



Australian Government

Department of Education, Employment and Workplace Relations

CPPBDN5005A Recommend sustainability solutions for small-scale building design projects

Release: 1

CPPBDN5005A Recommend sustainability solutions for small-scale building design projects

Modification History

New unit

Unit Descriptor

This unit of competency specifies the outcomes required to research current and incoming legislative requirements for environmental sustainability of buildings covered by the Building Code of Australia (BCA), except construction Type A buildings; and to clarify client preferences and budget.

It also covers reviewing site conditions, evaluating sustainability options, and recommending cost-effective options for sustainability to clients in order to meet compliance requirements and client preferences.

Application of the Unit

This unit of competency supports building designers who incorporate sustainable design solutions that fall within the clients' budget into 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

1	Research trends in sustainable design	1.1	Current and incoming <i>legislation relating to sustainable design requirements</i> for new buildings is researched and analysed in relation to <i>small-scale building design projects</i> .
		1.2	Global trends in sustainable design for new buildings are researched and analysed.
		1.3	Locally produced components and materials for sustainable design are researched and analysed.
		1.4	Research is recorded, filed and regularly updated according to workplace procedures.
2	Assess clients' sustainability requirements, preferences and budget	2.1	Compulsory requirements and trends in sustainable design are explained to <i>client</i> in relation to specific building design projects.
		2.2	Client's preferences for sustainable design solutions are clarified, assessed against current and incoming requirements, and discussed.
		2.3	Client's project budget is clarified and budgetary constraints on sustainable design preferences are discussed.
3	Evaluate and recommend design options for sustainability	3.1	Sustainable design options specific to project location and site conditions are researched and evaluated.
		3.2	Generic sustainable design options relevant to small-scale building design projects are researched and evaluated.
		3.3	Sustainable design options are assessed against client

preferences and budget, and cost-effective solutions are recommended to client.

- 3.4 Client's decisions on sustainable design options are recorded and actioned according to workplace requirements.

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
 - plan and arrange professional development activities
- analytical and problem-solving skills to:
 - develop innovative ideas and designs
 - select cost-effective products and materials that contribute to sustainable development
 - work out optimum compliant and cost-effective design solutions
- interpersonal skills to:
 - interact with builders, clients, consultants, manufacturers and suppliers
 - network with other professionals
- language, literacy and numeracy skills to:
 - communicate with clients and contacts, including:
 - presenting design options
 - writing reports
 - estimate costs of sustainable design options
 - interpret and apply complex information, including legislation, regulations, codes and standards
 - research sustainable design options
- technology skills to use information technology and relevant software

Required knowledge

- basic principles of structural engineering
- building designers' duty of care to ensure quality and safety of designs
- construction materials and methods used in sustainable design, including costs
- legislation, codes and standards relevant to sustainable design requirements for small-scale building design projects
- organisational scope of business and client demographics, including:
 - geographic areas of operation
 - trends in clients' sustainable design preferences
 - types of building design projects that form the core business of the organisation
- principles of sustainable design

- sources of reliable information on:
- current and incoming legislation
- local and global trends in sustainable design

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.

Critical aspects for assessment and evidence required to demonstrate competency in this unit	A person should demonstrate the ability to: • develop a body of current research findings relating to sustainable designs for different types of small-scale buildings in different project locations and conditions • systematically document and store research findings • analyse sustainable design options in relation to a range of different projects and locations • communicate with clients to finalise sustainable design solutions.
Context of and specific resources for assessment	Assessment of this unit: • 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. Resource implications for assessment include: • access to: • suitable assessment venue and equipment • suitable simulated or real opportunities and resources to demonstrate competence • assessment instruments.
Method of assessment	Assessment for this unit must verify the practical application of the required skills and knowledge, using one or more of the following methods: • 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.
--	---

Guidance information for assessment	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.
-------------------------------------	--

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.

<i>Legislation relating to sustainable design requirements</i> may include:	• environmental • heritage protection • land rights • planning • renewable energy • sustainability • water use.
<i>Sustainable design</i> may include:	• carbon dioxide reduction methods • energy-efficient design • minimal impact on site ecosystem and natural water • passive solar design • renewable energy appliances • sustainable building materials, including: • locally produced • recycled • water-efficient design.
<i>Small-scale building design projects:</i>	• include buildings covered by the BCA except construction Type A buildings • may be residential projects, such as: • additions and renovations • heritage restorations • new buildings • may be commercial or industrial projects, such as:

	• factories • motels • offices • restaurants • retail and service outlets • warehouses.
Clients may include:	• companies • individuals • families • target groups for standard housing products.

Unit Sector(s)

Building design

Custom Content Section

Not applicable.