appropriate personnel	• may include supervisors, clients, colleagues, managers
Falling	• is to be undertaken with general guidance on specific work site, coupe/compartments and environmental requirements • may require the use of multiple back cuts and/or boring techniques, unconventional or non-standard

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

	cuts
Conditions	- will be undertaken in all conditions for which it is safe including slopes up to the maximum allowed by relevant regulations - in which falling will be undertaken may include: ground slope not more than 20 degrees, moderate wind speed, ground is clear of growth or fallen trees which may prevent complete fall, absence of other trees and hazardous ground features within planned line of fall
Environment protection measures	may include 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
Communication	may include verbal and non-verbal language, hand or other agreed signals, eye contact with other operators or personnel, active listening, questioning to clarify and confirm understanding, use of electronic communication devices
Tools and equipment	may include support tools, protective equipment, first aid equipment, spares, maintenance requirements, fuel
Visual assessment	may cover size, weight distribution, lean, species, multi leaders, soundness of timber, growth characteristics and stresses
Errors	may relate to hang-ups, damage and extraction
Falling procedures	require minimising splitting including methods of dealing with additional leader(s) where applicable
Clearances	of growth for escape route may require assistance from dozer or other machine
Operations	must include scarf cutting to plan, backcutting to provide planned hinge-wood and maintain control of tree, using wedges to assist in controlling falling direction

Unit Sector(s)

Not Applicable

Competency Field

Competency Field Harvesting and Haulage