

Case for National Quality Council Endorsement

3 February 2010

for the addition of a new unit of competency covering
the installation of ceiling insulation
to CPC08 Construction, Plumbing and Services
Integrated Framework Training Package





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1 Overview

Construction and Property Services Industry Skills Council (CPSISC) submits the following for endorsement as continuous improvement of the CPC08 Construction, Plumbing and Services Integrated Framework Training Package.

- One revised qualification:
 - CPC31208 Certificate III in Wall and Ceiling Lining
- One new unit of competency:
 - CPCCPB3027A Install ceiling insulation.

1.1 Rationale for the continuous improvement project

As part of the government's recent *Energy Efficient Homes Package*, in particular the ceiling insulation program, CPSISC were asked by the Department of Environment, Water, Heritage and the Arts (DEWHA) to design nationally recognised training for ceiling insulation installers.

CPSISC mapped available competencies and identified three relevant endorsed units:

- CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry
- CPCCCM1006A Work safely at heights
- CPCCPB3014A Install batt insulation products.

Components of a fourth unit, CPCCPB3015A Install acoustic and thermal environmental protection systems, were selected to fill a gap in installing other types of insulation.

CPC31208 Certificate III in Wall and Ceiling Lining contains two general electives relating to thermal insulation, CPCCPB3014A and CPCCPB3015A. These units were left untouched as part of the recent review and have not been updated since 2003.

Due to the lack of a national unit of competency to cover the work requirements to install ceiling insulation, CPSISC developed training support materials for registered training organisations (RTOs) to deliver the required units of competency (CPCCPB34014A and its prerequisite and co-requisite units CPCCOHS2001A and CPCCCM1006A).

DEWHA's Ceiling Insulation Program competency guidelines also included the acceptance of individual Statements of Attainment against CPCCPB3015A Install acoustic and thermal environmental protection systems as a competency requirement for supervisors of insulation installation.

Through industry consultation it was identified that individual competencies were not sufficient to ensure that supervisors had all the relevant skills and knowledge, especially in critical safety aspects. It was agreed that a new unit of competency which combined all critical functions of installing ceiling insulation should be developed to ensure consistency in training.

1.2 Project objectives

CPSISC, along with its dedicated Ceiling Insulation Industry Advisory Group, conducted research on the various skill requirements and mapped these against existing CPC08 units of competency. A single 'competency summary' was produced to be agreed upon by the group prior to commencing the process for the training support material development.

A meeting held 8 May 2009 saw industry agree to the 'competency summary', which contained all the relevant clustered information from the existing units of competency:

- CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry
- CPCCCM1006A Work safely at heights
- CPCCPB3014A Install batt insulation products
- partial coverage of CPCCPB3015A Install acoustic and thermal environmental protection systems.

CPSISC then developed the training materials which consisted of:

- a training delivery guide
- a recognition of prior learning (RPL) instrument
- an assessment guide
- an assessment instrument.

The above materials, based on the 'competency summary', were mapped directly to the units of competency.

Insulation Installers are licensed in South Australia and they are using the training materials for these units as a requirement for registration.

National workshops for RTOs were conducted by DEWHA and the Department of Education, Employment and Workplace Relations (DEEWR) in July 2009, outlining the resources that had been developed and how the training program related to the requirements of installers under the Energy Efficient Homes Package. RTOs began delivering based on the resources in July 2009.

Call for a nationally endorsed single unit of competency

Following an insulation installation related fatality in Queensland, a meeting with industry stakeholders was requested by the Minister for DEWHA on 27 October 2009. It was agreed at that meeting that CPSISC and the ElectroComms and Energy Utilities Industry Skills Council (EE-Oz) would review available training materials and look at strengthening electrical safety messages. Through this review the need for learners to conduct a risk assessment was also identified.

The Ceiling Insulation Industry Advisory Group met again on 12 November 2009 to discuss the proposed changes to the ceiling insulation training program. These changes were agreed to and an extensive document outlining all proposed changes was circulated for feedback. Revised training materials for RTOs were submitted to DEWHA and placed on the CPSISC website on 30 November 2009.

2 Quality principles

2.1 Quality assurance

All independent quality reports were completed by members of the Quality Assurance Panels (holistic quality assurance, editorial and equity). The holistic Quality Assurance report is included as Appendix 1.

2.2 Report by exception

The new unit of competency and the revised qualification are supported by the Ceiling Insulation Industry Advisory Group and DEWHA.

There are no unresolved or outstanding issues to report.

3 Components for endorsement

3.1 Revised qualification

The following qualification is submitted for endorsement.

CPC31208 Certificate III in Wall and Ceiling Lining

This qualification has one new unit added to the general electives pool and may be found in Appendix 2.

3.2 New unit of competency

One new unit of competency has been developed to cover the workplace requirements of ceiling insulation installers.

This unit covers:

- OHS requirements, such as working safely at heights, working in confined spaces, electrical safety, and hazard identification and risk assessment
- the work functions relating to preparing to install ceiling insulation, the installation, and the clean-up phases.

The new unit that is part of this Case for Endorsement is included in Appendix 3.

3.3 Licensing requirements or specific assessment

Three agencies have a strong 'regulatory' interest in ceiling insulation installation and in the new unit being proposed for endorsement.

These agencies are the:

- DEWHA through the *Energy Efficient Homes Package*
- South Australian Office of Business and Consumer Affairs
- Queensland Electrical Safety Office.

DEWHA requires ceiling insulation installers wanting to work under the *Energy Efficient Homes Package* to be registered on the Australian Government's Installer Provider Register.

DEWHA has driven the development of the proposed unit of competency and involved both the Construction and Property Services and ElectroComms and Energy Utilities Industry Skills Councils and key industry stakeholders through the Ceiling Insulation Industry Advisory Group. DEWHA has also funded the development of comprehensive training resources to support this unit. These resources are accessible to RTOs at no cost from DEWHA's website.

