



Australian Government

CPCCPWP5006 Survey waterproofing systems

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 conduct a survey of waterproofing systems and remedial recommendations for buildings.

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

The unit covers planning and preparing to conduct a survey of waterproofing systems, carrying out the survey of waterproofing systems, analysing report findings and making recommendations, and evaluating and communicating survey findings.

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

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| 1. Plan and prepare. | 1.1 Determine scope of survey in consultation with stakeholders, reports and project brief, building works or structural specifications. |
| | 1.2 Gather and review design specifications and data sheets, manufacturers' information, drawings and waterproofing |

- contractors' scopes of work.
- 1.3 Assess site environmental conditions according to approved plans, including surface and sub-surface drainage.
 - 1.4 Confirm design complies with National Construction Code (NCC) performance requirements and Australian Standards.
 - 1.5 Determine tools, equipment and relevant technologies required for the survey according to site conditions.
 - 1.6 Develop the scope for the survey, including installation stages and compliance review.
2. Carry out survey.
- 2.1 Establish stage inspection protocols and benchmarks for compliance with design and manufacturers' specifications.
 - 2.2 Communicate survey procedures and timeframe in consultation with stakeholders.
 - 2.3 Conduct quality assurance inspections of the waterproofing systems, including substrate assessment for suitability, component installation and compliance with manufacturers' specifications.
 - 2.4 Identify latent conditions outside of the waterproofing system design.
 - 2.5 Determine if installation complies with design requirements and manufacturers' specifications.
 - 2.6 Record observations of survey of waterproofing systems for analysis.
3. Analyse survey report findings and make recommendations.
- 3.1 Review report findings and confirm installation complies with manufacturer's specifications, Australian Standards and NCC performance requirements.
 - 3.2 Identify and document any non-compliance regarding installation and deviation from design.
 - 3.3 Develop recommendations for remediation of non-compliances and any defects.

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| | 3.4 | Develop recommendations to remediate the latent conditions to assist with the remediation advice. |
| | 3.5 | Develop a report summary and quality control recommendations for stakeholders. |
| 4. Evaluate survey findings and communicate recommendations. | 4.1 | Review survey findings against waterproofing systems design. |
| | 4.2 | Review and confirm remediation of non-compliances and defects, including latent conditions. |
| | 4.3 | Review survey results to accommodate use of area at the highest risk level. |
| | 4.4 | Communicate survey findings and any recommendations 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>

Assessment Requirements for CPCCWP5006 Survey waterproofing systems

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Performance Evidence

A person demonstrating competency in this unit must satisfy the requirements of the elements, performance criteria and foundation skills of this unit, in addition to the specific performance and knowledge evidence described below.

The candidate must develop one (1) survey report for each of the below:

- an internal wet area
- an external above ground area
- a below ground system
- a remedial waterproofing system.

The survey report must include a stage inspection or hold point report and final inspection report.

The candidate must also provide a review of documentation or specifications for each waterproofing system above.

One (1) or more of the survey reports must identify a latent condition and must include recommendations for a resolution of the latent condition.

The survey reports must include:

- parameters of survey in accordance with stakeholders' brief
- classification of wet areas
- assessment of waterproofing design against compliance with National Construction Code (NCC) performance requirements, Australian Standards, building design and use of area
- site conditions at the time of survey
- provision of stage inspection protocols and benchmarks for compliance with design and manufacturers' specifications
- methodical collation of observations from survey
- review of observations against compliance of design and manufacturers' specifications
- recommendations for remediation of defects and confirming compliant installation practices
- identify latent conditions outside of systems design
- recommendations to remediate the latent conditions to assist with the remediation advice

- provision of remedial scope and timeframe for remedial works to completion in accordance with survey report
- review of survey findings and recommendations against waterproofing design.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- application of scientific methodology
- diagnostic procedures – non-destructive and destructive, including:
 - site investigation
 - knowledge of construction materials and their properties
 - inspecting and testing protocols utilising factors and influences in accordance with risk levels, including:
 - observation procedures
 - establishing control areas and reference points
 - analysing evidence
 - utilising information from other sources, e.g., hydraulic and drainage reports, Bureau of Meteorology observations
 - suitable technologies:
 - thermal
 - microwave
 - ground penetrating radar (GPR)
 - dye water testing
 - impedance and capacitance technologies
 - electronic field vector mapping
 - high and low voltage holiday testing
 - setting control parameters and testing values, including:
 - calibration of testing equipment
 - effects on testing equipment by site conditions and testing procedures
- contributing site factors, including:
 - water ingress sources
 - surface water pathways
 - sub-surface water pathways
 - properties of water and moisture movement
 - gradient or falls
 - hydrostatic pressure
 - surface tension of finishes
 - capillarity
 - size and effectiveness of outfalls
 - penetrations and intrusion points

- causes and effects of dampness in buildings, including the ingress of water, capillary action and surface and interstitial condensation and their remediation
- building elements and integration, including:
 - product properties and compatibility with building elements
 - installation methods and practices
 - stages of installation and inspection benchmarks
 - waterproofing systems design and relationship with building design
- physical aids to detection of moisture and water ingress and interpretation of results, including:
 - flood testing
 - targeted water testing
 - thermal surveys
 - moisture meters
 - combination of aids
 - hygrometric surveys
- NCC performance requirements relevant to wet areas tested, including:
 - waterproofing
 - weather proofing
 - damp proofing
 - condensation management
- Australian Standards and design requirements relevant to wet areas inspected
- waterproofing system manufacturers' requirements, including:
 - installation
 - performance of system according to service conditions
 - suitability of materials as fit for purpose
 - compatibility of components within the system
- risk assessment of water ingress for the purposes of providing designed systems, including:
 - assessment of service conditions
 - risk and management of interstitial condensation within building elements as part of design
 - consequence of defects affecting the use of the intended adversely affected areas as wet, damp or dry
 - feasibility of repair of the waterproofing system
- properties of waterproofing systems available:
 - substrate assessment and preparation
 - combining components to form a system
 - component compatibility in a combined system
 - component properties for site conditions
 - component installation practices
- system analysis for effectiveness

- stakeholders:
 - architect
 - engineer
 - builder
 - building owner
 - consumer
 - design team
 - construction team
 - certifier
 - building surveyor
 - regulators
- report content and communication of findings:
 - types of diagnostic reports and structures, including:
 - issue
 - performance standard
 - remedial action required
 - tables and diagrams
 - photographic evidence
 - thermal imaging analysis
 - interpreting measurement values
 - references to Australian Standards and designs
 - verbal communication strategies
 - different audiences
 - presenting evidence.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment of performance must be undertaken in the workplace or simulated workplace environment. A simulated workplace is one that fully replicates the resources, environment and any time and productivity pressures that exist in the actual workplace, and which meets industry standards for safety and environmental practices.

Candidates must have access to:

- relevant tasks
- Australian Standards, relevant building legislation, industry codes, NCC and requirements of workplace policies and procedures as required by Commonwealth, state and territory regulators
- relevant environmental requirements.

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