



Australian Government

CPPBDN4006 Import and transpose information from external sources into digital building design drawings

Release: 1

CPPBDN4006 Import and transpose information from external sources into digital building design drawings

Modification History

Release 1. New unit.

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

Application

This unit of competency specifies the outcomes required to import drawing files and transpose information from drawings prepared by external surveyors, engineers and construction consultants into existing digital building design drawings for residential, commercial and industrial buildings as defined by the Building Code of Australia (BCA), using building information modelling (BIM)-capable building design software.

It also covers understanding and applying functions and options of drawing software for different methods of importing files and for managing elements in imported drawings.

The unit supports the work of drafters who assist and work under the supervision and instruction of architects and building designers and who check drawings and reports for accuracy and compliance with relevant legislation, regulations, codes and standards before importing or transposing into existing drawings; and who then check the integrity and accuracy of the completed drawings.

Licensing, legislative, regulatory or certification requirements apply to building design drafting in some states. Relevant state and territory regulatory authorities should be consulted to confirm those requirements.

Pre-requisite Unit

Nil

Competency Field

Drafting

Unit Sector

Building design

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. Confirm accuracy and compliance of externally-sourced drawings. | <p>1.1. Land survey drawings are checked for accuracy according to workplace requirements.</p> <p>1.2. Structural engineering drawings are checked for accuracy and compliance according to workplace requirements.</p> <p>1.3. Drawings and reports from engineers are checked for accuracy and compliance according to workplace requirements.</p> <p>1.4. Drawings, reports and drawing notations from consultants are checked for accuracy and compliance according to workplace requirements.</p> <p>1.5. Inaccuracies and non-compliance issues relating to drawings and drawing notations are reported to, and discussed with, architect or building designer.</p> <p>1.6. Architect's or building designer's observations on externally-sourced drawings are noted.</p> <p>1.7. Amended drawings are requested, noted details of amendments required are provided, and amended drawings are obtained from relevant engineers or consultants according to workplace requirements.</p> |
| 2. Import drawings from external sources into digital building design files. | <p>2.1. Compatibility of digital drawings from external sources for importing into digital building design files is determined and confirmed with architect or building designer.</p> <p>2.2. Building design software and work instructions relating to the importing of drawings from external sources are interpreted to determine options to be applied for different building design projects.</p> <p>2.3. Method for importing drawings is applied according to work instructions.</p> <p>2.4. Import options are applied to incoming files according to work instructions.</p> <p>2.5. Files depicting materials and scenery are imported to enhance presentation and conceptual drawings, as required.</p> <p>2.6. Digital building design files are re-named and saved according to workplace requirements.</p> |

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| | | 2.7. | Files are checked for integrity, submitted to architect or building designer for approval, and amendments made as directed. |
| 3. | Transpose information from externally-sourced drawings into digital building design files. | 3.1. | Work instructions for transposing information from externally-sourced drawings into digital building design files are interpreted and confirmed with architect or building designer. |
| | | 3.2. | Information is added to drawings according to work instructions and checked for accuracy and completeness of transposition according to workplace requirements. |
| | | 3.3. | Details of externally-sourced documents are added to the list of supporting documents in the drawing set. |
| | | 3.4. | Digital building design files are re-named and saved according to workplace requirements. |
| | | 3.5. | Files are checked for integrity, submitted to architect or building designer for approval, and amendments made as directed. |

Foundation Skills

This section describes core skills that are essential to performance and not explicit in the performance criteria. Employment skills essential to performance are explicit in the performance criteria of this unit of competency.

Skill	Performance feature
Learning skills to:	- access a range of resources, information and support to assist in developing understanding of: - building design software functions and options for importing digital drawing file - standards and conventions for different types of technical drawings - use hard copy and digital filing systems to collect, analyse, store, organise and facilitate ongoing access to information.
Numeracy skills to:	- interpret and apply information from technical drawings and reports, including ratios, scales and scale conversions - use mathematical language to discuss information gathered from documentation with colleagues.
Oral communication	participate in discussions in the workplace and with external specialists using specialised vocabulary relating to building design

skills to: projects.