In South Australia, the Office of Consumer and Business Affairs (OCBA) regulates the installation of ceiling insulation. OCBA supports the endorsement of the proposed new unit of competency and has provided written support for this endorsement.

The Queensland Electrical Safety Office has taken a strong interest in the development of the proposed unit of competency due to the fatalities in that jurisdiction and supports the endorsement of the proposed unit.

3.4 Mapping information

CPC08 qualifications

There have been no changes to the qualification codes or title as a result of this continuous improvement project.

CPC08 unit mapping

There have been no changes to qualification codes or titles as a result of this continuous improvement project.

V5 CPC08		V4 CPC08		Comment
Code	Title	Code	Title	
CPCCPB3027 A	Install ceiling insulation	---	---	New unit
No other CPC units of competency were changed or added in Version 5 of CPC08.				

Table 1 Mapping of CPC08 units of competency

3.5 CPC08 Version Modification History table

The following table shows the CPC08 version modification history and the proposed wording for Version 5.

Version	Release date	Comments
5	TBA	Change to elective pool of one existing qualification: <ul style="list-style-type: none"> CPC31208 Certificate III in Wall and Ceiling Lining: addition of new general elective unit CPCCPB3027A Install ceiling insulation to packaging rules.
		Addition of one new unit of competency: <ul style="list-style-type: none"> CPCCPB3027A Install ceiling insulation to address critical safety requirements in installing ceiling insulation.
4	TBA	Changes to packaging rules of three existing qualifications: <ul style="list-style-type: none"> CPC40110 Certificate IV in Building and Construction (Building): packaging rules changed to total of 16 units, consisting of 13 compulsory and 3 elective units CPC50210 Diploma of Building and Construction (Building): <ul style="list-style-type: none"> packaging rules changed to total of 18 units, consisting of 13 compulsory and 5 elective units options for choice of elective units amended and extended CPC50308 Diploma of Building and Construction (Management): <ul style="list-style-type: none"> two elective units changed to reflect changes detailed immediately below (CPCBC5001A to CPCBC5001B; and CPCBC5008A to CPCBC5018A).

Version	Release date	Comments
		<p>Changes to two units of competency:</p> <ul style="list-style-type: none"> amended content of CPCBC5001B Apply building codes and standards to the construction process for medium rise building projects to remove duplication with other units in the Diploma qualification deleted unit of competency (CPCBC5008A Apply structural principles to the construction of medium rise buildings) replaced by added new unit CPCBC5018A Apply structural principles to the construction of medium rise buildings, now with a prerequisite requirement.
3	20 October 2009	<ul style="list-style-type: none"> Addition of new specialist stream for hydraulic services design to CPC40909 Certificate IV in Plumbing and Services. <p>Addition of new hydraulic services design qualification CPC50609 Diploma of Hydraulic Services Design.</p>
2	22 July 2009	<p>Addition of two new fire systems design qualifications:</p> <ul style="list-style-type: none"> CPC50509 Diploma of Fire Systems Design CPC70109 Vocational Graduate Certificate in Fire Systems Design Management. <p>Addition of 18 new fire systems design units of competency.</p> <p>Addition of one imported unit (BSBAUD504B to CPC50509).</p>
1	February 2009	<p>Primary release.</p> <p>CPC08 brings together the qualifications and units of competency from three previous Training Packages:</p> <ul style="list-style-type: none"> BCG03 General Construction BCF00 Off-Site Construction BCP03 Plumbing and Services.

Table 2: CPC08 version modification history table

4 Implications of continuous improvement project

The availability of the new unit of competency will ensure that all safety requirements associated with installing ceiling insulation are specified precisely and to the satisfaction of regulatory agencies and industry.

Resources to support the delivery of training and assessment by RTOs for the installation of ceiling insulation and a candidate pocket book have been developed by CPSISC, through funding from DEWHA. The resources can be downloaded at no cost from both the DEWHA and CPSISC websites. DEWHA has supplied hard copies of the candidate pocket book to RTOs.



Appendices

Appendix 1 Quality assurance report

Performance Growth

Clear Vision + Strong Planning + Skilled People = Performance Growth

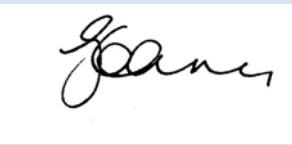
Quality Assurance Report

**For the addition of a new unit of competency:
CPCCPB3027A Install ceiling insulation as a general elective in
CPC31208 Certificate III in Wall and Ceiling Lining**

Prepared by:
Georgina Cane
Performance Growth Pty Ltd

Quality Report

SECTION 1 – DETAILS OF DRAFT TRAINING PACKAGE COMPONENTS

INFORMATION REQUIRED	DETAIL
Training Package title and code	CPC08 Construction, Plumbing and Services Integrated Framework Training Package
Number of new or revised qualifications or total number if a whole Training Package review	1
Number of new or revised units or total number if a whole Training Package review	1
Sampling size of units ¹	Total review (one unit only)
Summary of comments including a definitive statement on whether the draft endorsed components meet the Training Package Quality Principles in Section 2	<p>The proposal is for the incorporation of a new unit of competency (CPCCPB3027A Install ceiling insulation) as a general elective into the qualification: CPC31208 Certificate III in Wall and Ceiling Lining. The new unit and the reviewed qualification meet the requirements of the Training Package Quality Principles (section 2).</p> <p>The development of the new unit has occurred under the Continuous Improvement program and has been specifically designed to meet the requirements of the Government's Energy Efficient Homes Package and in particular, the ceiling insulation program.</p> <p>The new unit addresses a gap in the current ceiling installers qualification and is designed to support the supervisors of ceiling insulation installations.</p>
Panel member completing Quality Report	Georgina Cane
Statement confirming Panel member has not been involved in the development or validation activities associated with this Training Package	<p>I have not been involved in the planning or development of the new unit of competency and reviewed qualification.</p> <div style="text-align: center;">  </div> <p>Signed:</p>
Date completed	23 rd December, 2009

¹ The size of sample should be commensurate with the number of units of competency and qualifications being put forward for endorsement. Typically, this should mean that where there are: less than 10 units of competency – sample all units; between 10 – 100 units of competency – sample a minimum of 10 units; between 100 – 250 units of competency – sample 10% of units; greater than 250 units of competency – sample 5% - 10% of units. The exact number of units to be sampled must be confirmed with the ISC before commencing the work.

