

<b>Title</b>	<b>Demonstrate knowledge of the installation of profiled metal and translucent roofing</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	<p>This unit standard is for people who work in the plumbing industry.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> <li>– demonstrate knowledge of roof structures;</li> <li>– describe preparations for installation of roofing;</li> <li>– demonstrate knowledge of roofing installation processes; and</li> <li>– demonstrate knowledge of regulatory requirements, selection of methods and materials, and underpinning concepts and principles, as applied to the installation of roofing.</li> </ul>
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<b>Classification</b>	Plumbing, Gasfitting and Drainlaying > Plumbing
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<b>Available grade</b>	Achieved
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## Guidance Information

- 1 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to:

Building Act 2004;

New Zealand Building Code (Building Regulations 1992 – Schedule 1);

Health and Safety at Work Act 2015;

Plumbers, Gasfitters, and Drainlayers Act 2006;

Plumbers, Gasfitters, and Drainlayers Regulations 2010.

The following standards, which are available at <http://www.standards.govt.nz>:

NZS 3604:2011 Timber-framed buildings,

AS/NZS 2728:2013 *Prefinished/prepainted sheet metal products for interior/exterior building applications – Performance requirements*,

AS/NZS 3500.3:2021 *Stormwater Drainage*.

The following Building Code clauses, current versions, and any Acceptable Solution and Verification Method documents, which are available at

<https://www.building.govt.nz>:

New Zealand Building Code Clause E1 Surface Water,

New Zealand Building Code Clause E2 External Moisture.

The following guide, which is available at <https://www.metalroofing.org.nz/>

New Zealand Metal Roof and Wall Cladding Code of Practice.

Any new, amended or replacement referenced standards, codes of practice, guidelines, Building Code Acceptable Solutions and Verification Methods, or authority requirements affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.

## 2 Definitions

*Job requirements* refer to specific requirements of the job at hand not covered by job specifications.

*Job specifications* refer to instructions (oral, written, graphic) and may include any of the following – manufacturer instructions; design drawing detail specifications; specifications from a specialist source such as an architect, designer, engineer, or a supervisor; and site or work specific requirements.

*Substrate and structure* refers to, where applicable, pitch, laps, junctions, fascia, framing, substrate, valley boards, purlin spacing.

## 3 Candidates must hold a current limited certificate trainee authorisation or exemption under supervision as issued under the Plumbers, Gasfitters, and Drainlayers Act 2006.

## 4 Range

Profiled metal and translucent roofing.

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# Outcomes and performance criteria

## Outcome 1

Demonstrate knowledge of roof structures.

### Performance criteria

#### 1.1 Identify roof styles and roofing terminology.

Range            hip, gable, mono-pitch, barge, trusses, rafters, purlin, valley boards, common material profiles, fixings.

#### 1.2 Describe the process to confirm substrate and structure meet the requirements of codes, standards, job specifications, industry requirements, and manufacturer instructions.

Range            includes new roof and re-roof or repair.

#### 1.3 Describe requirements of roof layout for proposed roofing installation.

#### 1.4 Describe process to confirm correct timber treatments with reference to installation of roofing materials.

## Outcome 2

Describe preparations for installation of roofing.

**Performance criteria**

- 2.1 Describe height safety controls relevant to roofing.
- Range scaffolding, safety nets, harness systems, edge protection.
- 2.2 Describe the process to determine materials and quantities required.
- 2.3 Describe processes for managing roofing materials on-site.
- 2.4 Describe processes for managing a re-roof or repair.

**Outcome 3**

Demonstrate knowledge of roofing installation processes.

- Range profiled metal, (corrugated, trough section and trapezoidal) and translucent sheeting;  
where an aspect of the installation is the same across different roofing profiles, only a single example of that process is required.

**Performance criteria**

- 3.1 Describe the process for installing underlay.
- 3.2 Describe appropriate fixing patterns for different profiles and environments.
- 3.3 Describe the process for installing and fixing roofing.
- 3.4 Explain how to determine appropriate flashing dimensions, materials, and quantities to meet job requirements.
- 3.5 Describe finishing processes for roof installation.
- Range installing accessories, cleaning swarf and debris from work area, inspecting finished roof, correcting defects.

**Outcome 4**

Demonstrate knowledge of regulatory requirements, selection of methods and materials, and underpinning concepts and principles, as applied to the installation of roofing.

**Performance criteria**

- 4.1 Describe applicable sections of legislation, standards, and codes in terms of their application to the installation of roofing.
- Range includes but is not limited to – Building Code requirements, licensing, limitations on scope of work.

## 4.2 Justify selection of methods and materials.

Range job specifications, operation of the installed system and components, suitability and durability of materials; may include job requirements.

## 4.3 Describe the implication of environmental factors for selection of materials.

Range includes but is not limited to – ventilation, exposure to weather, heat, UV, moisture, airflow, wind loading, snow loading, exposure (corrosion) zones, environmental conditions.

## 4.4 Describe purposes and processes of management of chemical properties of roofing materials.

Range includes but is not limited to – material compatibility, corrosion, capillary attraction, expansion and contraction, sealants and fixings, potential use of runoff for drinking water.

<b>Replacement information</b>	This unit standard, unit standard 30546, unit standard 30547, unit standard 30548, and unit standard 30549 replaced unit standard 21884.
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<b>Planned review date</b>	31 December 2029
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	26 October 2017	31 December 2028
Review	2	30 May 2024	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0003
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Comments on this unit standard**

Please contact Waihangara Ara Rau Construction and Infrastructure Workforce Development Council [qualifications@waihangaraarau.nz](mailto:qualifications@waihangaraarau.nz) if you wish to suggest changes to the content of this unit standard.