



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **FPIHAR2202A Harvest trees manually (basic)**

**Release: 1**

## **FPIHAR2202A Harvest trees manually (basic)**

### **Modification History**

Not Applicable

### **Unit Descriptor**

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This unit specifies the outcomes required to prepare, plan and harvest regular trees, no more than 50cm in diameter at the stump height and not taller than 20 metres, using a chainsaw. Compliance with licensing, legislative, regulatory or certification requirements may be required in various jurisdictions

This unit replaces FPIH2003A Harvest trees manually - basic

### **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 production worker 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 Identify falling requirements	<p>1.1 Applicable <i>Occupational Health and Safety (OHS)</i>, <i>legislative</i> and <i>organisational</i> requirements relevant to harvesting <i>trees</i> are identified and complied with</p> <p>1.2 Site <i>environmental protection measures</i> are adhered to in accordance with harvesting plan and relevant legislation and regulations</p> <p>1.3 <i>Work order</i> is reviewed and checked with <i>appropriate personnel</i></p> <p>1.4 <i>Falling requirements</i> are determined and assessed for safe working <i>conditions</i></p> <p>1.5 Potential and existing risks and hazards in the work area are identified and controlled</p> <p>1.6 Trees to be felled and retained are identified and working face and general falling direction are checked</p> <p>1.7 Tree falling sequence for individual trees is assessed and progressively planned</p> <p>1.8 <i>Communication</i> with others is established and maintained in accordance with OHS requirements</p>
2 Prepare and maintain falling equipment	<p>2.1 Tree harvesting is conducted in accordance with work order, environmental and OHS requirements</p> <p>2.2 Chainsaw and components are selected appropriate to work requirements and checked for operational effectiveness in accordance with manufacturer's recommendations</p> <p>2.3 <i>Tools and equipment</i> are selected to support work requirements and prepared in accordance with site procedures</p> <p>2.4 Blunt or damaged saw chain is detected, rectified and reported in accordance with site procedures</p> <p>2.5 Chainsaw is sharpened and adjusted or components changed in accordance with manufacturer's recommendations</p> <p>2.6 Chainsaw performance is systematically monitored to ensure and maintain efficient operations</p>
3 Assess tree and plan falling	<p>3.1 Tree to be felled is located and surrounding growth cleared to enable a <i>visual assessment</i> of falling characteristics</p> <p>3.2 Required falling direction and degree of allowable <i>error</i> is assessed</p> <p>3.3 Trees that are beyond the characteristics appropriate for basic manual harvesting are identified and reported</p>

**ELEMENT****PERFORMANCE CRITERIA**

- to appropriate personnel
- 3.4 Trees considered too dangerous to fall are marked and reported in accordance with site procedures
- 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 care principles and site procedures
- 4 Fall tree
- 4.1 Movement and whereabouts of other personnel is monitored and work modified to be in accordance with OHS requirements
- 4.2 Tree falling ***operations*** are safely undertaken appropriate to site conditions
- 4.3 Unexpected characteristics of tree and other problems are assessed and planning reviewed
- 4.4 Cutting technique is adjusted in response to movement and condition of tree
- 4.5 Planned escape route is used when tree starts to fall and the movement of tree on ground is monitored until determined stable
- 4.6 Trees that hang-up are immediately cleared or marked and assistance sought from appropriate personnel

**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
  - review and accurately identify work requirements
  - use and maintain relevant tools, machinery and equipment
  - identify problems and equipment faults and demonstrate appropriate response procedures
  - use appropriate interpersonal and communication techniques and methods with colleagues and others
  - accurately locate, record and report information
  - assess, plan and fall the range of trees under normal conditions

**Required knowledge and understanding includes:**

- efficiently and safely operate chainsaw equipment to harvest trees
- apply safe work practices including the use of personal and protective equipment and control of hazards
- interpret, apply and convey information in written, diagrammatic and/or verbal form
- basic knowledge and understanding of 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
- procedures for recording, reporting and maintaining workplace records and information
- appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- chainsaw equipment operational procedures, technical capability and limitations
- process of assessment, planning and falling for the range of trees and conditions