Quality Report

SECTION 2 – COMMENTS ON HOW THE DRAFT TRAINING PACKAGE COMPONENTS MEET THE QUALITY

QUALITY PRINCIPLES	KEY FEATURES <i>The endorsed components of a Training Package must ...</i>	EVIDENCE <i>How do the endorsed components of a Training Package achieve this?</i>	COMMENTS <i>Provide brief commentary on the whether the draft endorsed components meet the Quality Principles with specific reference to the evidence provided</i>
<p><i>Ensures ...</i></p> <p>RESPONSIVENESS</p> <p><i>... to the needs of contemporary industry and its workforce</i></p>	<p>1. Reflect contemporary work organisation and job profiles incorporating a futures orientation</p>	<p>1.1 Open and inclusive consultation and validation commensurate with scope and impact is conducted</p>	<ul style="list-style-type: none"> The consultation process was extensive and relevant and, indeed, exceeded that normally associated with the addition of one elective unit to a qualification. There is clear evidence of strong input from relevant regulators, government departments, industry peak bodies, unions and practitioners.
	<p>2. Be driven by industry's needs</p>	<p>1.2 Other national and international standards for skills are considered</p>	<ul style="list-style-type: none"> Not applicable.
	<p>3. Respond to government broad policy initiatives</p>	<p>2.1 Clever, sustainable approaches to incorporate feedback from stakeholders</p>	<ul style="list-style-type: none"> There is clear evidence of the incorporation of industry's needs and appropriate responsiveness to stakeholders feedback
	<p>3.1 Innovative responses to government policy initiatives</p>	<p>3.1 Innovative responses to government policy initiatives</p>	<ul style="list-style-type: none"> This project is in direct response to government policy and initiatives and was instigated by the Department of Environment, Water, Heritage and the Arts (DEWHA)
<p><i>Enables ...</i></p> <p>RECOGNITION</p> <p><i>... of an individual's competence across industries and occupations</i></p>	<p>4. Recognise convergence and connectivity of skills</p>	<p>4.1 Incorporation of cross industry units and qualifications</p>	<ul style="list-style-type: none"> Not applicable
	<p>5. Support movement of skills within and across organisations and sectors</p>	<p>5.1 Clear and consistent packaging rules for qualifications</p>	<ul style="list-style-type: none"> Yes. No effective changes to the packaging rules were undertaken
		<p>5.2 Qualification framework and pathways are effectively designed</p>	<ul style="list-style-type: none"> Yes. No effective changes to the prior endorsed qualification
		<p>5.3 Incorporation of skill sets</p>	<ul style="list-style-type: none"> Not applicable
	<p>6. Promote national and international portability</p>	<p>6.1 Qualification outcomes are aligned with the Australian Qualifications Framework</p>	<ul style="list-style-type: none"> Yes. No effective changes to the prior endorsed qualification
		<p>6.2 Other national and international standards for skills are considered</p>	<ul style="list-style-type: none"> Yes. No effective changes to the prior endorsed qualification

Quality Report

	7. Reflect licensing and regulatory requirements	7.1 Solutions to incorporate licensing and regulatory requirements are brokered	<ul style="list-style-type: none"> Yes, appropriate references are included
<p><i>Provides ...</i></p> <p>FLEXIBILITY</p> <p><i>... to meet individual enterprise and learner needs</i></p>	8. Meet the diversity of individual and enterprise needs	8.1 Clear and consistent packaging rules for qualifications	<ul style="list-style-type: none"> Yes. No effective changes to the prior endorsed qualification
		8.2 Provide flexible qualifications that enable application in different contexts	<ul style="list-style-type: none"> Yes. No effective changes to the prior endorsed qualification
	9. Support equitable access and progression of learners	9.1 Provide multiple entry and exit points	<ul style="list-style-type: none"> Appropriate. No effective changes to the prior endorsed qualification
		9.2 Pre and co-requisite units of competency are minimised	<ul style="list-style-type: none"> The unit does not contain pre or co-requisites
		9.3 Units of competency are clearly written and have consistent breadth and depth	<ul style="list-style-type: none"> The unit is clear, well written and comprehensive
10. Support learner transition between education sectors	10.1 Advice is provided on implementation/pathways	<ul style="list-style-type: none"> No effective changes to the prior endorsed qualification 	
<p><i>Ensures ...</i></p> <p>FUNCTIONALITY</p> <p><i>... through ease of understanding, clever design and consistency with policy and publication requirements</i></p>	11. Support implementation across a range of settings	11.1 Advice is provided on implementation/pathways	<ul style="list-style-type: none"> No effective changes to the prior endorsed qualification
	12. Support sound assessment practice	12.1 Units of competency are clearly written and have consistent breadth and depth	<ul style="list-style-type: none"> The unit is clear, well written and comprehensive and will support sound assessment
	13. Not impose structural barriers to implementation	13.1 Clear and consistent packaging rules for qualifications	<ul style="list-style-type: none"> Not applicable. No effective changes to the prior endorsed qualification
		13.2 Compliance with the National Training Information System (NTIS)/National Register standard for loading and publication	<ul style="list-style-type: none"> Yes

