

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.	Suitability of materials for low rise buildings: Q1 Q2 Q3 Q4 Q5 CPCBC4006B Assessment Requirements: Q1 Q2 Workplace Task: Evaluated and assessed materials to maintain quality standards on site
	1.2. Properties of materials, their quality and the compatibility and non-compatibility of different materials are identified.	Suitability of materials for low rise buildings: Q2 Compatibility of materials: Q1 Q2 Q3 Q4 Factors affecting properties of materials: Q1 Q2 Q3 Q4 Q5 Q6 Q7 ACTIVITY: Ordering pre-mixed concrete: Q1 CPCBC4006B Assessment Requirements: Q1 Q3 Workplace Task: Evaluated and assessed materials to maintain quality standards on site
	1.3. Environmental impacts of different materials are identified.	Embodied Energy in the Built Environment: Q1 Q2 Q3 Consideration of impacts on the environment: Q1 Q2 Q3 Q4 Reducing Waste on the Work-site: Q1 Q2 Q3 Q4 Q5 Q6 CPCBC4006B Assessment Requirements: Q1 Q4 Workplace Task: Evaluated and assessed materials to maintain quality standards on site
	1.4. Impact of allowable tolerances on the conversion of naturally occurring materials is identified.	Tolerances: Q1 Q2 Q3 Q4 CPCBC4006B Assessment Requirements: Q1 Q5 Workplace Task: Evaluated and assessed materials to maintain quality standards on site
	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.	Tolerances: Q1 Q2 Q3 Q4 ACTIVITY: Ordering pre-mixed concrete: Q1 Q2 Q3 Q4 CPCBC4006B Assessment Requirements: Q1 Workplace Task: Evaluated and assessed materials to maintain quality standards on site Workplace Task: Selected and ensured suitable materials are being used

<p>2. Ensure suitable building materials are selected for application.</p>	<p>2.1. Materials that are structurally adequate and appropriate for the building system specified in the contract are selected.</p>	<p>Suitability of materials for low rise buildings: Q3 Q4 Q5 Selection of building materials: Q1 Q2 Q4 ACTIVITY: Ensure selection of suitable building materials: Q3 CPCBC4006B Assessment Requirements: Q6 Q7 Workplace Task: Selected and ensured suitable materials are being used</p>
	<p>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.</p>	<p>Suitability of materials for low rise buildings: Q3 Q4 Q5 Quality standards and requirements: Q1 Q2 Q3 Q4 Q5 Selection of building materials: Q1 Q2 Q4 Asbestos in imported materials: Q1 Q2 ACTIVITY: Ordering pre-mixed concrete: Q1 Q2 Q3 Q4 CPCBC4006B Assessment Requirements: Q6 Q7 Materials for Block Masonry Construction: Q1 Q2 Q3 Workplace Task: Selected and ensured suitable materials are being used</p>
	<p>2.3. Short and long-term degradation of materials are considered in relation to the building's proposed life cycle.</p>	<p>Selection of building materials: Q3 CPCBC4006B Assessment Requirements: Q6 Q7 Workplace Task: Selected and ensured suitable materials are being used</p>
	<p>2.4. Alternative materials are evaluated and selected if specified materials are unavailable or unsuitable.</p>	<p>Selection of building materials: Q4 CPCBC4006B Assessment Requirements: Q6 Q7 Workplace Task: Selected and ensured suitable materials are being used</p>
	<p>2.5. Selection of materials for use is finalised in accordance with contractual requirements and in consultation with relevant professionals and the client.</p>	<p>Selection of building materials: Q1 Q2 Q3 Q4 Testing of materials: Q1 Q2 Q3 CPCBC4006B Assessment Requirements: Q6 Q7 Workplace Task: Selected and ensured suitable materials are being used</p>
<p>3. Supervise the acceptance, safe handling and storage of materials on site.</p>	<p>3.1. Limitations and effects of transportation on materials and components are determined and action is taken in the case of potentially damaging circumstances.</p>	<p>Testing of materials: Q1 Q2 Q3 Transportation and delivery of materials: Q1 Q2 Q3 Q4 ACTIVITY: Ordering pre-mixed concrete: Q1 Q2 Q3 Q4 Sequencing the concrete delivery: Q1 Q2 CPCBC4006B Assessment Requirements: Q8 Q9 Workplace Task: Supervised acceptance of materials Workplace Task: Safely handled and stored materials Workplace Task: Maintained effective sampling and record-keeping processes</p>

