



Australian Government

CPCCBS6016 Assess and advise on performance-based solutions for buildings up to three storeys

Release: 1

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Modification History

Release 1.

This version first released with CPC Construction, Plumbing and Services Training Package Version 1.

Application

This unit of competency specifies the outcomes required to advise on the application of National Construction Code (NCC) performance requirements for performance-based solutions for buildings up to three storeys, and to apply approved assessment methods to determine whether a proposed solution is compliant.

The unit applies to assessing architectural drawings and specifications for performance-based solutions and analysing them in relation to the relevant sections of the Building Code of Australia (BCA) and the Plumbing Code of Australia (PCA).

The unit supports the work of building surveyors who:

- provide advice to architects and building designers on compliance requirements and options for performance-based solutions, or
- act in the statutory role with responsibility for assessing the compliance of performance-based solutions and certifying those that are compliant.

Under legislation the building surveyor is responsible for ensuring that there is no conflict of interest between the two roles. The building surveyor cannot advise on, and then certify, the same performance-based solution.

Licensing, legislative, regulatory or certification requirements apply to this unit in some States. Relevant state and territory regulatory authorities should be consulted to confirm those requirements.

Pre-requisite Unit

Nil

Competency Field

Building surveying

Unit Sector

Construction

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.

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| 1. Determine building surveying service requirements. | 1.1. Scope and limitations of building surveyor role in relation to advising on or certifying performance-based solutions are determined. |
| | 1.2. Architectural drawings and specifications are obtained and performance-based solutions to be advised on or certified are identified. |
| | 1.3. Requirement for performance-based solution is clarified and discussed with development team, as required. |
| | 1.4. Service level agreements and budgets are negotiated with clients in the case of building surveyors providing an advisory service. |
| | 1.5. Process for applying for assessment of performance-based solutions is clarified with clients in the case of building surveyors acting in a statutory role. |
| 2. Analyse performance requirements for performance-based solutions. | 2.1. Regulatory intent of performance-based solutions is determined. |
| | 2.2. Methods for identifying performance requirements relevant to proposed performance-based solutions are determined and applied. |
| | 2.3. Level of performance applied to the development of performance-based solutions is determined. |
| 3. Determine assessment requirements for performance-based solutions. | 3.1. NCC performance requirements and specifications for the material, form of construction or design of performance-based solution are interpreted and confirmed. |
| | 3.2. NCC <i>assessment methods</i> that may be applied to performance-based solution are determined. |
| | 3.3. Requirements for services of technical experts qualified to provide evidence or expert judgement in relation to |

the performance-based solution are determined and negotiated with clients.

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| 4. | Analyse performance-based solutions. | 4.1. | Analysis of performance-based solution is discussed with relevant stakeholders and technical experts. |
| | | 4.2. | Principles of fire safety engineering are applied to analysis of compliance of performance-based solution for fire safety. |
| | | 4.3. | Design principles are applied to analysis of compliance of performance-based solution for structural safety, health, amenity and sustainability . |
| | | 4.4. | Strengths and weaknesses of performance-based solution are determined. |
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| 5. | Advise on performance-based solutions. | 5.1. | Assessment requirements for performance-based solution are explained to, and discussed with, clients. |
| | | 5.2. | Strengths and weaknesses of proposed performance-based solutions are evaluated and discussed with clients. |
| | | 5.3. | Optional performance-based solutions are developed and discussed with clients. |
| | | 5.4. | Client is advised and assisted in selecting preferred performance-based solution. |
| | | 5.5. | Verification methods and evidence or expert judgment to support performance-based solutions are evaluated and explained to clients. |
| | | 5.6. | Documentation for performance-based solution is gathered and prepared for submission for assessment. |
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| 6. | Assess compliance of performance-based solutions. | 6.1. | Documentation for performance-based solution is reviewed for completeness and requests are made for further information, as required. |
| | | 6.2. | Verification information supplied to support performance-based solution is analysed and evaluated. |

- 6.3. Evidence or expert judgment to support performance-based solution is analysed and evaluated.
- 6.4. Compliance of performance-based solution is determined and documented according to regulatory requirements.
- 6.5. Documentation is processed and client is notified according to legislative and regulatory requirements.

Foundation Skills

This section describes the language, literacy, numeracy and employment skills essential to performance in this unit but not explicit in the performance criteria.