Quality Report

		13.3 Compliance with Training Package policy	<ul style="list-style-type: none">• Yes
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Appendix 2 Draft endorsed qualification

CPC31208	Certificate III in Wall and Ceiling Lining
Qualification Notes	
<p>This qualification provides a trade outcome in wall and ceiling lining.</p> <p>Occupational titles may include:</p> <ul style="list-style-type: none"> • wall and ceiling liner. <p>The qualification has compulsory requirements that cover common skills for the construction industry, as well as two specialist fields of work.</p> <p>The construction industry strongly affirms that training and assessment leading to recognition of skills must be undertaken in a real or very closely simulated workplace environment and this qualification requires all units of competency to be delivered in this context.</p> <p>Completion of the general induction training program specified by the National Code of Practice for Induction Training for Construction Work (SAC 2006) is required before entering a construction work site. Achievement of unit CPCCOHS1001A covers this requirement.</p>	
Packaging Rules	
<p>26 units of competency are required for award of this qualification:</p> <ul style="list-style-type: none"> • 19 compulsory units • 7 elective units. <p>A maximum of two of the seven required elective units may be substituted by selecting relevant units of competency from any Certificate III or IV construction qualification or qualification in another endorsed Training Package.</p>	
Compulsory units	
CPCCCM1002A	Work effectively and sustainably in the construction industry
CPCCCM1003A	Plan and organise work
CPCCCM1004A	Conduct workplace communication
CPCCCM1005A	Carry out measurements and calculations
CPCCCM1006A	Work safely at heights
CPCCCM2001A	Read and interpret plans and specifications
CPCCOHS2001A	Apply OHS requirements, policies and procedures in the construction industry
Fixing (hanging) field of work	
CPCCPB3001A	Fix standard plasterboard wall sheets
CPCCPB3002A	Fix standard plasterboard ceiling sheets
CPCCPB3003A	Fix battens
CPCCPB3004A	Fix wet area sheets
CPCCPB3005A	Fix ceiling sheets to external protected areas
CPCCPB3006A	Fix fibre cement board
Finishing (stopping, sanding and cornices) field of work	
CPCCPB3007A	Apply levels of finish standards to planning and inspection of own work
CPCCPB3008A	Mix plastering compounds
CPCCPB3009A	Finish plasterboard joins manually
CPCCPB3010A	Manually sand plaster work
CPCCPB3011A	Finish category 1 and 2 wet areas

CPC31208		Certificate III in Wall and Ceiling Lining
CPCCPB3012A	Cut and fix paper-faced cornices	
Elective units		
Commercial wall and ceiling lining field of work		
CPCCCA3014A	Construct bulkheads	
CPCCCA3015A	Assemble partitions	
CPCCCM2006A	Apply basic levelling procedures	
CPCCCM2007A	Use explosive power tools	
CPCCWC3001A	Install and finish plasterboard and fibre cement sheeting to curved walls and ceilings	
CPCCWC3003A	Install dry wall passive fire-rated systems	
CPCCWC3004A	Install suspended ceilings	
Plasterboard handling field of work		
CPCCPB3023A	Load and unload plaster and plaster-related products	
CPCCPB3024A	Use manual handling equipment to manoeuvre plaster products	
CPCCPB3025A	Store plasterboard and related products	
General electives		
CPCCCA3001A	Carry out general demolition of minor building structures	
CPCCCM2008A	Erect and dismantle restricted height scaffolding	
CPCCCM3001A	Operate elevated work platforms	
CPCCPB3013A	Plan travel routes	
CPCCPB3014A	Install batt insulation products	
CPCCPB3015A	Install acoustic and thermal environmental protection systems	
CPCCPB3016A	Install and finish columns	
CPCCPB3017A	Rectify faults in plaster applications	
CPCCPB3018A	Use vacuum and electric sanding equipment to finish plaster work	
CPCCPB3019A	Inspect equipment for serviceability	
CPCCPB3020A	Match, mitre and install cast ornamental cornices	
CPCCPB3021A	Install and fix residential acoustic plaster products	
CPCCPB3022A	Use mechanical jointing equipment to finish joints	
CPCCPB3026A	Erect and maintain trestle and plank systems	
CPCCPB3027A	Install ceiling insulation	
CPCCSP3003A	Apply trowelled texture coat finishes	
CPCCSP3005A	Install pre-cast decorative mouldings	
CPCCWC2001A	Complete penetrations and flashings	
CPCCWC3002A	Install and finish plasterboard and fibre cement sheeting to arches	
BSBSMB301A	Investigate micro business opportunities	
BSBSMB406A	Manage small business finances	

EMPLOYABILITY SKILLS SUMMARY FOR CPC31208	
Employability skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> Communicates with clients, colleagues and others using effective and appropriate communication techniques, including: Follows instructions from supervisor and others Understands, interprets and applies information as required from

