



Australian Government

Department of Education, Employment and Workplace Relations

CPCBC4050A Select, procure and store construction materials for swimming pools and spa projects

Release: 1

CPCBC4050A Select, procure and store construction materials for swimming pools and spa projects

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit of competency specifies the outcomes required to supervise the systems through which materials are typically selected, acquired and stored on site for projects described by the Building Code of Australia (BCA) as construction of indoor and outdoor permanent swimming pools and spas. It ensures the delivery to the site of materials that meet contract specifications and service requirements.

Application of the Unit

Application of the unit

This unit of competency supports builders, related construction industry professionals and managers within building and construction firms responsible for supervising and applying quality standards to the selection of construction materials. To achieve the outcomes for this unit, knowledge of relevant building construction materials and technologies, environmental effects on materials and evaluation procedures is required.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units Nil

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. Identify and evaluate the properties of swimming pool and spa building materials.	<ul style="list-style-type: none">1.1. Suitability of <i>materials</i> commonly used in the region for swimming pools and spas is identified for a given building system.1.2. Properties of materials, their quality and the compatibility and non-compatibility of different materials are identified.1.3. Environmental impacts of different materials are identified.1.4. Impact of allowable tolerances on the conversion of naturally occurring materials is identified.1.5. Tolerances for installing materials are identified and checked in regard to the nature of the work being performed and the requirements of the Australian standards and BCA.
2. Ensure suitable materials are selected for application.	<ul style="list-style-type: none">2.1. Materials that are structurally adequate and appropriate for the building system specified in the contract are <i>tested</i>.2.2. Materials are selected for safety and <i>suitability</i> to the application, durability, serviceability, cost effectiveness and compliance with Australian standards.2.3. Short and long-term degradation of materials is considered in relation to the swimming pool and/or spa's proposed life cycle.2.4. Alternative materials are evaluated and selected if specified materials are unavailable or unsuitable.2.5. Selection of materials for use is finalised in accordance with contractual requirements and in consultation with relevant professionals and the client.
3. Supervise the acceptance, safe handling and storage of materials on site.	<ul style="list-style-type: none">3.1. Limitations and effects of transportation on materials and components are determined and action is taken in the case of potentially damaging circumstances.3.2. <i>Materials are handled correctly and safely</i> on site using appropriate equipment and safe work practices.3.3. Materials are stored in accordance with manufacturer specifications and in compliance with relevant Australian standards.3.4. Processes are implemented for inspecting all materials delivered on site for naturally occurring and/or manufactured defects before installation.3.5. Personnel are aware of actions to be taken in the case of defects caused by incorrect installation,

ELEMENT

PERFORMANCE CRITERIA

application or placement.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- analysis and report preparation
- application of safe work practices and materials handling
- basic supervision of construction work teams
- communication skills to:
 - communicate with manufacturers and suppliers of materials
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - consult relevant professionals and the client
 - provide advice and information to regulatory authorities
 - read and interpret:
 - documentation from a variety of sources
 - plans, specifications and drawings
 - use and interpret non-verbal communication
 - use language and concepts appropriate to cultural differences
- develop and manage standardised processes
- apply safe work practices and materials handling.

Required knowledge

Required knowledge for this unit is:

- alternative materials
- BCA
- construction and contracting equipment and its use
- construction supply processes
- environmental effects on various swimming pool and spa construction materials
- relevant Australian standards
- swimming pool and spa construction materials and technologies
- relevant state or territory building and construction codes, standards and regulations, including:

REQUIRED SKILLS AND KNOWLEDGE

- AS1926.1-1993 Swimming pool safety - Fencing for swimming pools
- AS1926.2-1995 Swimming pool safety - Location of fencing for private swimming pools
- AS1926.3-2003 Swimming pool safety - Water recirculation systems
- AS2610.1-1993 Spa pools Part 1: Public spas
- AS2610.2-1993 Spa pools Part 2: Private spas
- AS/NZS3136:2001 Approval and test specification - Electrical equipment for spa and swimming pools
- testing procedures
- workplace safety requirements.

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

This unit of competency could be assessed by planning and supervision of a system for selecting, procuring and safely storing all materials required for construction of a swimming pool and spa. This unit of competency can be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

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

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- identify suitable swimming pool and spa building materials specified by the project or contract
- use effective verbal and written communication with manufacturers and suppliers of materials
- apply effective and efficient testing of the materials to maintain quality standards on site
- use effective sampling and record keeping processes
- ensure safe handling and storage of materials
- comply with organisational and legislative requirements.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- documentation that should normally be available in either a building or construction office

EVIDENCE GUIDE

- relevant codes, standards and regulations
- office equipment, including calculators, photocopiers and telephone systems
- computers with appropriate software to view 2-D CAD drawings, run costing programs and print copies
- a technical reference library with current publications on measurement, design, building construction and manufacturers' product literature
- a suitable work area appropriate to the construction process.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with

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a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge

- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed. Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

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.

Materials commonly used in swimming pools and spas include:

- concrete
- fibreglass and plastics
- cements
- masonry units
- mortars
- paints and coatings
- ceramics
- structural steel.

Records of materials ***tested*** are kept and reported by:

- distributing copies in accordance with organisational policy
- following up reports that indicate departures from quality or manufacturing requirements
- obtaining appropriate records and reports for

RANGE STATEMENT

Selected for *suitability* involves a range of processes including:

- review and analysis
- proving advice and information to regulatory authorities as authorised by the organisation
- taking appropriate remedial action within the scope of individual's authority.
- analysing reports, manufacturer specifications or other reference material regarding the suitability of new swimming pool and spa building material technologies with reference to BCA requirements
- arranging industry standard, external quality tests or inspections and provision of results as necessary
- arranging relevant industry standard, on-site quality tests for products to be used in swimming pools and spas
- decision making to ensure appropriate materials are selected, including:
 - identifying materials from specifications and drawings
 - identifying specifications and standards described in the contract documents
 - selecting and ordering materials that meet those requirements
- arranging for expert advice as necessary to confirm or refute materials options
- referencing external reports and manufacturer specifications
- refusing acceptance of sub-standard or out of specification materials
- seeking expert appraisal from relevant industry professionals, including architects, designers and engineers.
- allocation of space for on-site storage of materials
- confirming products or materials are as ordered and signing off delivery documentation
- ensuring safe unloading and handling of swimming pool and spa building materials
- ensuring safe use of hazardous materials and complying with statutory or regulatory requirements
- ensuring correct materials are being delivered

Materials are handled correctly and safely includes:

RANGE STATEMENT

to correct site

- providing for adequate on-site security of materials
- undertaking quality checks within the competence of the individual.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area