



**Australian Government**

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

# **FPIHAR5201B Design harvesting plans**

**Release: 1**

## **FPIHAR5201B Design harvesting plans**

### **Modification History**

Not Applicable

### **Unit Descriptor**

#### **Unit descriptor**

This unit describes the outcomes required to design harvesting plans for established coupes to maximise output and cost efficiencies across multiple coupes in a number of locations

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPIHAR5201A Design harvesting plans

### **Application of the Unit**

#### **Application of the unit**

The unit involves designing harvesting plans in a forest or farm forest setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

### **Licensing/Regulatory Information**

Refer to Unit Descriptor

### **Pre-Requisites**

#### **Prerequisite units**

## Employability Skills Information

**Employability skills**            This unit contains employability skills

## Elements and Performance Criteria Pre-Content

|                                                                   |                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Elements describe the essential outcomes of a unit of competency. | Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide. |
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## Elements and Performance Criteria

| ELEMENT                          | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Plan for coupe harvest design | <p>1.1. Applicable <b>Occupational Health and Safety</b> (OHS), <b>environmental</b>, <b>legislative</b> and <b>organisational requirements</b> relevant to designing harvesting plans are identified and followed</p> <p>1.2. <b>Local authority</b> coverage, <b>land ownings</b> are obtained and <b>boundaries</b> are established</p> <p>1.3. Coupe locations including map and grid references are identified</p> <p>1.4. Land use <b>zonings</b> are identified or applied for</p> <p>1.5. Documented environmental issues encountered with previous harvesting plans are analysed and taken into consideration</p> <p>1.6. <b>Communication</b> with others is established and maintained in line with OHS requirements</p> |
| 2. Design harvesting plans       | <p>2.1. Forest types, available <b>species</b> and <b>topography</b> are analysed and documented in line with plan and site procedures</p> <p>2.2. <b>Gross area</b> of each coupe is calculated and <b>nett area</b> to be <b>harvested</b> devised</p> <p>2.3. <b>Volume</b> estimates are calculated and reported for each coupe</p> <p>2.4. <b>Operational activities</b> including site preparation environmental considerations and access are designed</p> <p>2.5. Harvesting and <b>cartage</b> requirements are analysed and calculated</p> <p>2.6. Schedule for harvesting is designed, checked and communicated</p>                                                                                                      |
| 3. Review harvesting plan design | <p>3.1. Harvesting plan designs are reviewed with other harvest plan designers</p> <p>3.2. Harvesting plan designs are tested and modified to suit each coupe</p> <p>3.3. Harvesting plan design is <b>recorded and reported</b> to appropriate personnel</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

## REQUIRED SKILLS AND KNOWLEDGE

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

### Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to accurately calculate gross and nett coupe areas
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

### Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for designing harvesting plans
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for designing harvesting plans
- Environmental risks and hazards specific to coupes
- Harvesting planning design principles
- Harvesting methodologies
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace records and information

# 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, range statement and the Assessment Guidelines for the 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 design harvesting plans within organisational requirements

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

The evidence required to demonstrate competency in this unit must be relevant to, and satisfy, all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to designing harvesting plans
- following organisational policies and procedures relevant to designing harvesting plans
- designing harvesting plans in line with regulations and organisational requirements
- designing harvesting plans in line with site conditions, regulations and organisational requirements

### 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 required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
  - workplace location or simulated workplace
  - materials and equipment relevant to undertaking work applicable to this unit
  - 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

## EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required 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, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**OHS requirements:** are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and

## RANGE STATEMENT

organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying
- legislation
- organisational policies and procedures
- workplace practices

**Environmental requirements**  
may include:

**Legislative requirements:**

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and 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

**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 procedures

## RANGE STATEMENT

- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste disposal, recycling and re-use guidelines)

**Local authorities** are to include: local government councils or shires with local planning and zoning authority for a given region

**Land ownings** the process of notifying and obtaining owner approval to commence harvesting operations

**Boundaries** are designated forest allotments owned privately, by Government or by the forestry organisation that fall within survey pegs for the land allocated

**Zoning** is designated forest coupes owned privately, by government or by the forestry organisation with boundaries that fall within survey pegs for the land allocated for forest growing and harvesting operations under local authority allocation

**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
- body language

**Species** may include:

- native species of one or more type
- imported species

**Topography** is a map of the designated area showing terrain levels, contours, elevations, slopes, gullies and adjoining land parcels, rainfall, soil type

**Gross area** is the total area mass of the planned forest coupe

**Nett area** is the total area of forest available for harvesting excluding streamside buffers, filter strips, habitat

## RANGE STATEMENT

|                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                            | protection areas, rainforest protection, excluded areas, roads, tracks and landings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Harvested</b>                           | is the method of cutting and extracting trees and logs from designated areas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Volume</b>                              | is the estimated return of cubic metres or tonnes of timber for each of sawlogs, pulpwood or firewood                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Operational activities</b> may include: | <ul style="list-style-type: none"><li>• coupe map details</li><li>• site preparation</li><li>• streamside buffers</li><li>• filter strips</li><li>• contours</li><li>• gullies</li><li>• crossing points</li><li>• habitat protection</li><li>• rainforest protection</li><li>• flora and fauna protection</li><li>• landscape protection</li><li>• soil and water protection</li><li>• excluded areas</li><li>• rubbish removal</li><li>• permanent roads</li><li>• temporary roads</li><li>• landings</li><li>• dumps</li><li>• snig tracks</li><li>• forwarding tracks</li><li>• adjoining land</li><li>• wet weather restrictions</li><li>• fire protection requirements</li></ul> |
| <b>Cartage</b>                             | is the use of log truck hauling operators to remove felled logs from the site                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Records and reports</b> may include     | <ul style="list-style-type: none"><li>• producing detailed records and reports outlining the design of harvesting plans and the review processes</li></ul> <p>and may be:</p> <ul style="list-style-type: none"><li>• manual</li><li>• using a computer-based system or other appropriate organisational communication</li></ul>                                                                                                                                                                                                                                                                                                                                                       |

## **RANGE STATEMENT**

system

## **Unit Sector(s)**

**Unit sector** No sector assigned

## **Co-requisite units**

**Co-requisite units**

## **Competency field**

**Competency field** Harvesting and Haulage