

Unit of Competency

CPCBIM4002 Use BIM processes to carry out building or construction work

Modification history

Release	Comments
1	New unit. No equivalent unit. This version first released with CPC Construction, Plumbing and Services Training Package Release 8.0.

Application

This unit of competency specifies the skills and knowledge required to use Building Information Modelling (BIM) processes to carry out building or construction work. It includes using 2D drawings and 3D models and related data to clarify building or construction work requirements, manage interferences and risks associated with planned building or construction work and schedule and sequence work activities and resources.

The unit applies to builders, tradespersons, project and site managers who work on building or construction projects that require BIM interaction and collaboration. The unit provides BIM skills and knowledge which can be adapted to a range of tools and technologies and applied to normal building or construction work activities. It requires basic information technology skills.

A person who has achieved this unit of competency is able to work with autonomy and take responsibility for applying BIM processes to building or construction work.

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 *CPCCWHS1001 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.

Prerequisite Unit

None.

Unit Sector

Construction.

Elements and Performance Criteria

1. Clarify building or construction work requirements.	1.1 Identify reporting and documentation processes to comply with BIM execution plan and workplace requirements. 1.2 Identify project participants and clarify roles and responsibilities relevant to planned building or construction work to meet BIM execution plan and workplace requirements. 1.3 Interpret 2D drawings and 3D model and data to clarify scope of building or construction work and check information to confirm currency.
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	1.4 Access and assess other documentation related to building or construction work to ensure full understanding of activities, timeframes and regulatory compliance requirements.
2. Manage interferences and risks associated with building or construction work.	2.1 Use BIM tools and technologies to create and test virtual construction model and detect any interferences associated with planned building or construction work. 2.2 Use BIM tools and technologies to detect work health and safety (WHS) and regulatory compliance risks associated with planned building or construction work. 2.3 Consult with project participants to discuss and agree strategies to resolve interferences and mitigate risks. 2.4 Implement actions required to resolve interferences and mitigate risks associated with planned building or construction work in accordance with workplace requirements.
3. Schedule and sequence building or construction work requirements.	3.1 Use BIM data to sequence building or construction work activities to achieve required efficiencies and compatibilities with other construction or building disciplines. 3.2 Use BIM data to schedule equipment and resources to meet building or construction work timeframes in accordance with workplace requirements. 3.3 Document and communicate building or construction work requirements to project participants to meet BIM execution plan and workplace requirements.

Foundation skills

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

Unit Mapping Information

New unit. No equivalent unit.

Links

The Companion Volume Implementation Guide for the CPC Construction, Plumbing and Services Training Package is available at:

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

Assessment Requirements for CPCBIM4002 Use BIM processes to carry out building or construction work

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Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by using BIM processes including a minimum of two different BIM technologies (tools and software) to carry out building or construction work and, in doing so:

- creating and testing at least two virtual construction models within the same federated space
- detecting interferences in the federated model based on two different criteria
- detecting two work health and safety (WHS) or regulatory compliance risks associated with planned building or construction work by using a 3D model and visual communication tools
- consulting with at least two other project participants to discuss and agree strategies to resolve interferences and mitigate risks.

Knowledge Evidence

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

- BIM project delivery methods
- BIM standards relevant to planned building or construction work including ISO 19650 *Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling*
- BIM uses relevant to construction phases
- common BIM tools and technologies
- graphical and data communication methods when working with BIM
- meaning and benefits of visual communication and extended reality technologies during the construction phase of a BIM project
- meaning of open formats and interoperability in the BIM context
- methods for confirming currency of building or construction documentation and data
- methods for scheduling equipment and resources for building or construction work
- methods for sequencing building or construction work to achieve efficiencies across multi-disciplinary building or construction projects
- purpose and content of BIM execution plans
- purpose of virtual construction models and methods for detecting building or construction interferences and risks using BIM
- role of common data environments in managing project information
- roles and responsibilities of BIM project participants across multiple disciplines
- types of drawings, models and documentation used when planning building or construction work that is part of a BIM project

- workplace requirements for planning building or construction work using BIM processes:
 - compliance with relevant regulations and standards
 - WHS
 - quality control procedures
 - reporting and documentation.

Assessment Conditions

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

Assessment must be conducted in the workplace or a simulated workplace using realistic conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Candidates must have access to documentation, technologies, equipment and other resources required to achieve the performance criteria and performance evidence.

Links

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