Skill	Performance feature
Learning skills to:	- independently access and interpret a range of complex technical information relating to performance requirements for buildings up to three storeys - use structured approaches to maintain currency of skills and knowledge as a regular part of routine through, for example, email alerts, conferences, or subscriptions to relevant journals.
Numeracy skills to:	- extract and interpret a range of mathematical information contained in technical documentation relating to the design of buildings up to three storeys, including: - ratios, rates and proportions - detailed plans.
Oral communication skills to:	- determine client requirements regarding nature and scope of services sought, through open-ended questioning, active listening, paraphrasing and summarising - understand and use specialised construction industry vocabulary in a variety of situations, for example explanations, descriptions and discussions with architects, building designers and specialist personnel.
Reading skills to:	- use different reading strategies to locate specific compliance requirements in a range of resources, including the NCC - understand technical texts with complex structures, specialised vocabulary, acronyms and diagrams specific to plans and

This section describes the language, literacy, numeracy and employment skills essential to performance in this unit but not explicit in the performance criteria.

Skill	Performance feature
	- performance requirements for buildings up to three storeys - monitor own understanding of technical language and texts and apply a range of strategies to ensure correct interpretation of performance requirements, including re-reading or obtaining clarification from another source.
Writing skills to:	use accurately-spelled specialised construction industry vocabulary in emails, letters and reports to clients and specialist personnel.

Range of Conditions

This section specifies essential operating conditions and any other factors essential to the work environment. Bold italicised wording, if used in the performance criteria, is detailed below.

Assessment methods must include:	- calculations - inspections - tests - other method recommended by appropriate technical experts in relation to the material, construction method or design.
Analysis of compliance must include:	- comparison with deemed-to-satisfy specifications - evaluation against NCC assessment methods.
Structural safety, health, amenity and sustainability must include two of the following:	- access and egress, including access for people with a disability - damp and weatherproofing - energy efficiency - light and ventilation - room heights - sanitary and other facilities - services and equipment - sound transmission and insulation - structural safety.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCCBS6016 Assess and advise on performance-based solutions for buildings up to three storeys

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Performance Evidence

A person demonstrating competency in this unit must satisfy all of the elements, performance criteria and foundation skills of this unit. The person must provide advice on three performance-based solutions for the following buildings up to three storeys:

- one performance-based fire safety solution
- two performance-based solutions for structural safety, health, amenity and sustainability.

In doing the above, the person must:

- determine service levels required by the client or clarify assessment processes with the applicant
- determine the performance requirements applicable to the solutions
- analyse performance-based solutions against performance requirements
- advise on compliance of performance-based solutions, including optional solutions
- advise clients on the documentation required to verify solutions
- assess performance-based solutions and certify those that are compliant.

Knowledge Evidence

A person demonstrating competency in this unit must demonstrate knowledge of:

- construction methods and materials applicable to performance-based solutions
- drawing symbols, notations, acronyms and construction terminology used in the National Construction Code (NCC), Australian standards, working drawings, building design specifications, and building permit documentation
- international standards and guidelines relevant to performance-based solutions
- performance requirements for performance-based solutions specified in the NCC
- principles of fire safety engineering:
 - International Fire Engineering Guidelines, Part 1
 - characteristics of building materials in relation to fire
 - fire-modelling
 - fire science:
 - fire behaviour and dynamics

- impact of fire on structures and materials
- products of combustion
- fire control strategies
- fire retardants
- fire detection technologies
- fire suppression technologies
- fire containment
- human response to fire
- interconnection of fire systems, including cause and effect matrix
- interaction with other services
- project management strategies that ensure thorough and timely advice is delivered according to service level agreement
- regulatory intent of performance-based solutions.

Assessment Conditions

Suitable assessment of performance requires:

- equipment:
 - computer with internet access and business software currently in use in building surveying practices
- materials:
 - documentation for the three performance-based solutions specified in the performance evidence
- specifications:
 - access to the NCC and associated standards.

Assessor requirements

Assessors must satisfy the assessor requirements in the *Standards for Registered Training Organisations* (RTOs) current at the time of assessment.

In addition, assessors must also demonstrate current membership of a relevant industry association and have current registration on the National Building Professionals Register in the Building Industry Control category (level 1) or be accredited under the Australian Institute of Building Surveyors (AIBS) National Accreditation Scheme at Building Surveyor level.

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