	<p>3.2. Materials are handled correctly and safely on site using appropriate equipment and safe work practices.</p>	<p>Handling and storage of materials on site: Q1 Q2 Q3 Sequencing the concrete delivery: Q1 Q2 SCENARIO: Supervision procedures of materials on site: Q2 CPCBC4006B Assessment Requirements: Q8 Q10 Workplace Task: Supervised acceptance of materials Workplace Task: Safely handled and stored materials Workplace Task: Maintained effective sampling and record-keeping processes</p>
	<p>3.3. Materials are stored in accordance with manufacturer specifications and in compliance with relevant Australian standards.</p>	<p>Handling and storage of materials on site: Q1 Q2 Q3 ACTIVITY: Storage of materials on-site: Q1 CPCBC4006B Assessment Requirements: Q8 Q11 Workplace Task: Supervised acceptance of materials Workplace Task: Safely handled and stored materials Workplace Task: Maintained effective sampling and record-keeping processes</p>
	<p>3.4. Processes are implemented for inspecting all materials delivered on site for naturally occurring and/or manufactured defects before installation.</p>	<p>Handling and storage of materials on site: Q1 Q2 Q3 CPCBC4006B Assessment Requirements: Q8 Q9 Workplace Task: Supervised acceptance of materials Workplace Task: Safely handled and stored materials Workplace Task: Maintained effective sampling and record-keeping processes</p>
	<p>3.5. Personnel are aware of actions to be taken in the case of defects caused by incorrect installation, application or placement.</p>	<p>Handling and storage of materials on site: Q1 Q2 Q3 SCENARIO: Supervision procedures of materials on site: Q2 CPCBC4006B Assessment Requirements: Q8 Q9 Workplace Task: Supervised acceptance of materials Workplace Task: Safely handled and stored materials Workplace Task: Maintained effective sampling and record-keeping processes</p>
	<p>3.6. Timber is preserved and ferrous and non-ferrous metals used in the construction process are protected, using established methods.</p>	<p>Handling and storage of materials on site: Q1 Q2 Q3 Preservation processes: Q1 Q2 Q3 Q4 Q5 ACTIVITY: Storage of materials on-site: Q1 CPCBC4006B Assessment Requirements: Q8 Q11 Workplace Task: Supervised acceptance of materials Workplace Task: Safely handled and stored materials Workplace Task: Maintained effective sampling and record-keeping processes</p>

REQUIRED SKILLS

Required Skill	Task / Question Map
Required skills for this unit are:	
<i>analysis and report preparation</i>	<p><i>Suitability of materials for low rise buildings: Q1</i></p> <p><i>CPCCB4006B Assessment Requirements: Q2</i></p> <p><i>Workplace Task: Maintained effective sampling and record-keeping processes</i></p> <p><i>Workplace Task: Evaluated and assessed materials to maintain quality standards on site</i></p>
<i>application of safe work practices and materials handling</i>	<p><i>Transportation and delivery of materials: Q1 Q2 Q3 Q4</i></p> <p><i>Sequencing the concrete delivery: Q1 Q2</i></p> <p><i>SCENARIO: Supervision procedures of materials on site: Q2</i></p> <p><i>ACTIVITY: Storage of materials on-site: Q1</i></p> <p><i>CPCCB4006B Assessment Requirements: Q10</i></p> <p><i>Workplace Task: Safely handled and stored materials</i></p>
<i>apply numeracy skills to workplace requirements</i>	<p><i>Tolerances: Q1 Q2 Q3 Q4</i></p> <p><i>CPCCB4006B Assessment Requirements: Q5</i></p> <p><i>Workplace Task: Maintained effective sampling and record-keeping processes</i></p> <p><i>Workplace Task: Evaluated and assessed materials to maintain quality standards on site</i></p>
communication skills to:	
<i>enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand</i>	<p><i>Selection of building materials: Q1 Q2 Q4</i></p> <p><i>Handling and storage of materials on site: Q1 Q2 Q3</i></p> <p><i>SCENARIO: Supervision procedures of materials on site: Q2</i></p> <p><i>CPCCB4006B Assessment Requirements: Q1 Q6 Q8</i></p> <p><i>Workplace Task: Maintained effective sampling and record-keeping processes</i></p> <p><i>Workplace Task: Supervised acceptance of materials</i></p>