	<p>relevant:</p> <ul style="list-style-type: none"> • Understands relevant definitions, terminology, symbols, abbreviations and language • Records relevant information using standard workplace documentation • Applies measurements and calculations using appropriate equipment, formulas and records as required • Reports and records hazards and risks: <ul style="list-style-type: none"> ◦ Clear and direct communication ◦ Active listening ◦ Verbal and non-verbal language ◦ Questioning to identify and confirm requirements ◦ Language and concepts appropriate to cultural differences ◦ Regulatory, legislative, licensing and organisational requirements ◦ Environmental and OHS requirements, including material safety data sheets ◦ Codes and standards ◦ Plans, drawings and specifications ◦ Work orders ◦ Photographs ◦ Contracts ◦ Street directories and road maps ◦ Safety signs and symbols ◦ Organisational policies and procedures
Teamwork	<ul style="list-style-type: none"> • Works as part of a team • Provides assistance and encouragement to other team members • Initiates and encourages improvements in team performance • Identifies and utilises the strengths of other team members • Relates to people from diverse social, cultural and ethnic backgrounds and with varying physical and mental abilities • Coordinates and actions tasks • Participates in on-site meetings
Problem solving	<ul style="list-style-type: none"> • Examines tools and equipment prior to use for damage, missing components or other defects • Identifies typical faults and problems and takes remedial action and/or reports to supervisor • Rectifies simple faults with tools and equipment
Initiative and enterprise	<ul style="list-style-type: none"> • Identifies opportunities to improve resource efficiency and makes suggestions as appropriate • Responds to change and workplace challenges • Puts ideas into action • Maximises use of resources by recycling, re-using or using appropriate disposal methods
Planning and organising	<ul style="list-style-type: none"> • Identifies hazards and implements appropriate hazard control measures • Identifies and manages risks • Selects and uses appropriate materials, tools and equipment • Selects appropriate travel route and estimates travel time • Identifies products for storage, appropriate stock records and inventory

	<p>systems, and prepares storage area</p> <ul style="list-style-type: none"> • Determines material quantity requirements and conformity to requirements • Prioritises and sequences tasks • Applies time management skills to ensure work is completed to time requirements
Self management	<ul style="list-style-type: none"> • Evaluates own actions and makes judgements about performance and necessary improvements • Contributes to workplace responsibilities, such as current work site environmental/sustainability frameworks or management systems • Manages own performance to meet workplace standards • Seeks support to improve work performance • Cleans up work area, including tools and equipment
Learning	<ul style="list-style-type: none"> • Identifies own learning needs and seeks skill development as required • Is open to learning new ideas and techniques
Technology	<ul style="list-style-type: none"> • Uses calculators • Uses and operates a range of tools and equipment correctly and safely • Properly starts up, operates and shuts down equipment • Carries out pre- and post-operational checks on equipment and machines • Performs tool and equipment maintenance as required

Appendix 3 Draft endorsed unit of competency

CPCCPB3027A	Install ceiling insulation	
Unit descriptor	<p>This unit of competency specifies the outcomes required to install ceiling insulation to comply with safety requirements as well as environmental requirements for energy efficiency ratings in accordance with sustainable building practices. It includes identifying and complying with applicable legislative requirements, planning and preparing for work, installing ceiling insulation, and completing installation and post-work clean-up activities.</p> <p>This unit may be an essential requirement for registration to install ceiling insulation. Registration requirements may vary in different states and territories.</p> <p>At the time of endorsement, this unit meets the regulatory requirements of the Government's <i>Energy Efficient Homes Package</i>.</p>	
Employability skills	This unit contains employability skills.	
Prerequisite units		
	CPCCOHS2001A	Apply OHS requirements, policies and procedures in the construction industry
Co-requisite units		
Application of the unit	This unit supports those individuals who safely and efficiently install ceiling insulation while working with others as members of a team.	
Competency field	Plasterboard	
Unit sector	Construction	

ELEMENT	PERFORMANCE CRITERIA
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.
1. Identify legislative, regulatory, and organisational requirements.	<p>1.1. Safety and applicable legislative requirements are identified and complied with.</p> <p>1.2. Organisational environmental and safety plans and policies are identified and complied with according to organisational requirements.</p> <p>1.3. Safe work methods and practices are identified and applied according to organisational safety plans and policies.</p> <p>1.4. Environmental requirements are identified and applied according to organisational environmental plans and regulatory requirements.</p> <p>1.5. Emergency response and evacuation procedures are identified and carried out when required.</p>
2. Plan and prepare for installing insulation.	<p>2.1. Work instructions and relevant information are obtained and confirmed for planning and preparation purposes.</p> <p>2.2. Risk assessment is undertaken to identify existing risks and hazards in the work area, including electrical risks and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>hazards.</p> <p>2.3. Identified risks are documented and appropriate response is undertaken according to safety requirements.</p> <p>2.4. Ceiling insulating material and insulation requirements are confirmed in accordance with work specifications.</p> <p>2.5. Appropriate personal protective equipment (PPE) and clothing are identified, correctly fitted, and used according to organisational policies and procedures.</p> <p>2.6. Tools and equipment are selected appropriate to the requirements of the work, confirmed for serviceability, and reported for repair or replacement where not serviceable.</p> <p>2.7. Associated material is determined and organised ready for use according to quality requirements and work plans and specifications.</p>
<p>3. Install ceiling insulation.</p>	<p>3.1. Insulation material is accurately measured to minimise waste.</p> <p>3.2. Insulation is installed using approved processes and handling techniques according to manufacturer specifications and relevant electrical and building regulations.</p> <p>3.3. Dust-suppression procedures are used to minimise health risk in work area to self and others.</p> <p>3.4. Insulation is installed safely without damage or distortion of the surrounding environment, electrical and other services and in a manner that maximises safety of self and others.</p> <p>3.5. Variations and difficulties affecting performance or quality requirements of own work are identified and reported.</p>
<p>4. Complete installation.</p>	<p>4.1. Final inspections are conducted to ensure installed ceiling insulation conforms to job and manufacturer specifications.</p> <p>4.2. Notification of work completion is made to designated personnel according to organisational procedures.</p> <p>4.3. Work area is cleaned and materials are disposed of, reused or recycled according to organisational, safety and environmental requirements.</p> <p>4.4. Tools and equipment are cleaned, checked, maintained and stored according to manufacturer specifications and organisational procedures.</p> <p>4.5. Malfunctions, faults, wear or damage to tools, equipment and site are accurately documented and reported for repair or replacement according to organisational procedures.</p>

