



Australian Government

CPCCB6016 Assess construction faults in large building projects

Release: 2

CPCCBC6016 Assess construction faults in large building projects

Modification History

- Release 2 Updated reference to general construction induction training program.
- Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.
- Supersedes and is equivalent to CPCCBC6016A Assess construction faults in large building projects. Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to identify construction faults in large, high-rise and complex buildings and define the problem. It includes analysing faults, determining alternative options and methods and deciding on a reasonable and compliant solution.

It applies to builders and other related construction industry professionals who identify the root cause of construction faults, clarify key issues and establish processes to remediate faults.

This unit of competency supports builders, project managers and related construction industry professionals responsible for assessing construction faults, addressing complex construction problems and seeking advice from relevant experts to eliminate potential future implications.

Completion of the general construction induction training program specified by the model Code of Practice for Construction Work is required for any person who is to carry out construction work. Achievement of *CPCWHS1001 Prepare to work safely in the construction industry* meets this requirement.

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

Pre-requisite Unit

Nil.

Unit Sector

Building and Construction

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 Identify and analyse construction faults. | 1.1 Collect information relating to specific construction faults. |
| | 1.2 Analyse original construction project plans and specifications to identify potential causes of construction problems. |
| | 1.3 Document and communicate construction problems to relevant personnel following organisational work practices. |
| | 1.4 Gather expert analysis and opinions as required from project team members and external professionals. |
| | 1.5 Use problem-solving techniques to identify typical faults and problems. |
| | 1.6 Develop a rectification action that meets the Performance Requirements of the National Construction Code (NCC). |
| 2 Analyse construction techniques, methods and materials. | 2.1 Use building terminology accurately in the communication of issues. |
| | 2.2 Evaluate working drawings and specifications to identify any existing or designed-in construction problems. |
| | 2.3 Prepare alternative methods and materials to meet the project specification objectives and comply with the NCC and relevant building legislation. |
| 3 Evaluate alternative construction solutions. | 3.1 Consider and evaluate commonly occurring on-site problems with building materials and their causes. |
| | 3.2 Prepare reports identifying available alternative methods and materials available to meet the construction aims and objectives of the specifications. |
| | 3.3 Prepare detailed sketches of available alternative methods and materials that meet the construction aims and objectives of the specification. |

4	Resolve construction faults using alternative construction methods.	4.1	Evaluate solutions and recommend suitable alternative methods to resolve the problem and meet project aims and objectives and organisational processes.
		4.2	Integrate selected methods into the project construction works to align with construction schedules and timeframes.
		4.3	Manage and monitor alternative forms of construction to ensure compliance.
5	Communicate preferred solution to construction problem.	5.1	Document technical resolution in detail of identified problem.
		5.2	Lodge appropriate documentation and communicate with appropriate project and other construction professionals.
		5.3	Determine and implement strategies to monitor corrective action processes and procedures.

Foundation Skills

As well as the foundation skills explicit in the performance criteria of this unit, candidates require:

- technology skills to:
 - use digital tools and devices to communicate and collaborate effectively with others
 - use equipment and programs to access, extract information and develop relevant documentation.

Unit Mapping Information

Supersedes and is equivalent to CPCBC6016A Assess construction faults in large building projects.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCBC6016 Assess construction faults in large building projects

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Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by identifying and assessing the impact of construction faults on a Type A building project.

In doing this, the candidate must identify, assess the impact of and determine remedial action for construction faults associated with at least two of the following:

- structural
- installation
- refurbishment
- renovation
- restoration.

Knowledge Evidence

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

- government building legislation and regulation
- building codes and standards
- the National Construction Code (NCC)
- project drawings, details and specifications
- design principles and behaviour of structural members undergoing stress, strain, tension, compression, bending or combined actions
- nature of materials and effects on performance
- structural design:
 - aesthetics
 - economy
 - equilibrium

- functionality
- stability
- strength
- properties, characteristics and limitations of structural materials:
 - reinforced and pre-stressed concrete and tilt-up panels
 - composite steel and concrete
 - masonry
 - steel (cold-formed steel) and aluminium
- performance characteristics of columns analysis:
 - bending behaviour and performance of loaded support beams
 - eccentric and axial load effect
 - load spanning elements for bending moments, shear forces, deflection and torsion
 - effect of connections
 - effect of slab behaviour in relation to spans and stress distribution
 - effect of slenderness ratio
- high performance structural elements:
 - castellated beams
 - connections
 - fire resistance
 - laminated beams
 - pre-stressed beams
 - slabs
 - trusses
 - use of steel to reinforce concrete
 - waffle slabs
- applications of structural principles in buildings:
 - dead and live load calculations and characteristics
 - fire resistance of materials
 - impact of thermal effects
 - impact of time-dependent effects, including creep and shrinkage
 - impact of wind, snow, groundwater, earthquake, liquid pressure, rainwater and earth pressure actions
 - structural resistance of forms of construction
 - structural resistance of materials
- work health and safety (WHS) and organisational quality procedures and processes
- temporary structural elements:
 - bracing
 - close sheeting
 - formwork props
 - pressure resistant formwork

- scaffolding sole plates
- shields
- shoring collar sets
- soldier sets.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment can be undertaken in the workplace or in a simulated workplace environment.

A simulated environment is one that realistically replicates workplace conditions, materials and equipment, interactions with others and workplace irregularities, and which meets industry standards for safety and environmental practices.

Candidates must have access to:

- relevant government building legislation codes and standards
- environmental and sustainability requirements
- manufacturer specifications and installation instructions
- organisational policies, procedures and workplace safety requirements
- project plans and specifications
- business equipment, technology and software to assess and remediate construction faults in large building projects and collaborate effectively with external professionals.

Links

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