



Australian Government

Department of Education, Employment and Workplace Relations

FPICOT3214B Take off material quantities

Release: 1

FPICOT3214B Take off material quantities

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to estimate the correct material quantities and pricing in relation to take off items, and includes preparing and itemising materials, detailing material sizes and quantities, and calculating quantity pricing

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 FPICOT3014A Take off material quantities

Application of the Unit

Application of the unit

The unit involves take off material quantities in a forest products factory 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

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. Prepare and itemise materials	1.1. Applicable occupational health and safety (OHS), environmental, legislative and organisational requirements relevant to take off material quantities are identified and followed 1.2. Documentation and specifications are obtained and interpreted to determine material types and job requirements 1.3. Components to be listed are identified and general detailing and dimensioning systems integrated 1.4. Tables for listing are prepared and required items are listed and categorised in line with industry standards 1.5. Materials are detailed in lists in line with customer requirements and site procedures 1.6. Common industry materials are selected where no specific information is provided and material is not critical to design 1.7. Communication with others is established and maintained in line with OHS requirements
2. Detail material sizes and quantities	2.1. Physical dimensions for components are read, calculated, scaled or extracted from tables, in line with industry, site and job requirements 2.2. Material quantities are estimated in line with site procedures and expressed as industry standard lengths or sheet sizes 2.3. Wastage is allowed for in estimated quantities 2.4. Multiple requirements for identical material are accumulated and total quantities are given 2.5. Notes and records are maintained and completed in line with detail of material usage, and cutting and machining requirements
3. Calculate quantities and prices	3.1. Total requirements for each line item in take off are calculated and documented in line with customer requirements and site procedures 3.2. Quantities are expressed in measurement units that match item type, customer requirements and site procedures 3.3. Costs are calculated from item rate and presented in line with specific job requirements

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; efficiently and safely take off material quantities
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to record and report workplace information; maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults; 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 taking off material quantities
- Environmental protection requirements, including the safe disposal of waste material
- Organisational and site standards, requirements, policies and procedures for taking off material quantities
- Environmental risks and hazards
- Using material effectively and efficiently
- Estimating and quantifying
- Products and materials related to take off items
- Pricing arrangements
- Established communication channels and protocols
- Problem identification and resolution strategies, and common fault finding techniques
- Types of tools and equipment, and procedures for their safe use and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting 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 estimate and calculate cost and quantities of take off material

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 taking off material quantities
- following organisational policies and procedures relevant to taking off material quantities
- preparing detail and organising material types in line with organisational requirements
- calculating quantities and costing of take off materials in line with 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 accuracy of performance (over time and in a range of

EVIDENCE GUIDE

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 organisational safety policies and procedures, and

RANGE STATEMENT

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
- ethical standards

RANGE STATEMENT

- recording and reporting requirements
 - equipment use, maintenance and storage requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
- Take off** may include:
- timber-based constructed items where designs have been completed and detailed requirements for item dimensions and individual component materials and sizes are provided
- Documentation** may include:
- drawings and drawing notes
 - sketches
 - customer requirements
 - site instructions
 - information from work colleagues
 - other documentation relating to design of timber construction
 - components listing
 - dimensional and detailing data
- Specifications** may include:
- take off requirements
 - purpose
 - overall design of timber construction
- Material types** may include:
- panels of common manufactured types and surface treatments
 - sawn timber with a range of finishes
 - laminated timber
 - timber of varying species
 - other common building materials and hardware
- Detailing and dimensioning systems** may be by:
- manual techniques
 - with the aid of suitable computer software, such as computer-based retrieval systems
- Lists:**
- are laid out so that the size, type and end use of materials are separated
 - conform to industry terminology and provide sufficient detail to fully specify the material
- Communication** may include:
- verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm

RANGE STATEMENT

- 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
 - industry set sizes for timber and their quality levels
- Standards** are to include:
- Wastage** may include:
- edge or end trimming
 - scarf losses
 - cutting angle losses
- Records** may include:
- product type and size
 - inspection information
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents
 - equipment malfunctions
- Measurement units** may include:
- lineal metres
 - cubic metres
 - unit numbers

Unit Sector(s)

Not Applicable

Competency field

Competency field Common Technical