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- self-management skills to:
 - adjust work activity to maintain quality standards
 - evaluate own actions and make judgments about performance and necessary improvements
- communication skills to:
 - communicate clearly and directly, using questioning to identify and confirm requirements
 - follow instructions
 - listen and understand

REQUIRED SKILLS AND KNOWLEDGE

- share information
- use and interpret non-verbal communication, such as hand signals
- use language and concepts appropriate to cultural differences
- literacy skills to:
 - read and interpret:
 - company procedures
 - documentation from a variety of sources
 - drawings and specifications
 - material safety data sheets (MSDS), job safety analyses (JSA), safe work method statements, and risk assessments
 - recognise and interpret work-related signs, such as safety logos and warnings
 - report faults, safety risks and hazards
 - record results of checks and tests and relevant work-completion procedures
- numeracy skills to calculate insulation material quantities
- identify and report to designated personnel any faults in tools, equipment or materials
- identify faults in insulation materials
- organisational skills to:
 - identify and document wiring that is likely to be adversely affected by the retrospective installation of thermal insulation
 - identify and document hazards, including electrical
 - plan, prioritise and set out work
- problem-solving skills to:
 - respond to change
 - address safety concerns and seek specialist advice where required
- teamwork skills to:
 - relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
 - work with others to action tasks
- technological skills to:
 - use a range of mobile technology, such as two-way radios and mobile phones
 - voice and hand signals to access and understand site-specific instructions

Required knowledge

- appropriate PPE and its use to reduce injury and electric shock
- ceiling insulation material types and quality requirements
- common health and safety risks associated with handling ceiling insulation
- common workplace safety hazards and risks, and procedures for reporting these to designated personnel
- emergency response and evacuation procedures
- environmental requirements, including waste management and recycling
- hierarchy of hazard control
- legislation, regulation and building codes related to ceiling insulation
- MSDS, JSA and safe work method statements
- methods for calculating insulation material quantities
- organisational requirements and procedures relating to ceiling insulation installation, including requirements for a systematic approach to planning own work
- procedures to safely use equipment, shift and handle products and materials, and work at heights and in enclosed areas
- product and process knowledge to identify problems and predict consequences
- relationships of 'R' rating with Building Code of Australia (BCA) and Australian standards' requirements and energy ratings
- tools and equipment prohibited for use near identified asbestos-containing materials

REQUIRED SKILLS AND KNOWLEDGE

(ACM)

- type and purpose of tags and logs of use for equipment
- types, characteristics, uses and limitations of installation tools and equipment
- types, possible location and risks of ACM, including serpentine and amphibole groups, and their use on common building materials
- reason for the operating temperature limit of electrical cables
- effect on cables partially surrounded by thermal insulation and fully surrounded by thermal insulation
- common wiring systems used in domestic premises indicating the age of the installation
- wiring not likely to be adversely affected by the retrospective installation of thermal insulation; note: the following conditions shall apply:
 1. cables are thermoplastic sheathed (white), and
 2. cables are in continuous contact with a surface (e.g. laying on ceiling lining, fixed to structural members) or in a position where they cannot be partially or fully surrounded by thermal insulation
- clearance of thermal insulation from recessed downlights and ancillary equipment in accordance with AS/NZS 3000:2007 Clause 4.5.2.3; note:
 1. Clause 4.5.2.3 in part states:
 - recessed luminaires and their auxiliary equipment shall be installed in such a manner that necessary cooling air movement through or around the luminaire is not impaired by thermal insulation or other material
 - where thermal insulation is of a type that is not fixed in position (e.g. loose fill), a barrier or guard constructed of fire-resistant material shall be provided and secured in position to maintain the necessary clearance
 2. any barriers placed around recessed luminaires shall not be enclosed and allow the heat from the luminaire to dissipate freely
- electrical hazards in roof spaces, including unenclosed connections, unenclosed conductors, damaged cable sheaths and exposed conductors
- risk assessment documentation and actions to take where:
 - wiring is of a type likely to be adversely affected by the installation of thermal insulation, and
 - electrical hazards are present
 - note: this requires the engagement of a licensed electrician through an electrical contractor to evaluate the suitability of the wiring for the retrospective installation of thermal insulation and to rectify electrical hazards
- hazards related to polystyrene, polyurethane and metallic foil; note:
 1. polystyrene and polyurethane have a detrimental effect on electrical insulation, reducing the effective safe service life of the cables and should not be used where there is a likelihood of contact with electrical cables
 2. metallic foil is electrically conductive, therefore appropriate tools, equipment and fixings must be selected

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.

Safety requirements are to be in accordance with commonwealth, state and territory legislation and regulations,

- emergency procedures, including evacuation and provision of first aid
- hazard control procedures
- hazardous materials and substances
- electrical hazards

