



Australian Government

CPCBC6001B Apply building codes and standards to the construction process for large building projects

Release 1

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Modification History

Minor changes throughout unit, mostly reflecting update to National Construction Code Equivalent to CPCBC6001A

Unit Descriptor

This unit of competency specifies the outcomes required to access, interpret and apply relevant building codes and standards applicable to the construction processes of large, high rise and complex buildings (open licensing classification with special reference to Type A buildings).

To successfully comply with relevant standards and codes in large constructions requires a thorough knowledge of the purpose of the National Construction Code (NCC) coupled with the ability to interpret specific standards in relation to the design and specifications of building projects.

Application of the Unit

This unit of competency supports builders, project managers and related construction industry professionals responsible for ensuring compliance with building codes and standards in the residential and commercial construction industry.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Nil

Employability Skills Information

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

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|---|---|-----|--|
| 1 | Access and interpret relevant code and standard requirements. | 1.1 | Relevant clauses from the NCC that apply to individual projects (classified as <i>open</i>) are identified. |
| | | 1.2 | Prescriptive requirements of relevant NCC clauses for <i>standard construction</i> are determined for the <i>scope of work</i> . |
| | | 1.3 | Requirements of relevant Australian standards referenced in the NCC are accessed and interpreted appropriately. |
| 2 | Classify buildings. | 2.1 | Nature of a building is determined according to use and arrangement. |
| | | 2.2 | NCC criteria to determine the defined classification are applied. |
| | | 2.3 | NCC requirements for multiple classifications are identified and interpreted. |
| 3 | Analyse and apply a range of solutions to a construction problem for compliance with the NCC. | 3.1 | Range of criteria that will ensure construction methods comply with intent of the NCC is determined. |
| | | 3.2 | Alternative solutions to a construction problem that will comply with NCC <i>performance requirements</i> are discussed and proposed according to company policies and procedures and <i>standard specifications</i> . |
| | | 3.3 | Performance-based solutions are identified and documented according to NCC requirements. |
| | | 3.4 | <i>Assessment methods</i> used by authorities to determine whether a <i>building solution</i> complies with the NCC are |

- analysed and applied.
- 3.5 NCC assessment methods are identified as appropriate to meet DTS provisions of NCC.
 - 3.6 Relevant documentation is identified and completed according to performance requirements of the NCC.
- 4 Apply fire protection requirements.
- 4.1 Fire resistance required for the construction of all classes and types of buildings is determined.
 - 4.2 NCC requirements with respect to passive and active fire protection to all classes and types of buildings are identified and applied.
 - 4.3 Check of existing buildings for compliance with passive and active fire protection requirements is carried out according to NCC requirements.
- 5 Implement strategy to manage compliance with NCC for large, complex and high rise buildings.
- 5.1 Processes are established and implemented to coordinate the work of professionals involved in the development and management of the building process.
 - 5.2 Effective design solutions for buildings of more than three storeys are sought to meet the needs of clients and ensure compliance with NCC.
 - 5.3 Quality assurance processes are designed and implemented to ensure effective and compliant management of the construction process.

Required Skills and Knowledge

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

Required skills

Required skills for this unit are:

- accurate application of building codes and standards
- application of design concepts and principles according to Australian standards
- application of design concepts and principles according to NCC
- analysis and interpretation skills relating to documentation from a wide range of sources, including NCC and Australian standards
- communication skills to:
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - discuss and propose alternative solutions
 - read and interpret specifications and drawings
 - use and interpret non-verbal communication
 - use language and concepts appropriate to cultural differences
 - written skills to complete documentation according to NCC requirements
- numeracy skills to apply mathematical information included in building codes and standards.

Required knowledge

Required knowledge for this unit is:

- application of NCC, namely:
 - low rise:
 - Class 1 and 10
 - Class 2 to 9 with a gross floor area not exceeding 2000 square metres, not including Type A or Type B construction
 - medium rise:
 - Class 1 and 10
 - Class 2 to 9 to a maximum of 3 storeys, not including Type A construction
 - open:
 - all classes of building and types of construction
- application of relevant Australian standards
- definitions and common technical terms or usage specified under general provisions of NCC

- design principles and the behaviour of structures under stress, strain, compression, bending or combined actions
- nature of materials and effects of performance
- NCC performance hierarchy
- relevant legislative and OHS requirements, codes and practices
- work drawings and specifications.

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 the application of design principles and solutions specified in the deemed-to-satisfy and performance-based concept of NCC criteria applied to a building project.

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:

- comply with organisational quality procedures and processes
- apply and interpret relevant documentation and codes
- accurately apply NCC codes and standards relating to performance of and compliance with building project work
- demonstrate understanding of the assessment methods available to determine whether a building solution complies with the NCC.

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:

- NCC, Class 2 to 9 buildings and Guide to NCC
- documentation, including design brief drawings, specifications, codes, design concepts, construction schedules and other necessary supporting documents
- research resources, including product information and data
- access to relevant legislation, regulations and codes of practice; like NCC, National Timber Framing Code, AS1684, AS4055 and other Australian standards required to meet the purpose of intended use
- relevant computer software package and suitable hardware.

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 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

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.

Open is classified as:

- classes of building and types of construction within the NCC with special reference to the construction of buildings of more than 3 storeys.

Standard construction includes:

- Australian standards relative to the scope and context of large building construction
- NCC.

Scope of work includes:

- characteristics
- compatibility
- dimensions

- location
- patterns
- quantities
- sizes
- surfaces
- type of product or service.

- Performance requirements*** include:
- cost
 - detail relating to materials and quality of work
 - milestones
 - nominated subcontractors
 - provision of site access and facilities
 - quality assurance
 - standard procedures
 - standards of work
 - work schedules.

- Standard specifications*** include:
- detailed specifications addressing specific components, such as:
 - electrical
 - mechanical
 - structural
 - other requirements
 - developed specifications
 - preliminary and outline specifications.

- Assessment methods*** include:
- comparison with DTS provisions
 - evidence of suitability
 - expert judgement
 - verification method.

- Building solutions*** include:
- alternative solutions that comply with the performance requirements of the NCC
 - deemed-to-satisfy (DTS) provisions of the NCC.

Unit Sector(s)

Functional area

Unit sector Construction

Custom Content Section

Not applicable.