FPICOT5209A Manage tree harvesting to minimise environmental impact

Release: 1

ISC INDUSTRY SKILLS COUNCILS
Creating Australia's Future

FPICOT5209A Manage tree harvesting to minimise environmental impact

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to plan and manage tree harvesting to minimise environmental impact and by-product while maximising yields using harvest planning systems
	General workplace legislative and regulatory requirements apply to this unit. Subject to enterprise requirements specific licences/certification may be required in the following areas:

- Forest Sustainability Certification
- Chain of Custody Certification

Application of the Unit

Application of the unit	The unit involves managing tree harvesting to minimise environmental impact in a variety of settings including:

- native forests
- plantations
- agroforestry
- farm forestry

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

Not Applicable

Pre-Requisites

Not Applicable

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. |

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop tree harvesting plan	1.1. Applicable *Occupational Health and Safety* (OHS), *environmental*, *legislative* and *organisational requirements* relevant to managing tree harvesting while minimising environmental impact are identified and followed
	1.2. Tree harvesting requirements are researched and analysed
	1.3. Consultation processes are undertaken as an integral part of the planning process
	1.4. Available timber is identified and calculated
	1.5. *Tree harvesting plan* is developed to ensure maximum yields while minimising environmental impact and by-product
	1.6. Approval for plan is gained and work teams are informed
2. Initiate pre-harvesting activities	2.1. Equipment is selected appropriate to work requirements and checked for operational effectiveness in line with the manufacturer's specifications and OHS requirements
	2.2. Buffer zones, protected areas and erosion control measures are installed or identified
	2.3. Resources are acquired in line with plan requirements, and equipment and resource requirements estimated
	2.4. *Planning permits and access permission* are applied for and gained
	2.5. *Communication with stakeholders is established and maintained in line with OHS*, *environmental and organisational requirements*
3. Manage tree harvesting operations	3.1. *Harvesting operational activities* are managed for compliance with environmental and organisational requirements
	3.2. *Sustainability indicators* are monitored for compliance with sustainability plan
	3.3. Reported exceptions to work order and tree harvesting plan are rectified within legislative and planned timeframes
4. Review tree harvesting operations	4.1. Sustainability indicators are reported for all harvesting stages, including pre- and post-harvesting, in line with organisational and contractual requirements

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ELEMENT	PERFORMANCE CRITERIA
	4.2. Performance indicators are reported to appropriate stakeholders in line with legislative and contractual requirements
	4.3. Sufficient feedback is reported to provide data for assistance with planning of future harvesting
5. Review tree harvesting plan	5.1. Data from tree harvesting operations is analysed to assist with planning future harvesting operations
	5.2. Techniques to review effectiveness of harvesting operations in maximising yields and minimising environmental impact and by-product are implemented
	5.3. Information is used to change harvesting plan as required

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 manage tree harvesting while minimising environmental impact
- Communication skills sufficient to use appropriate consultative, communication and interpersonal techniques with colleagues and others
- Literacy skills sufficient to record and report workplace information; maintain documentation; read and interpret maps; follow legislation, regulations, standards, codes of practice and safe working procedures involved in harvesting operations
- Numeracy skills sufficient to estimate and calculate volume, gross and net areas; calculate available timber
- Problem solving skills sufficient to identify problems; demonstrate appropriate response procedures
- Planning and organisational skills sufficient to organise and obtain required permits and to manage harvesting operation while minimising environmental impact; prepare and review a tree harvesting plan; implement a tree harvesting plan
- Managerial skills sufficient to manage harvesting operations
- Research skills sufficient to obtain information on tree harvesting requirements to maximise yields and minimise environmental impact and by-product

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards,

REQUIRED SKILLS AND KNOWLEDGE

codes of practice and established safe practices relevant to the full range of processes for managing tree harvesting to minimise environmental impact

- Environmental protection requirements, including the safe disposal of waste material
- Organisational, site and management standards, requirements, policies and processes for implementing harvesting plans
- Environmental risks and hazards
- OHS in relation to harvesting operations
- OHS monitoring systems
- Applicable certification schemes such as Forest Stewardship Council, Australian Forestry Standard, ISO standards for environmental and other management systems, other identified industry standards
- Chain of custody principles and applicable systems
- Database management and document control systems
- Mathematic theory and application for calculating volume and scheduling flow
- Tree harvesting plans
- Sustainability indicators
- Coupe size (gross area estimate, net area estimate and volume estimate)
- Buffer zones, protected areas and erosion control
- Planning permits and access permission
- Performance indicators
- Established communication channels and protocols
- Problem identification and resolution
- Types of tools and equipment, and procedures for their safe use and maintenance
- Procedures for the recording, reporting and maintenance of workplace 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 manage tree harvesting in line with organisational requirements while minimising environmental impact
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, including, environmental, OHS and organisational policies and procedures relevant to managing tree harvesting - following organisational policies and procedures relevant to managing tree harvesting to minimise environmental impact - using harvest planning systems to develop and review a tree harvesting plan - managing harvesting operations in line with the tree harvesting plan - rectifying exceptions to work order and environmental plans - using data and performance indicators to review harvesting operations
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

EVIDENCE GUIDE

	• 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 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

RANGE STATEMENT

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 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

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

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
- heritage and traditional land owner issues

Organisational requirements may include:

- legal
- organisational and site guidelines
- fire management principles

RANGE STATEMENT

	• waste management principles
	• wet weather controls
	• soil erosion control
	• 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
	• ethical standards
	• recording and reporting requirements
	• equipment use, maintenance and storage requirements
	• environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
Tree harvesting plan may include:	• sustainability indicators
	• sustainability plan
	• OHS monitoring systems
	• applicable certification schemes
	• coupe size
	• calculation of available timber
	• key performance indicators
	• human resource requirements, equipment and resource requirement estimates
	• planning permits and access permission requirements
	• staff and contract work orders
Planning permits and access permission may include:	• permits granted by:
	• government
	• local authority
	• other entitled entities for access and harvesting operations to take place
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

RANGE STATEMENT

	• use of language and concepts appropriate to individual social and cultural differences • control of tone of voice and body language
Stakeholders may include:	• management • staff • contractors • environmental authorities • public • Commonwealth, State/Territory and local government • product processors • customers • destination markets
Harvesting operational activities may include:	• surveying and mapping site details • marking stream buffers, filter strips, contours, gullies, roads, bridges and other watercourse crossings • other site preparation • habitat protection • landscape protection • buffer establishment • related construction • fire management • harvesting • regeneration • machinery operations • site preparation silvicultural exercises associated with harvesting • road work, including the construction of roads, tracks, watercourse crossings and bridges, building drains and silt traps • waste removal • chipping • transportation • wet weather activities and operation adjustments • pest management prescriptions
Sustainability indicators should include:	• water quality • soil condition • appropriate native flora and fauna protection • maintenance of any culturally significant

RANGE STATEMENT

landscapes, natural or anthropogenic formations and constructions

Unit Sector(s)

Not Applicable

Competency field

Competency field   Common Technical