RANGE STATEMENT	
organisational safety plans and policies, and include:	<ul style="list-style-type: none"> • PPE prescribed under legislation, regulations and workplace policies and practices • reporting hazards, incidents, injuries, near misses and identified ACM • safe operating procedures, including the conduct of operational risk assessment and treatments associated with: <ul style="list-style-type: none"> ◦ manual handling ◦ concealed services, including water, power and gas ◦ lighting ◦ traffic control ◦ restricted access barriers ◦ trip hazards ◦ power sources and leads ◦ power tools, including cutting tools ◦ workplace visitors and the public ◦ working at heights ◦ working in enclosed areas ◦ working in proximity to others • types of fire and use of firefighting equipment • use of tools and equipment • workplace environmental requirements.
Commonwealth, state and territory legislative requirements include:	<ul style="list-style-type: none"> • Australian standards, including working at heights requirements: <ul style="list-style-type: none"> ◦ AS 6001:1999 Working platforms for domestic application ◦ AS 1576 Scaffolding ◦ AS/NZS4576:1995 Guidelines for scaffolding • conduct on-site operational assessment of electrical risk and implement control measures to prevent it • construction industry OHS standards and guidelines • duty of care • health and safety representatives, committees and supervisors • licences, tickets and certificates of competency • National Code of Practice for Induction Training for Construction Work • national safety standards • OHS and welfare Acts and regulations • safety codes of practice, and JSA and safe work method statements.
Organisational requirements relate to:	<ul style="list-style-type: none"> • access and equity policy, principles and practice • client service standards • defined resource parameters • emergency and evacuation procedures • employer and employee rights and responsibilities • OHS policies, procedures and programs • organisational goals, objectives, plans, systems and processes • organisational policies and procedures, including personnel practices and guidelines • own role and responsibility • quality and continuous improvement processes and

RANGE STATEMENT	
	standards.
Safe work methods and practices relate to:	<ul style="list-style-type: none"> • access to site amenities, such as drinking water and toilets • avoiding unnecessary risks • awareness of existing and potential hazards • day to day observation of OHS policies and procedures • drugs and alcohol at work • general requirements for safe use of plant, tools and equipment • general requirements for use of PPE and clothing • housekeeping to ensure a clean, tidy and safe work area • preventing bullying and harassment • risk assessment • smoking in designated areas • storage and removal of debris • use of plant and equipment guards.
Environmental requirements include:	<ul style="list-style-type: none"> • clean-up management • dust and noise • vibration • waste management and recycling.
Emergency response and evacuation procedures include:	<ul style="list-style-type: none"> • emergencies, such as fire, toxic and/or flammable vapours emission, vehicle/mobile plant accident, structural collapse, chemical spill and injury to personnel, including electric shock • evacuation • extinguishing fires • first aid.
Work instructions may include:	<ul style="list-style-type: none"> • completion dates • work requirements and tasks • procedures for installing insulation in relation to electrical equipment • electrical isolation and tagging of work area • site access information • risk assessment documentation • safety measures for electrical hazards • specific client and site requirements • work schedules.
Information includes:	<ul style="list-style-type: none"> • diagrams or sketches • drawings, plans and specifications • instructions issued by authorised organisational or external personnel • log books • manufacturer specifications and instructions • MSDS • memos • regulatory and legislative requirements pertaining to installing ceiling insulation • relevant Australian standards • safe work procedures relating to installing ceiling insulation • signage • suppliers' information • verbal and written instructions, including diagrams

RANGE STATEMENT	
	<ul style="list-style-type: none"> • work bulletins.
Planning and preparation relate to:	<ul style="list-style-type: none"> • assessing conditions and hazards • determining work requirements and safety plans and policies • identifying equipment defects • inspecting workplaces.
Hazards may include:	<ul style="list-style-type: none"> • asbestos dust and fibres • asbestos containing materials • enclosed areas (e.g. heat stress) • dust from fibreglass and other insulation materials • electrical hazards • inability of ceiling structure to support additional weight of insulation materials and installers • manual handling hazards (e.g. knee and back injury) • noise, plant and equipment hazards • slips, trips and falls • synthetic mineral fibres • working at heights.
Electrical risks and hazards include:	<ul style="list-style-type: none"> • unenclosed connections • unenclosed conductors • damaged cable sheaths • exposed conductors • wiring that is likely to be adversely affected by retrospective installation • not following specified clearances/insulation barriers around recessed luminaires • not observing operating temperature limit of electrical cables • wiring system age • using polystyrene, polyurethane and metallic foil-based products.
Appropriate response may include:	<ul style="list-style-type: none"> • engaging a licensed electrician to evaluate suitability of wiring • isolating and tagging work area • seeking changes to work instructions • deciding not to undertake work • reporting to designated personnel • following OHS legislative requirements.
Ceiling insulating material includes:	<ul style="list-style-type: none"> • batts and blankets: <ul style="list-style-type: none"> ◦ glasswool ◦ glasswool/rockwool – foil attached ◦ polyester ◦ rockwool ◦ sheep's wool • boards: <ul style="list-style-type: none"> ◦ expanded polystyrene ◦ expanded polystyrene – foil attached ◦ extruded polystyrene (styrofoam) • loose fills: <ul style="list-style-type: none"> ◦ cellulose fibre ◦ granulated rockwool ◦ sheep's wool • reflective:

RANGE STATEMENT	
	<ul style="list-style-type: none"> ◦ foil batts ◦ multi-layer reflective ◦ roll-form reflective foil laminate (RFL).
Insulation requirements:	<ul style="list-style-type: none"> • as determined by BCA and Australian standards AS/NZS 4859.1, AS 4200.1, AS 4200.2 (2006) • include: <ul style="list-style-type: none"> ◦ approved system radiative transfer (RT) calculations ◦ downward R-values ◦ upward R-values.
Personal protective equipment includes:	<ul style="list-style-type: none"> • aprons • arm guards • caps • dust masks and respirators • ear muffs and plugs • gloves • hard hats • harnesses and ropes • high visibility retro reflective vests • jackets • overalls • safety glasses and goggles • steel-capped boots • UV protective clothing and sunscreen.
Tools and equipment.	<ul style="list-style-type: none"> • include: <ul style="list-style-type: none"> ◦ broad knives ◦ brooms ◦ caulking guns ◦ electric screw guns ◦ hammers ◦ hand saws ◦ keyhole saws ◦ ladders ◦ manual levelling devices ◦ measuring tapes and rules ◦ nail bags ◦ power drills ◦ power leads ◦ power saws ◦ spanners ◦ spirit levels ◦ T squares ◦ taping knives ◦ tin snips ◦ trestles ◦ trowels ◦ non-conductive and insulated tools • may include: <ul style="list-style-type: none"> ◦ air compressors and hoses ◦ C clamps ◦ docking saw and drop saws ◦ laser levelling devices

