



Australian Government

Department of Education, Employment and Workplace Relations

CPPBDN5008A Develop concepts for small-scale building design projects and finalise solutions with clients

Release: 1

CPPBDN5008A Develop concepts for small-scale building design projects and finalise solutions with clients

Modification History

New unit

Unit Descriptor

This unit of competency specifies the outcomes required to integrate design briefs and site analyses, apply knowledge of construction materials and methods, and use creativity and innovation skills to produce concept sketches for small-scale building design projects covered by the Building Code of Australia (BCA), except construction Type A buildings.

It also covers presenting concepts to clients, negotiating changes, and preparing client-approved concept sketches and models as a basis for the ongoing design process.

Application of the Unit

This unit of competency supports building designers who produce design concepts that meet clients' requirements and compliance obligations for small-scale building design projects.

Licensing/Regulatory Information

Work in this area must be completed according to relevant legislative, industry and organisational requirements, including occupational health and safety (OHS) policies and procedures.

Different states and territories may have regulatory mechanisms that apply to this unit. Users are advised to check for regulatory limitations.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

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|---|---|-----|---|
| 1 | Analyse project information to clarify design concepts. | 1.1 | Design brief and site analysis documentation for <i>small-scale building design projects</i> are reviewed and further research requirements are noted and met. |
| | | 1.2 | <i>Contextual factors</i> affecting design options are analysed to determine <i>key design parameters</i> . |
| | | 1.3 | Compliance requirements are analysed and limitations on design options are interpreted. |
| | | 1.4 | Construction materials and methods appropriate to the project are reviewed and impacts on design options are analysed. |
| | | 1.5 | Project information is synthesised and <i>design principles</i> are applied to develop ideas for building designs. |
| 2 | Produce concept sketches | 2.1 | Building design ideas are explored through sketching and consultation with colleagues, as appropriate. |
| | | 2.2 | <i>Sketches</i> with accurate proportions are produced within project timelines to illustrate design concepts. |
| | | 2.3 | <i>Rendering techniques</i> are applied to sketches to enhance readability and depict light, shade and a range of <i>material finishes</i> . |
| | | 2.4 | Sketches are reviewed, refined and adjusted to ensure design concepts meet requirements of design briefs and address constraints imposed by project sites and compliance obligations. |
| | | 2.5 | Scaled renditions of design concepts are produced as required. |

- 3 Consult clients to finalise design concepts
- 3.1 Design concepts are presented to client and details of design solutions and choices are explained.
 - 3.2 Client is encouraged to give **feedback**, and questioning techniques and sketching skills are used to explore requested adjustments to design concepts.
 - 3.3 ***Implications of adjustments*** are discussed with client and final decisions on design concepts are negotiated.
 - 3.4 Negotiated adjustments are made to design concepts and client's approval of final drawings is obtained and recorded according to workplace procedures.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- administration and management skills to:
 - manage documents
 - manage time, including planning and prioritising work
- analytical and problem-solving skills to:
 - apply design principles and theories within regulatory requirements
 - respond to the challenges of irregularly shaped sites
 - work out optimum compliant and cost-effective design solutions
- artistic and creative thinking skills to visualise spaces, form, shapes and light
- interpersonal skills to interact with clients and colleagues
- language, literacy and numeracy skills to:
 - calculate scales
 - communicate with clients and contacts
 - interpret and apply complex information, including legislation, regulations, and codes and standards
 - present design options to clients
 - negotiate adjustments and their implications with clients
- technical skills to:
 - apply principles of design
 - produce accurate design documentation
 - draw, either freehand or using computer software
 - design from a brief
 - produce climate-responsive designs
 - use design tools
- technology skills to use information technology and relevant software

Required knowledge

- architectural styles and terminology
- basic principles of structural engineering
- building designers' duty of care to ensure quality and safety of designs
- contextual and site constraints that place limits on design options
- design development and approval processes and implications of changes to design at each stage

- key features of building life cycles and impact on designs
- legislation, codes and standards relevant to sustainable design requirements for small-scale building design projects
- organisational scope of business, service levels and fees
- planning processes and requirements
- principles of design, including sustainable design
- scientific and social principles of human interaction with the built environment
- sustainable construction materials and methods

