Australian Government

CPCCWP5001 Design below ground waterproofing

Release: 1

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Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 9.0.

Newly created unit.

Application

This unit of competency specifies the skills and knowledge required to design below ground waterproofing systems for buildings and structures.

The unit applies to Class 1 and 10 Buildings, and Class 2 to 9 Buildings.

The unit includes planning and preparing to design waterproofing systems, analysing risk, and carrying out a detailed design of the waterproofing system solution.

The unit is suitable for builders, building surveyors, building designers, architects, waterproofing design specialists and consultants, engineers and other design specialists.

Licensing, legislative, regulatory or certification requirements may apply to this unit. Relevant work health and safety (WHS) state and territory regulatory authorities should be consulted to confirm jurisdictional requirements.

Pre-requisite Unit

Nil.

Unit Sector

Building and Construction

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe what needs to be done to demonstrate achievement of the element.
1. Plan and prepare.	1.1 Determine the use of the area and most appropriate form of the waterproofing system, including proposed finishes in accordance with stakeholder needs.
	1.2 Determine site conditions and plan a basement waterproofing brief in consultation with all stakeholders identifying challenges and waterproofing system design

		requirements.
	1.3	Assess types of construction proposed and their permeability to water and moisture, including concrete, masonry and framing to be managed and identify potential water ingress points.
	1.4	Review drainage system requirements in accordance with the design team.
2. Carry out risk analysis.	2.1	Assess risk of water bearing to full extent of the structure and the effects of hydrostatic pressure on the proposed waterproofing system.
	2.2	Assess risks of possible defects in the waterproofing system.
	2.3	Assess consequence of water and moisture ingress into an area of the basement.
	2.4	Determine the risk of internal condensation and control measures with the design team.
	2.5	Determine feasibility of the proposed waterproofing design for the structure and the construction sequence.
	2.6	Review any requirement for repair and maintenance of the waterproofing system post construction.
	2.7	Analyse site environmental conditions according to approved plans, including surface and sub-surface drainage.
3. Carry out design.	3.1	Identify and assess below ground waterproofing systems available to suit the design that is appropriate for the conditions and in line with the risk analysis.
	3.2	Provide detailed design drawings for the installation of the waterproofing system, including factors such as building construction method and construction sequencing, substrate considerations and compatibility with the waterproofing system and other related building elements in accordance with stakeholder needs.
	3.3	Provide a basement waterproofing requirement and specification in accordance with the agreed

waterproofing design brief and stakeholder needs.

3.4 Carry out a review of and ensure compliance with relevant regulations, National Construction Code (NCC) performance requirements, Australian Standards, work health and safety (WHS), environmental requirements and manufacturers' requirements.

3.5 Carry out a safety in design analysis of the proposed waterproofing system.

3.6 Provide quality assurance inspection protocols for the waterproofing installation, including substrate assessment for suitability, compliance of membrane installation with project specifications, completion inspection processes and repair and maintenance plan.

3.7 Produce and submit design to stakeholders.

Foundation Skills

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

Unit Mapping Information

No equivalent unit.

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