RANGE STATEMENT	
	<ul style="list-style-type: none"> ◦ masonry drills ◦ nail guns ◦ pop riveters ◦ saw stools ◦ scaffolding and planks.
Associated materials include:	<ul style="list-style-type: none"> • adhesive • ceiling products • downlight covers • fibrous plaster • jointing tape • metal and aluminium type products • nails • non-conductive fixing devices • plasterboard • screws • sealants • staples • steel safety mesh.
Quality requirements incorporate relevant regulations and include:	<ul style="list-style-type: none"> • Australian standards • internal organisational quality policy and standards • manufacturer specifications • workplace operations and procedures.
Installation includes:	<ul style="list-style-type: none"> • employer-approved manual handling techniques • manufacturer recommended methods and fasteners • maintaining specified clearances from recessed luminaires • installing thermal insulation barriers to luminaires and other electrical equipment according to manufacturer's recommendations and applicable standards, including AS/NZS3000:2007 • work sequences and fixing processes that minimise waste and maximise material.
Electrical and building regulations may include:	<ul style="list-style-type: none"> • BCA • Australian standards such as: <ul style="list-style-type: none"> ◦ AS 3999:1992 Thermal insulation of dwellings – Bulk insulation – Installation requirements ◦ AS/NZS 4859.1:2002 Materials for the thermal insulation of buildings – Testing and labelling of insulation ◦ AS/NZS 4200 Pliable building membranes and underlays – reflective foils ◦ AS/NZS 4200.1 Part 1: Materials – reflective foils ◦ AS/NZS 4200.2 Part 2: Installation requirements – reflective foils ◦ AS 1366.1 Rigid cellular polyurethane (RC/PUR) – other insulations ◦ AS 1366.2 Rigid cellular polyisocyanurate (RC/PIR) – other insulations ◦ AS 1366.3 Rigid cellular polystyrene moulded (RC/PS-M) – other insulations ◦ AS 1366.4 Rigid cellular polystyrene – extruded (RC/PS) ◦ AS 4073 Urea-formaldehyde foam thermal insulation – In situ set foam BCA insulation levels – Other insulations.

RANGE STATEMENT	
	<ul style="list-style-type: none"> ◦ AS/NZS 3000:2007 (with Amd 1) Wiring Rules, in particular Clause 4.5.2.3.
Materials include:	<ul style="list-style-type: none"> • hazardous materials • non-toxic materials.

EVIDENCE GUIDE	
<p>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>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>A person who demonstrates competency in this unit must be able to provide evidence of the required skills and knowledge specified in this unit.</p> <p>In particular the person should demonstrate the ability to:</p> <ul style="list-style-type: none"> • apply knowledge of industry products to identify: <ul style="list-style-type: none"> ◦ common faults and problems ◦ manufacturer specifications in relation to insulation properties of the available product ◦ manufacturer components and materials ◦ relationships of 'R' rating with BCA and Australian standards' requirements and energy ratings • apply knowledge for the safe installation of thermal insulation in relation to electrical equipment, including: <ul style="list-style-type: none"> ◦ effects of thermal insulation on cables ◦ wiring likely to be adversely affected by the retrospective installation of thermal insulation ◦ clearance of thermal insulation from recessed downlights and ancillary equipment • complete a risk assessment sheet for each installation which documents: <ul style="list-style-type: none"> ◦ whether the wiring system is compatible with thermal insulation ◦ number of recess luminaires in ceiling and how the clearances are to be met ◦ electrical hazards, and measures taken to eliminate them ◦ relevant work instructions • communicate and work effectively and safely with others • comply with organisational policies and procedures, including quality requirements • comply with site safety plan and OHS legislation, regulations and codes of practice applicable to workplace operations • follow work instructions, operating procedures and inspection practices to: <ul style="list-style-type: none"> ◦ maintain workplace records in relation to materials, plant and equipment use ◦ modify work activities to cater for variations in workplace procedures, personnel, contexts and environment ◦ prevent damage to the environment, equipment, products, or site ◦ select and use appropriate PPE ◦ work effectively alone or with others and operate with minimal supervision

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> ◦ select and use non-conductive and insulated tools and materials to minimise electrical hazards • locate, interpret and apply relevant information, standards and specifications • select and install ceiling insulation on at least two occasions within agreed timeframes and standards using safe handling methods for materials and equipment.
Context of and specific resources for assessment	<p>This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.</p> <p>This unit is to be assessed using standard and authorised work practices, safety requirements and environmental constraints. Assessment of essential underpinning knowledge will usually be conducted in an off-site context.</p> <p>Assessment is to comply with relevant regulatory or Australian standards' requirements.</p> <p>Resource implications for assessment include:</p> <ul style="list-style-type: none"> • ceiling spaces • materials and tools. <p>Assessment of this unit may be in conjunction with assessment of other units commonly performed at the same time in normal work roles.</p> <p>Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.</p>
Method of assessment	<p>Assessment methods must:</p> <ul style="list-style-type: none"> • satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Integrated Framework Training Package • include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application • reinforce the integration of employability skills with workplace tasks and work roles • confirm that competency is verified and able to be transferred to other circumstances and environments. <p>Validity and sufficiency of evidence requires that:</p> <ul style="list-style-type: none"> • competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace • where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge • all assessment that is part of a structured learning experience must include a combination of direct, indirect and

EVIDENCE GUIDE

	<p>supplementary evidence.</p> <p>Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.</p> <p>Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.</p>
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