

## Barrier L4 Install building control systems

<b>Kaupae   Level</b>	4
<b>Whiwhinga   Credit</b>	
<b>Whāinga   Purpose</b>	<p>This skill standard recognises the skills required to install building control systems.</p> <p>It contributes to the New Zealand Certificate in Carpentry (Level 4) with optional strand in Metal Roof Cladding Installation [Ref:2738].</p>

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

Hua o te ako   Learning outcomes	Paearu aromatawai   Assessment criteria
1. Identify the types, properties, and components of control systems.	a. The types of sound control systems are identified, including their properties and components.
	b. The types of fire barrier systems are identified, including their properties and components.
	c. The types of thermal barrier systems are identified, including their properties and components.
2. Identify the regulations and requirements for control systems.	a. Regulatory and compliance requirements for control systems are identified.
	b. Installation requirements for control systems are identified.
3. Carryout installation of control systems.	a. Control systems are planned and prepared for installation to reflect plans and specifications.
	b. Control systems are installed to meet regulatory requirements and reflect manufacturer's specifications.

### 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 building control systems for to industry standards.

Control systems can include sound, thermal and fire systems that are used in residential construction that complies with the requirements of New Zealand building codes and 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, work, demolition and project plans.

This standard must be assessed in the workplace.

Evidence for this standard must be:

- 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**

#### Material types and properties

- Insulation: Thermal and sound insulation materials, R-values, mass, and absorption.
- Interior Linings: plasterboard, and acoustic panels.
- Doors/Windows: Sound and fire-resistant features of solid core doors and double-glazed windows.
- Double Stud Walls: Impact on sound transmission.
- Mass/Stiffness, sound insulation.
- Sound absorption, acoustic properties.

#### Sound wave theory and STC ratings

- Sound Waves: How sound is generated and travels.
- 4. STC Ratings: Interpreting sound transmission class for acoustic performance.
- 5. ITC Ratings: Impact insulation class for impact noise control.

#### Identifying weak spots

- Areas where noise and fire transmission can occur (gaps, joints).
- Control systems, sealing gaps and reinforcing materials.

#### Managing control systems

- Increasing mass, reducing stiffness, absorption, decoupling.

#### Fire resistance and passive systems

- Passive fire walls and fire seals

#### Calculations and standards

- Calculations for achieving desired sound performance through material choice and construction.
- R Ratings

#### Fixing, insulation, and sealants

- Installation process, correct fixing and placement.
- Sealants/adhesives

### Rauemi | Resources

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

### Pārongo Whakaū Kounga | 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	0048

<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	[dd mm yyyy]	N/A
<b>Kōrero whakakapinga  </b> Replacement information	This skill standard replaces unit standards:		
<b>Rā arotake  </b> Planned review date	31 December 2029		

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.