

## 40797 Complete thermal insulation work

<b>Kaupae   Level</b>	4
<b>Whiwhinga   Credit</b>	3
<b>Whāinga   Purpose</b>	<p>This skill standard is for people intending to complete qualifications and credentials in the carpentry trades.</p> <p>People with this skill standard have the skills to complete thermal insulation work.</p> <p>This skill standard may contribute to New Zealand qualifications designed for construction trades.</p>

### Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

<b>Hua o te ako   Learning outcomes</b>	<b>Paearu aromatawai   Assessment criteria</b>
1. Complete thermal insulation work.	a. Thermal insulation is installed using equipment and methods to reflect plans and specifications.
	b. Thermal installation process and end-product are confirmed to meet industry standards.

### Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria

#### Assessment specifications:

To achieve this standard the candidate must be capable of installing two different types of thermal insulation in either walls, floors, or ceilings, to industry standards.

Industry standards must reflect industry best practice, workplace procedures, and be within acceptable tolerances as defined in New Zealand codes, standards and regulations.

Plans and specifications can include working drawings, plan specifications, manufacturer specifications, installation instructions and demolition and project plans.

This standard must be assessed in the workplace.

Evidence for this standard must be demonstrated:

- to current and relevant Legislation, Standards, and Codes (including safety),
- in an environmentally sustainable manner,
- within an acceptable timeframe,
- in different and unfamiliar contexts,
- with acceptable behaviours.

**Ngā momo whiwhinga | Grades available**

Achieved

**Ihirangi waitohu | Indicative content****Insulation types and their applications**

- Types of insulation: natural wool, mineral wool, cellulose, fiberglass, polyester, polystyrene, glazing, expanded polyurethane foam.
- Properties: R-value/performance, sound absorption, thermal zones, forms (roll, sheet, loose), flammability, sustainability, and environmental friendliness.

**Principles of heat transfer and their relevance to insulation**

- Mechanisms of heat transfer: radiation, convection, conduction.
- Storage of heat and thermal mass.

**Insulation requirements for different building areas**

- Applications of insulation in floors, walls, and ceilings.
- Differences in residential vs. commercial building insulation.

**Compliance with building codes and inspections**

- Pre-line inspection.
- Legislation requirements for thermal performance and safety.

**Considerations for specialised insulation systems**

- Warm roofs and their requirements.
- Safe installation practices for glass wool products.

**Planning and installing insulation**

- Safety protocols, including personal protective equipment and handling precautions.
- Steps for measuring, cutting, and installing insulation materials to ensure compliance with standards.

**Rauemi | Resources**

Programme Guidance information available from [qualifications@waihangaararau.nz](mailto:qualifications@waihangaararau.nz).

**Pārongo Whakaū Kouna | Quality assurance information**

<b>Ngā rōpū whakatau-paerewa  </b> Standard Setting Body	Waihanga Ara Rau Construction and Infrastructure Workforce Development Council
<b>Whakaritenga Rārangi Paetae Aromatawai  </b> DASS classification	Planning and Construction > Construction Trades > Carpentry
<b>Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga  </b> CMR	0120

<b>Hātepe  </b> Process	<b>Putanga  </b> Version	<b>Rā whakaputa  </b> Review Date	<b>Rā whakamutunga mō te aromatawai  </b> Last date for assessment
<b>Rēhitatanga  </b> Registration	1	28 August 2025	N/A
<b>Kōrero whakakapinga  </b> Replacement information	This skill standard replaces unit standard 30862.		
<b>Rā arotake  </b> Planned review date	31 December 2030		

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at [qualifications@waihangaararau.nz](mailto:qualifications@waihangaararau.nz) to suggest changes to the content of this skill standard.