<p><i>communicate with manufacturers and suppliers of materials</i></p>	<p><i>Suitability of materials for low rise buildings: Q1</i> <i>Selection of building materials: Q1 Q2 Q4</i> <i>Asbestos in imported materials: Q1 Q2</i> <i>Transportation and delivery of materials: Q1 Q2 Q3 Q4</i> <i>ACTIVITY: Ordering pre-mixed concrete: Q1 Q2 Q3 Q4</i> <i>CPCCB4006B Assessment Requirements: Q9</i> <i>Workplace Task: Maintained effective sampling and record-keeping processes</i> <i>Workplace Task: Supervised acceptance of materials</i></p>
<p><i>provide advice and information to regulatory authorities</i></p>	<p><i>Suitability of materials for low rise buildings: Q1</i> <i>CPCCB4006B Assessment Requirements: Q7</i> <i>Workplace Task: Maintained effective sampling and record-keeping processes</i> <i>Workplace Task: Supervised acceptance of materials</i></p>
<p>read and interpret:</p>	
<p><i>contracts</i></p>	<p><i>Selection of building materials: Q4</i> <i>CPCCB4006B Assessment Requirements: Q6 Q7</i> <i>Workplace Task: Maintained effective sampling and record-keeping processes</i></p>
<p><i>drawings and specifications</i></p>	<p><i>Suitability of materials for low rise buildings: Q1</i> <i>Selection of building materials: Q4</i> <i>Workplace Task: Maintained effective sampling and record-keeping processes</i> <i>Workplace Task: Selected and ensured suitable materials are being used</i></p>
<p><i>use language and concepts appropriate to cultural differences</i></p>	<p><i>Suitability of materials for low rise buildings: Q1</i> <i>Selection of building materials: Q1 Q2 Q4</i> <i>SCENARIO: Supervision procedures of materials on site: Q2</i> <i>CPCCB4006B Assessment Requirements: Q11</i> <i>Workplace Task: Maintained effective sampling and record-keeping processes</i></p>
<p><i>use and interpret non-verbal communication</i></p>	<p><i>Suitability of materials for low rise buildings: Q1 Q2 Q3 Q4 Q5</i> <i>Compatibility of materials: Q1 Q2 Q3 Q4</i> <i>Selection of building materials: Q1 Q2 Q4</i> <i>CPCCB4006B Assessment Requirements: Q7</i> <i>Workplace Task: Maintained effective sampling and record-keeping processes</i></p>

<p><i>development and management of standardised processes</i></p>	<p><i>Factors affecting properties of materials: Q1 Q2 Q3 Q4 Q5 Q6 Q7</i></p> <p><i>Preservation processes: Q1 Q2 Q3 Q4 Q5</i></p> <p><i>CPCBC4006B Assessment Requirements: Q3</i></p> <p><i>Workplace Task: Maintained effective sampling and record-keeping processes</i></p>
<p><i>supervision of small teams.</i></p>	<p><i>Handling and storage of materials on site: Q1 Q2 Q3</i></p> <p><i>Sequencing the concrete delivery: Q1 Q2</i></p> <p><i>SCENARIO: Supervision procedures of materials on site: Q2</i></p> <p><i>CPCBC4006B Assessment Requirements: Q9 Q10 Q11</i></p> <p><i>Workplace Task: Maintained effective sampling and record-keeping processes</i></p>

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>Selection of building materials: Q4 CPCBC4006B Assessment Requirements: Q7</i>
<i>building and construction materials and technologies</i>	<i>Suitability of materials for low rise buildings: Q1 Q2 Q3 Q4 Q5 Selection of building materials: Q1 Q2 Q4 Sequencing the concrete delivery: Q1 Q2 ACTIVITY: Ensure selection of suitable building materials: Q2 Q3 CPCBC4006B Assessment Requirements: Q7 Materials for Block Masonry Construction: Q1 Q2 Q3</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>Quality standards and requirements: Q1 Q2 CPCBC4006B Assessment Requirements: Q1 Q5</i>
<i>construction supply processes</i>	<i>Factors affecting properties of materials: Q1 Q2 Q3 Q4 Q5 Q6 Q7 Transportation and delivery of materials: Q1 Q2 Q3 Q4 ACTIVITY: Ordering pre-mixed concrete: Q1 Q2 Q3 Q4 Sequencing the concrete delivery: Q1 Q2 CPCBC4006B Assessment Requirements: Q7 Q9</i>
<i>construction and contracting equipment and its use</i>	<i>Compatibility of materials: Q1 Q2 Q3 Q4 CPCBC4006B Assessment Requirements: Q10</i>
<i>environmental effects on various building and construction materials</i>	<i>Embodied Energy in the Built Environment: Q1 Q2 Q3 Consideration of impacts on the environment: Q1 Q2 Q3 Q4 CPCBC4006B Assessment Requirements: Q4</i>
<i>relevant state or territory building and construction codes, standards and regulations</i>	<i>Suitability of materials for low rise buildings: Q1 Quality standards and requirements: Q1 Q2 Q3 Q4 Q5 Electrical Lighting: Q1 Q2 Q3 CPCBC4006B Assessment Requirements: Q4 Q7</i>