**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 to confirm work requirements, convey	1

information communicated?	information and requests to colleagues and report and record outcomes for tree harvesting operations	
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 slopes, wind speed and direction to safely complete tasks	2
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	1

## 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 assess, plan and safely and efficiently operate chainsaw equipment to fell trees in a forest environment within organisational requirements

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### 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 harvesting basic trees manually
- Comply with applicable licensing or certification requirements
- Communicate effectively and work safely with others in the work area
- Assess, plan and safely and efficiently fall trees without damage to personnel, equipment or surrounding environment
- Prepare, operate and maintain chainsaw equipment 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 FPI11 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



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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

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<b>Legislative requirements are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include:</b>	<ul style="list-style-type: none"> <li>• award and enterprise agreements</li> <li>• industrial relations</li> <li>• Australian Standards</li> <li>• confidentiality and privacy</li> <li>• OHS</li> <li>• the environment</li> <li>• equal opportunity</li> <li>• anti-discrimination</li> <li>• relevant industry codes of practice</li> <li>• duty of care</li> <li>• heritage and traditional land owner issues</li> </ul>
<b>Organisational requirements</b>	<ul style="list-style-type: none"> <li>• 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)</li> </ul>
<b>Trees</b>	<ul style="list-style-type: none"> <li>• will be fallen in a forest environment and may require a range of cuts</li> <li>• fallen during basic harvesting are to conform with the following characteristics: diameter not more than 50 centimetres at position of cut, height not more than 20 metres, species and growth conditions not prone to twisting or splitting, sound wood condition in barrel, single leader, lean and weight distribution consistent with falling direction,</li> </ul>
<b>Environmental protection measures</b>	<ul style="list-style-type: none"> <li>• 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 and obstacles. Measures may also include contingencies for modifying operations during wet or other adverse weather conditions</li> </ul>
<b>Work order</b>	<ul style="list-style-type: none"> <li>• is to include information and instructions relevant to tree harvesting operations including processing location details and trees to be felled and retained</li> </ul>

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<b>Appropriate personnel</b>	<ul style="list-style-type: none"> <li>may include supervisors, clients, colleagues, managers</li> </ul>
<b>Falling requirements</b>	<ul style="list-style-type: none"> <li>include trees to be felled and retained, extraction methods, processing location, environmental care principles</li> </ul>
<b>Conditions</b>	<ul style="list-style-type: none"> <li>in which falling will be undertaken may include: minimal canopy affecting free fall, ground slope not excessive, wind not significantly affecting falling characteristics, absence of ground growth or fallen trees preventing complete fall, absence of stags and hazardous ground features in falling radius, clear falling or sparse tree density, absence of ground growth or fallen trees preventing free movement around tree stump</li> </ul>
<b>Communication</b>	<ul style="list-style-type: none"> <li>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</li> </ul>
<b>Tools and equipment</b>	<ul style="list-style-type: none"> <li>may include support tools, protective equipment, first aid equipment, spares, maintenance requirements, fuel</li> </ul>
<b>Visual assessment</b>	<ul style="list-style-type: none"> <li>may cover size, weight distribution, lean, species, multi leaders, soundness of timber, growth characteristics and stresses</li> </ul>
<b>Errors</b>	<ul style="list-style-type: none"> <li>may relate to hang-ups, damage and extraction</li> </ul>
<b>Clearance</b>	<ul style="list-style-type: none"> <li>of growth for escape route may require assistance from dozer or other machine</li> </ul>
<b>Operations</b>	<ul style="list-style-type: none"> <li>may include scarf cutting to plan, backcutting to provide planned hinge-wood and maintain control of tree, using wedges to assist in controlling falling direction</li> </ul>

## Unit Sector(s)

Not Applicable

## Competency Field

Competency Field                      Harvesting and Haulage