



Australian Government

CPPBDN4106 Investigate materials for construction of Class 1 and 10 buildings

Release: 1

CPPBDN4106 Investigate materials for construction of Class 1 and 10 buildings

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 11.0.

Supersedes and is not equivalent to CPPBDN4001 Research and evaluate construction materials and methods for building design projects.

CPPBDN4001 Research and evaluate construction materials and methods for building design projects was split to create two units. This unit is based on the construction materials component. Updated to meet the Standards for Training Packages 2012.

Application

This unit specifies the skills and knowledge required to investigate construction materials for Class 1 and 10 buildings, as defined in the National Construction Code (NCC). It includes determining the application and performance of commonly available construction materials and identifying suitable materials to comply with relevant sections of legislation, Australian Standards and the NCC.

The unit applies to drafters who work under the supervision of building designers or architects to identify and apply information and data on construction materials across building design projects. Drafters use specialised knowledge to complete routine and non-routine tasks and deal with predictable and sometimes unpredictable drafting problems.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Building Design

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

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| 1 Assess materials used for structural elements in Class 1 and 10 buildings. | 1.1 | Identify types of timber, steel, concrete and reinforced masonry used in Class 1 and 10 buildings. |
| | 1.2 | Investigate properties and characteristics of timber, steel, concrete and reinforced masonry. |
| | 1.3 | Determine structural performance of timber, steel, concrete and reinforced masonry commonly used in Class 1 and 10 buildings. |
| | 1.4 | Determine applications of timber, steel, concrete and reinforced masonry and confirm their suitability and compliance. |
| | 1.5 | Determine thermal performance and sustainability of timber, steel, concrete and reinforced masonry commonly used in Class 1 and 10 buildings. |
| | 1.6 | Document findings on materials used in structural elements in Class 1 and 10 buildings. |
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| 2 Assess materials used for building envelope of Class 1 and 10 buildings. | 2.1 | Identify types of cladding, internal lining, unreinforced masonry, glass and glass framing, and insulation used in building envelope. |
| | 2.2 | Investigate properties and characteristics of cladding, internal lining, unreinforced masonry, glass and glass framing, and insulation commonly used in Class 1 and 10 buildings. |
| | 2.3 | Determine performance of cladding, internal lining, unreinforced masonry, glass and glass framing, and insulation. |
| | 2.4 | Determine applications of cladding, internal lining, unreinforced masonry, glass and glass framing, and insulation, their suitability and compliance. |
| | 2.5 | Determine thermal properties and sustainability of cladding, internal lining, unreinforced masonry, glass and glass framing, and insulation. |
| | 2.6 | Document findings on materials used in the building envelope of Class 1 and 10 buildings. |

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| 3 Assess materials used for coatings and finishes in Class 1 and 10 buildings. | 3.1 Identify types of paints, oils, varnishes and waterproofing membranes used in coatings and finishes in Class 1 and 10 buildings. |
| | 3.2 Investigate properties and characteristics of paints, oils, varnishes and waterproofing membranes. |
| | 3.3 Determine performance of paints, oils, varnishes and waterproofing membranes commonly used in Class 1 and 10 buildings. |
| | 3.4 Determine applications of paints, oils, varnishes and waterproofing membranes, and their suitability and compliance. |
| | 3.5 Determine sustainability of paints, oils, varnishes, and waterproofing membranes. |
| | 3.6 Document findings on materials used for coatings and finishes in Class 1 and 10 buildings. |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is not equivalent to CPPBDN4001 Research and evaluate construction materials and methods for building design projects.

CPPBDN4001 Research and evaluate construction materials and methods for building design projects was split to create two units. This unit is based on the construction materials component.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPBDN4106 Investigate materials for construction of Class 1 and 10 buildings

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Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by compiling a portfolio of information on materials used in the construction of Class 1 and 10 buildings, as defined in the National Construction Code (NCC), suitable for:

- structural elements
- building envelope
- coating and finishing.

The portfolio must identify sources that can be used in the future to access up-to-date information.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- NCC building classifications
- relevant legislation and Australian Standards
- construction terminology associated with materials used in the construction of Class 1 and 10 buildings
- conventional and sustainable construction materials
- relevant properties and characteristics of construction materials used for Class 1 and 10 buildings:
 - aesthetic
 - required protection
 - durability: weather and pest resistance
 - fire resistance
 - fixing requirements

- thermal performance
- health and safety
- stress grading
- performance requirements of construction materials used for Class 1 and 10 buildings including compatibility, interactions with other materials and reinforcement
- sustainability requirements of construction materials used for Class 1 and 10 buildings:
 - lifecycle
 - recyclability
 - thermal performance
 - embodied energy and carbon footprint.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations. Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting where these skills and knowledge would be performed. This includes access to:

- computer with internet access and word processing software
- relevant regulations, codes and standards
- technical reference sources with current information on construction materials.

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