40307 Identify construction strategies to manage environmental impact on buildings

Kaupae | Level	4
Whiwhinga | Credit	5
Whāinga | Purpose	This skill standard recognises the skills required to identify construction strategies used and the effect on managing environmental impact on buildings. This skill standard contributes to qualifications designed for the construction environment.

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

Hua o te ako | Learning outcomes	**Paearu aromatawai |** Assessment criteria
1. Explain environmental effects on materials and buildings.	a. The effects of environmental factors are described in relation to the impact on materials and buildings.
2. Identify strategies to manage environmental impact on material and buildings.	a. Water penetrating principles and management strategies for buildings are described.
	b. Methods to manage the impact of environmental factors on materials and buildings are described.
	c. Methods to maintain the integrity of materials used in buildings are identified.

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

Assessment specifications:

Candidates must be capable of identifying familiar construction strategies to manage environmental conditions in a construction trade.

Buildings refer to any constructed structure, including house, office, bridge, or other.

Environmental impacts refer to something either natural or man-made that causes a change in the physical or chemical properties of a building or building materials that may be harmful to people, animals, or the natural environment.

External impacts may include loads, metrological, air pollution, UV, noise, and subterranean conditions, seismic activity.

Internal impacts may include temperature, air quality, moisture, and noise.

The level of knowledge required is that of a trade professional rather than that of an engineer, designer, or scientist.

Ngā momo whiwhinga* | *Grades available

Achieved.

Ihirangi waitohu | Indicative content

- Heat, moisture, airflow, corrosion
- Loading – load types.
- How loads work on and within a structure.
- How design and construction compensate for loads
- Subterranean conditions.
- Structural considerations.
- Water principles – capillary actions, hydrostatic pressure, gravity, wind pressure and surface tension.
- Watertightness – deflection, drying, drainage and durability of materials.
- Regional environmental variations.
- Materials suitable for managing different environmental impacts.
- Trade specific strategies to manage environmental effects.
- Materials management.

Rauemi | Resources

Programme Guidance available from qualifications@waihangaararau.nz.

Pārongo Whakaū Kounga | Quality assurance information

Ngā rōpū whakatau-paerewa | Standard Setting Body	Waihanga Ara Rau Construction and Infrastructure Workforce Development Council
Whakaritenga Rārangi Paetae Aromatawai | DASS classification	Planning and Construction > Construction Trades > Core Construction
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga | CMR	0048

Hātepe | Process	**Putanga |** Version	**Rā whakaputa |** Review Date	**Rā whakamutunga mō te aromatawai |** Last date for assessment
Rēhitatanga | Registration	1	28 November 2024	N/A
Kōrero whakakapinga | Replacement information	This skill standard and skill standard 40306 replaced unit standard 30858.		
Rā arotake | Planned review date	31 December 2029		

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