Reading skills to:

- understand specialised vocabulary, abbreviations and acronyms specific to building design work, including functions and operation of BIM-capable software
- use different reading approaches to locate specific details in sometimes complex drawings and documentation.

Writing skills to:

- prepare requests for amended drawings from external consultants, giving technical details of the changes or additions required using specialised vocabulary relating to building design projects.

Range of Conditions

This section specifies work environments and conditions that may affect performance.

Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

Drawings must include at least one from each of the following:

- consultant
- engineer
- land survey
- structural engineering.

Workplace requirements must include:

- building design project procedures, including:
 - communication protocols for liaising with external consultants
 - file naming, storing and saving systems and procedures
 - quality requirements
 - work health and safety requirements
- roles and responsibilities of building project team, including extent and limitations of drafter's role.

Compliance must include:

- current Australian standards applicable to the building design
- federal, state or territory, and local authority legislation and regulations applicable to the building design
- National Construction Code.

Engineers must include one or more of the following:

- electrical
- fire safety
- geotechnical
- hydraulic
- mechanical.

Consultants must include one or

- access

more of the following:

- acoustic
- arborist
- bushfire
- energy efficiency
- flooding
- lighting
- traffic.

Building design software must include:

- BIM-capable current industry-standard software.

Options to be applied must include:

- colours
- external references
- layers
- positioning
- scale
- views.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPBDN4006 Import and transpose information from external sources into digital building design drawings

Modification History

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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 also be able to provide evidence of the ability to import and transpose information from at least five different types of externally-sourced drawings into digital building design drawing files for the following three different types of building design projects, as defined by the Building Code of Australia (BCA). At least one of the building design projects must include a Class 10 component:

- one Class 1 building
- one Class 2 building
- one building selected from Classes 3 to 9.

At least one of the above building projects must be two storeys and one building project must be three storeys or more.

Within the context described above, a person must provide evidence of:

- identifying consultants' design discrepancies
- checking drawings and notations for accuracy and compliance before importing and transposing files
- consulting with architect or building designer to discuss inaccuracies or non-compliance and to obtain designer's observations
- requesting and obtaining amended drawings
- checking drawings for compatibility with design software
- applying building design software functions and options to import drawings into digital building design drawing files
- checking integrity of drawings once import is completed
- transposing information and notations from drawings into digital building design drawing files and confirming accuracy and completeness
- adding details of externally-sourced documents to supporting documentation list for the project
- applying naming conventions and version control protocols to renaming, storing and saving files according to workplace procedures.

Knowledge Evidence

A person demonstrating competency in this unit must be able to demonstrate the knowledge required to import and transpose information from external sources into digital building design drawings for the three different types of building design projects specified in the performance evidence, including:

- compliance requirements relating to the three different types of building design projects
- construction terminology required to discuss content of externally-sourced drawings and reports with work colleagues, designers and external consultants
- functions and options of building design software relating to importing external digital drawings into project files
- protocols for communication and liaison with construction professionals who provide drawings and information for building designs
- roles and responsibilities of internal and external contributors to building design projects
- systems for naming, saving and storing digital files and ensuring version control
- types of drawings from external sources required for building designs, including the extent and level of detailed information required.

Assessment Conditions

Assessment must be conducted in the workplace or a close simulation of the workplace.

Suitable assessment of performance requires:

- equipment:
 - computer with internet access, building information modelling (BIM)-capable building design software and storage capacity for a range of typical building design project information
 - electronic file storage devices
- materials:
 - electronic and hard copy project files for the three projects specified in the performance evidence
- relationships with team members and supervisor:
 - tasks may be completed as an individual and as a team member, under the direction of an architect, building designer or other relevant person
- specifications:
 - a range of project documentation, both hard copy and electronic, from construction professionals and consultants involved in the building design process for the three different building design projects specified in the performance evidence
 - National Construction Code and Australian standards relevant to building design projects.

Assessor requirements

As a minimum, assessors must satisfy SNR/AQTF assessor requirements.

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