



Australian Government

CPCCB6017 Evaluate services layout and connection methods for the planning of large building projects

Release: 2

CPCBC6017 Evaluate services layout and connection methods for the planning of 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 CPCBC6017A Evaluate services layout and connection methods for the planning of large building projects. Updated to meet the Standards for Training Packages 2012.

Application

This unit of competency specifies the skills and knowledge required to evaluate the layout of services and connection methods in large, high-rise and complex buildings that comply with government building requirements and the National Construction Code (NCC). It includes cold and hot water supply, sewerage layout, electric and electronic installation, mechanical ventilation and air conditioning, smoke alarms and fire preventative systems.

This unit of competency applies to builders and other related construction industry professionals and senior managers who determine and manage services installation and connection and resolve issues relating to the planning of services layout and solving related problems.

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 Performance criteria describe what needs to be done to

essential outcomes.	demonstrate achievement of the element.
1 Evaluate layout of water supply for general and firefighting use.	1.1 Identify, evaluate and record specified water supply layout and connection in project plans and specifications. 1.2 Check water connection approvals and determine layout meets NCC performance requirements. 1.3 Record installation of water services supplying fire hydrants, fire hose reels and fire sprinkler systems. 1.4 Evaluate results of interconnected and non-return water tanks for fire services. 1.5 Confirm plumbing systems for general water supply is detailed and compliant with the NCC.
2 Evaluate layout of sewerage and drainage disposal methods.	2.1 Check approval documentation from the sewerage and drainage authority for any conditions related to the project. 2.2 Identify and evaluate planned sewerage layout and connect for compliance with NCC and authority requirements. 2.3 Identify, evaluate and record connection methods of main drains to local authority sewers across open ground and within buildings for the whole site. 2.4 Evaluate local authority requirements for disposal of sewerage from fixtures situated below the level of local authority sewer mains. 2.5 Evaluate and document the design and installation of stormwater drainage systems. 2.6 Evaluate and document methods for disposal of stormwater drainage systems.
3 Evaluate mechanical services and ventilation layout and connection.	3.1 Establish mechanical ventilation control methods and use correct terminology to state how ventilation, volume, velocity and content is controlled. 3.2 Identify, evaluate and record methods of air distribution and smoke hazard management and ensure compliance with the NCC.

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| | 3.3 | Identify, evaluate and record functions, application and basic elements of air conditioning and mechanical ventilation for various occupancy types in buildings. |
| 4 | Select hot water systems. | |
| | 4.1 | Identify and evaluate design factors, height of installation, area to be serviced, number of outlets and energy sources available to select appropriate hot water system. |
| | 4.2 | Evaluate and document operating principles of various types of hot water systems. |
| | 4.3 | Evaluate layout and connection for selected hot water system. |
| 5 | Evaluate natural and artificial lighting. | |
| | 5.1 | Determine the intent of natural lighting and aim of design from plans and specifications. |
| | 5.2 | Identify luminance requirements and compare artificial lighting types and sources for various service situations to meet relevant codes and standards. |
| | 5.3 | Evaluate layout and connection methods for lighting systems from plans and specifications. |
| 6 | Evaluate firefighting and fire detection systems. | |
| | 6.1 | Identify building classification and relevant authorities responsible for fire safety regulations and inspection. |
| | 6.2 | Identify and evaluate requirements for sprinkler systems, fire hydrants and fire hoses for compliance with the building classifications and codes. |
| | 6.3 | Identify and evaluate fire detection and alarm systems for compliance with the building classification and codes. |
| | 6.4 | Evaluate layout and connection of fire detection and firefighting systems. |
| 7 | Determine requirements for | |
| | 7.1 | Identify electrical design and requirements for service connection from electrical supply authorities. |

general electrical and electronic service installation.	7.2	Evaluate layout and connection for general electrical supply and electronic services.
	7.3	Identify design and evaluate layout and connection of emergency warning systems, emergency lighting and exit signage systems.

Foundation Skills

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

- writing skills to:
 - articulate evaluations and apply organisational and industry protocols in the preparation and provision of reports to appropriate bodies or individuals
 - document evaluations, methods and requirements.
- technology skills to:
 - use digital tools and devices to communicate and collaborate effectively with others
 - use equipment and programs to access, extract and record information and develop relevant documentation.

Unit Mapping Information

Supersedes and is equivalent to CPCCB6017A Evaluate services layout and connection methods for the planning of 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>