

CPCBC4006B Matrix Map

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ELEMENTS AND PERFORMANCE CRITERIA

Element	Performance Criteria	Task / Question Map
1. Identify and evaluate the properties of building materials.	1.1. Suitability of materials commonly used in the region for low rise buildings is identified for a given building system.	Workplace Task: identify suitable building and construction materials specified by the project or contract
	1.2. Properties of materials, their quality and the compatibility and non-compatibility of different materials are identified.	Workplace Task: identify suitable building and construction materials specified by the project or contract
	1.3. Environmental impacts of different materials are identified.	Workplace Task: identify suitable building and construction materials specified by the project or contract
	1.4. Impact of allowable tolerances on the conversion of naturally occurring materials is identified.	Workplace Task: identify suitable building and construction materials specified by the project or contract
	1.5. Tolerances for installing and assembling materials are identified and checked in regard to the nature of the work being performed and the requirements of relevant construction industry Australian standards.	Workplace Task: effectively and efficiently test materials to maintain quality standards on site
2. Ensure suitable building materials are selected for application.	2.1. Materials that are structurally adequate and appropriate for the building system specified in the contract are selected.	Workplace Task: identify suitable building and construction materials specified by the project or contract

	2.2. Materials are selected for their safety; required fire resistance rating; suitability to the application, durability, serviceability and cost effectiveness; and compliance with Australian standards.	Workplace Task: identify suitable building and construction materials specified by the project or contract
	2.3. Short and long-term degradation of materials are considered in relation to the building's proposed life cycle.	Workplace Task: identify suitable building and construction materials specified by the project or contract
	2.4. Alternative materials are evaluated and selected if specified materials are unavailable or unsuitable.	Workplace Task: identify suitable building and construction materials specified by the project or contract
	2.5. Selection of materials for use is finalised in accordance with contractual requirements and in consultation with relevant professionals and the client.	Workplace Task: use effective verbal and written communication with manufacturers and suppliers of materials
3. Supervise the acceptance, safe handling and storage of materials on site.	3.1. Limitations and effects of transportation on materials and components are determined and action is taken in the case of potentially damaging circumstances.	Workplace Task: safely handle and store materials
	3.2. Materials are handled correctly and safely on site using appropriate equipment and safe work practices.	Workplace Task: safely handle and store materials
	3.3. Materials are stored in accordance with manufacturer specifications and in compliance with relevant Australian standards.	Workplace Task: safely handle and store materials
	3.4. Processes are implemented for inspecting all materials delivered on site for naturally occurring and/or manufactured defects before installation.	Workplace Task: safely handle and store materials

	<i>3.5. Personnel are aware of actions to be taken in the case of defects caused by incorrect installation, application or placement.</i>	<i>Workplace Task: safely handle and store materials</i>
	<i>3.6. Timber is preserved and ferrous and non-ferrous metals used in the construction process are protected, using established methods.</i>	<i>Workplace Task: safely handle and store materials</i>

REQUIRED SKILLS

Required Skill	Task / Question Map
Required skills for this unit are:	
<i>analysis and report preparation</i>	<i>Workplace Task: comply with organisational and legislative requirements</i>
<i>application of safe work practices and materials handling</i>	<i>Workplace Task: safely handle and store materials</i>
<i>apply numeracy skills to workplace requirements</i>	<i>Workplace Task: comply with organisational and legislative requirements</i>
communication skills to:	
<i>enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand</i>	
<i>communicate with manufacturers and suppliers of materials</i>	
<i>provide advice and information to regulatory authorities</i>	
read and interpret:	
<i>contracts</i>	
<i>drawings and specifications</i>	
<i>use language and concepts appropriate to cultural differences</i>	
<i>use and interpret non-verbal communication</i>	
<i>development and management of standardised processes</i>	
<i>supervision of small teams.</i>	

REQUIRED KNOWLEDGE

Required Knowledge	Task / Question Map
Required knowledge for this unit is:	
<i>alternative materials that can be specified in construction projects</i>	
<i>building and construction materials and technologies</i>	
<i>Building Code of Australia (Class 1 and 10 and Class 2 to 9 with a gross floor area not exceeding 2000 square metres, but not including Type A or Type B construction)</i>	
<i>construction supply processes</i>	
<i>construction and contracting equipment and its use</i>	
<i>environmental effects on various building and construction materials</i>	
<i>relevant state or territory building and construction codes, standards and regulations</i>	
<i>testing procedures for construction materials</i>	
<i>workplace safety requirements.</i>	

CRITICAL ASPECTS

Critical Aspects	Task / Question Map
A person who demonstrates competency in this unit must be able to provide evidence of the ability to:	
<i>identify suitable building and construction materials specified by the project or contract</i>	<i>Workplace Task: identify suitable building and construction materials specified by the project or contract</i>
<i>use effective verbal and written communication with manufacturers and suppliers of materials</i>	<i>Workplace Task: use effective verbal and written communication with manufacturers and suppliers of materials</i>
<i>effectively and efficiently test materials to maintain quality standards on site</i>	<i>Workplace Task: effectively and efficiently test materials to maintain quality standards on site</i>
<i>maintain effective sampling and record-keeping processes</i>	<i>Workplace Task: maintain effective sampling and record-keeping processes</i>
<i>safely handle and store materials</i>	<i>Workplace Task: safely handle and store materials</i>
<i>comply with organisational and legislative requirements.</i>	<i>Workplace Task: comply with organisational and legislative requirements</i>

RANGE STATEMENTS

Range Statements	Task / Question Map	
<i>Materials commonly used in low rise buildings include:</i>	cements	
	ceramics	
	concrete	
	engineered timber products	
	flooring	
	framing	
	glass	
	masonry units	
	mortars	
	paints and coatings	
	plasterboard	
	plasterglass	
	roofing	
	structural steel.	
<i>Low rise buildings are described within the BCA as:</i>	Class 1 and 10	
	<i>Class 2 to 9 with a gross floor area not exceeding 2000 square metres, not including Type A or Type B construction.</i>	
<i>Material suitability is identified by a range of processes, including:</i>	<i>analysing reports, manufacturer specifications or other reference material regarding the suitability of new and environmentally efficient and sustainable building material technologies with reference to the BCA requirements</i>	

	<i>arranging industry standard, external quality tests or inspections and provision of results as necessary</i>	
	<i>arranging relevant, industry standard, on-site quality tests for products to be used in low rise buildings</i>	
	<i>referencing external reports and manufacturer specifications</i>	
	<i>refusing to accept substandard or out of specification materials</i>	
	<i>seeking expert appraisal from relevant industry professionals, including architects, designers and engineers.</i>	
<i>Selected includes:</i>	<i>arranging for expert advice as necessary to confirm or refute material options</i>	
	<i>identifying materials from specifications and drawings</i>	
	<i>identifying specifications and standards described in contract documents</i>	
	<i>selecting and ordering materials that meet those requirements.</i>	
<i>Materials are handled correctly and safely by:</i>	<i>allocation of space for on-site storage of materials</i>	
	<i>confirming products or materials are as ordered and signing off delivery documentation</i>	
	<i>ensuring safe unloading and handling of construction materials</i>	
	<i>ensuring safe use of hazardous materials and complying with statutory or regulatory requirements</i>	

	<i>ensuring correct materials are delivered to correct site</i>	
	<i>providing adequate on-site security of materials</i>	
	<i>undertaking quality checks within the competence of the individual.</i>	