<i>testing procedures for construction materials</i>	<i>Testing of materials: Q1 Q2 Q3</i> <i>Asbestos in imported materials: Q1 Q2</i> <i>CPCBC4006B Assessment Requirements: Q9</i>
<i>workplace safety requirements.</i>	<i>Handling and storage of materials on site: Q1</i> <i>SCENARIO: Supervision procedures of materials on site: Q2</i> <i>CPCBC4006B Assessment Requirements: Q9 Q10 Q11</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>	<p><i>Suitability of materials for low rise buildings: Q1 Q2 Q3 Q4 Q5</i></p> <p><i>Factors affecting properties of materials: Q1 Q2 Q3 Q4 Q5 Q6 Q7</i></p> <p><i>ACTIVITY: Ensure selection of suitable building materials: Q2 Q3</i></p> <p><i>CPCBC4006B Assessment Requirements: Q1 Q2 Q3 Q4 Q5</i></p> <p><i>Workplace Task: Evaluated and assessed materials to maintain quality standards on site</i></p> <p><i>Workplace Task: Supervised acceptance of materials</i></p>
<i>use effective verbal and written communication with manufacturers and suppliers of materials</i>	<p><i>Selection of building materials: Q4</i></p> <p><i>Transportation and delivery of materials: Q1 Q2 Q3 Q4</i></p> <p><i>ACTIVITY: Ordering pre-mixed concrete: Q1 Q2 Q3 Q4</i></p> <p><i>SCENARIO: Supervision procedures of materials on site: Q2</i></p> <p><i>CPCBC4006B Assessment Requirements: Q9</i></p> <p><i>Workplace Task: Supervised acceptance of materials</i></p> <p><i>Workplace Task: Maintained effective sampling and record-keeping processes</i></p>
<i>effectively and efficiently test materials to maintain quality standards on site</i>	<p><i>Testing of materials: Q1 Q2 Q3</i></p> <p><i>Asbestos in imported materials: Q1 Q2</i></p> <p><i>CPCBC4006B Assessment Requirements: Q9</i></p> <p><i>Workplace Task: Evaluated and assessed materials to maintain quality standards on site</i></p> <p><i>Workplace Task: Supervised acceptance of materials</i></p>
<i>maintain effective sampling and record-keeping processes</i>	<p><i>Transportation and delivery of materials: Q1 Q2 Q3 Q4</i></p> <p><i>CPCBC4006B Assessment Requirements: Q11</i></p> <p><i>Workplace Task: Maintained effective sampling and record-keeping processes</i></p> <p><i>Workplace Task: Supervised acceptance of materials</i></p>

<p><i>safely handle and store materials</i></p>	<p><i>Building Site Environmental Management: Q1</i> <i>Handling and storage of materials on site: Q1 Q2 Q3</i> <i>SCENARIO: Supervision procedures of materials on site: Q2</i> <i>ACTIVITY: Storage of materials on-site: Q1</i> <i>CPCBC4006B Assessment Requirements: Q8 Q10 Q11</i> <i>Workplace Task: Safely handled and stored materials</i> <i>Workplace Task: Supervised acceptance of materials</i></p>
<p><i>comply with organisational and legislative requirements.</i></p>	<p><i>Suitability of materials for low rise buildings: Q1</i> <i>Quality standards and requirements: Q1 Q2 Q3 Q4 Q5</i> <i>Asbestos in imported materials: Q1 Q2</i> <i>Building Site Environmental Management: Q1</i> <i>CPCBC4006B Assessment Requirements: Q2 Q3 Q9 Q10 Q11</i> <i>Workplace Task: Safely handled and stored materials</i></p>