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>A person should demonstrate the ability to:</p> <ul style="list-style-type: none"> • collect, review and analyse information relevant to at least three different small-scale building design projects, including residential and commercial or industrial projects • produce accurately proportioned and rendered design concept sketches, that meet design brief and site or compliance constraints, within project timelines • consult with clients, including: <ul style="list-style-type: none"> • explaining design concepts • obtaining feedback • negotiating and finalising adjustments • produce finalised design concepts and gain and process client approval documentation.
<p>Context of and specific resources for assessment</p>	<p>Assessment of this unit:</p> <ul style="list-style-type: none"> • must be in the context of the work environment • may be conducted in an off-site context, provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills • must meet relevant compliance requirements. <p>Resource implications for assessment include:</p> <ul style="list-style-type: none"> • access to: <ul style="list-style-type: none"> • suitable assessment venue and equipment • suitable simulated or real opportunities and resources to

	<p style="text-align: center;">demonstrate competence</p> <ul style="list-style-type: none">• assessment instruments.
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<p>Method of assessment</p>	<p>Assessment for this unit must verify the practical application of the required skills and knowledge, using one or more of the following methods:</p> <ul style="list-style-type: none"> • written and/or oral assessment of the candidates required knowledge for the unit • observed, documented and/or firsthand testimonial evidence of the candidates • implementation of appropriate procedures and techniques for the safe, effective and efficient achievement of the required outcomes • identification of the relevant information and scope of the work required to meet the required outcomes • identification of viable options and the selection of options that best meet the required outcomes • consistently achieving the required outcomes.
<p>Guidance information for assessment</p>	<p>This unit could be assessed on its own or in combination with other units relevant to the job function. Where applicable, physical resources should include equipment modified for people with disabilities. Access must be provided to appropriate learning and/or assessment support when required. Assessment processes and techniques must be culturally appropriate, and appropriate to the language and literacy capacity of the candidate and the work being performed.</p>

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Small-scale building design projects:</i></p>	<ul style="list-style-type: none"> • include buildings covered by the BCA, except construction Type A buildings • may be residential projects, such as: <ul style="list-style-type: none"> • additions and renovations • heritage restoration • new buildings • may be commercial or industrial projects, such as: <ul style="list-style-type: none"> • factories • motels
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	<ul style="list-style-type: none">• offices• restaurants• retail and service outlets• warehouses.
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<p><i>Contextual factors</i> may include:</p>	<ul style="list-style-type: none"> • building function, including: <ul style="list-style-type: none"> • behaviours of users • changes in use and behaviours of users over life cycle of building • neighbourhood characteristics • site typology.
<p><i>Key design parameters</i> may include:</p>	<ul style="list-style-type: none"> • concept and identity • patterns of movement • privacy and transparency • spatial relationships • visual goals.
<p><i>Design principles</i> may include:</p>	<ul style="list-style-type: none"> • aesthetics • balance • contrast • dominance and emphasis • functionality • gradation • harmony • proportion • radiation • repetition • rhythm • scale • symmetry • unity.
<p><i>Sketches</i> may:</p>	<ul style="list-style-type: none"> • include: <ul style="list-style-type: none"> • plans • elevations • one-point perspectives • two-point perspectives • show details of: <ul style="list-style-type: none"> • aesthetic elements • construction • structural elements • be produced by: <ul style="list-style-type: none"> • computer software applications • freehand drawing.
<p><i>Rendering techniques</i> may include:</p>	<ul style="list-style-type: none"> • burnishing • hatching • line drawings

	<ul style="list-style-type: none">• negative space• rubbing• scoring• stippling• tonal rendering.
<p><i>Material finishes</i> may include:</p>	<ul style="list-style-type: none">• natural finishes, such as:<ul style="list-style-type: none">• rammed earth• slate• stone• timber• vegetation• non-reflective textured materials, such as:<ul style="list-style-type: none">• brick• carpet• pavers• rendered surfaces• tiles• reflective surfaces, such as:<ul style="list-style-type: none">• glass• mirrors• water.
<p><i>Implications of adjustments</i> may include:</p>	<ul style="list-style-type: none">• buildability issues• changes to:<ul style="list-style-type: none">• budget• project timelines• service level agreement• planning approval issues.

Unit Sector(s)

Building design

Custom Content Section

Not applicable.