RANGE STATEMENTS

Range Statements		Task / Question Map
<i>Materials commonly used in low rise buildings include:</i>	cements	ACTIVITY: Ordering pre-mixed concrete: Q1 Q2 Q3 Q4 ACTIVITY: Storage of materials on-site: Q1
	ceramics	
	concrete	ACTIVITY: Ordering pre-mixed concrete: Q1 Q2 Q3 Q4 Sequencing the concrete delivery: Q1 Q2 Materials for Block Masonry Construction: Q3
	engineered timber products	
	flooring	
	framing	ACTIVITY: Storage of materials on-site: Q1
	glass	Glazing and Thermal Performance: Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 ACTIVITY: Ensure selection of suitable building materials: Q3
	masonry units	SCENARIO: Supervision procedures of materials on site: Q2 Materials for Block Masonry Construction: Q1
	mortars	
	paints and coatings	ACTIVITY: Ensure selection of suitable building materials: Q2
	plasterboard	ACTIVITY: Storage of materials on-site: Q1
	plasterglass	
	roofing	
	structural steel.	
<i>Low rise buildings are described within the BCA as:</i>	Class 1 and 10	Quality standards and requirements: Q2 CPCBC4006B Assessment Requirements: Q5
	Class 2 to 9 with a gross floor area not exceeding 2000 square metres, not including Type A or Type B construction.	Quality standards and requirements: Q2 CPCBC4006B Assessment Requirements: Q5

<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>Suitability of materials for low rise buildings: Q1</i>
	<i>arranging industry standard, external quality tests or inspections and provision of results as necessary</i>	<i>Suitability of materials for low rise buildings: Q1 Asbestos in imported materials: Q1 Q2</i>
	<i>arranging relevant, industry standard, on-site quality tests for products to be used in low rise buildings</i>	<i>Suitability of materials for low rise buildings: Q1 Asbestos in imported materials: Q1 Q2</i>
	<i>referencing external reports and manufacturer specifications</i>	<i>Suitability of materials for low rise buildings: Q1 Asbestos in imported materials: Q1 Q2</i>
	<i>refusing to accept substandard or out of specification materials</i>	<i>Suitability of materials for low rise buildings: Q1 Asbestos in imported materials: Q1 Q2</i>
	<i>seeking expert appraisal from relevant industry professionals, including architects, designers and engineers.</i>	<i>Suitability of materials for low rise buildings: Q1</i>
<i>Selected includes:</i>	<i>arranging for expert advice as necessary to confirm or refute material options</i>	<i>Selection of building materials: Q4 Asbestos in imported materials: Q1 Q2</i>
	<i>identifying materials from specifications and drawings</i>	<i>Selection of building materials: Q4 ACTIVITY: Ensure selection of suitable building materials: Q2 Q3</i>
	<i>identifying specifications and standards described in contract documents</i>	<i>Selection of building materials: Q4 ACTIVITY: Ensure selection of suitable building materials: Q2</i>
	<i>selecting and ordering materials that meet those requirements.</i>	<i>Selection of building materials: Q4 ACTIVITY: Ordering pre-mixed concrete: Q1 Q2 Q3 Q4</i>
<i>Materials are handled correctly and safely by:</i>	<i>allocation of space for on-site storage of materials</i>	<i>Handling and storage of materials on site: Q2 CPCBC4006B Assessment Requirements: Q9</i>
	<i>confirming products or materials are as ordered and signing off delivery documentation</i>	<i>Handling and storage of materials on site: Q2 CPCBC4006B Assessment Requirements: Q9</i>

	<p><i>ensuring safe unloading and handling of construction materials</i></p>	<p><i>Handling and storage of materials on site: Q2</i> <i>Sequencing the concrete delivery: Q1 Q2</i> <i>SCENARIO: Supervision procedures of materials on site: Q2</i> <i>CPCBC4006B Assessment Requirements: Q10</i></p>
	<p><i>ensuring safe use of hazardous materials and complying with statutory or regulatory requirements</i></p>	<p><i>Handling and storage of materials on site: Q1</i> <i>CPCBC4006B Assessment Requirements: Q10</i></p>
	<p><i>ensuring correct materials are delivered to correct site</i></p>	<p><i>Handling and storage of materials on site: Q2</i> <i>CPCBC4006B Assessment Requirements: Q9</i></p>
	<p><i>providing adequate on-site security of materials</i></p>	<p><i>CPCBC4006B Assessment Requirements: Q11</i></p>
	<p><i>undertaking quality checks within the competence of the individual.</i></p>	<p><i>CPCBC4006B Assessment Requirements: Q9</i></p>