

Title	Demonstrate knowledge of metal roof tile systems		
Level	3	Credits	7

Purpose	<p>This unit standard is intended for use in the training and assessment of people carrying out metal roof tile installation work and covers knowledge of metal roof tile systems.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> – identify common residential metal roof tile parts and types; – identify support framing for metal roof tile systems; – demonstrate knowledge of metal roof tiles; – demonstrate knowledge of battens for metal roof tiles; – demonstrate knowledge of underlays used under metal roof tiles; – demonstrate knowledge of fastenings used for metal roof tiles; – demonstrate knowledge of flashings and finishing trims used on metal roof tiles; – describe the functions of project people; and – identify specifications and describe regulations relevant to metal roof tile installation.
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Classification	Plumbing, Gasfitting and Drainlaying > Roofing
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Available grade	Achieved
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Guidance Information

1 This unit standard has been developed for learning and assessment off-job.

2 **References**

Construction Contracts Act 2002;

Historic Places Act 1993;

Local Government Act 2002;

Building Act 2004 and associated regulations;

Health and Safety at Work Act 2015;

Resource Management Act 1991;

Acceptable Solutions and Verification Methods for New Zealand Building Code Clause E2 External Moisture;

Licensed Building Practitioner Scheme – Understanding the Regulatory Environment Booklet – available at: <http://www.business.govt.nz/lbp/the-board/getting-licensed/applying-for-licensing>;

NZS 3604:2011 Timber-framed buildings;

NZS 3902:2004 Housing, alterations and small buildings contract;

NZS 4121:2001, Design for access and mobility: Buildings and associated facilities;

New Zealand Building Code Hand Book – available at:

<http://www.building.govt.nz/building-code-compliance/building-code-and-handbooks/building-code-handbook>;

and all subsequent amendments and replacements.

- 3 This unit standard applies to both new roof and re-roofing installations.
- 4 Range
- a Candidates must refer to current legislation and Standards during assessment.
 - b Demonstration of safe working practices are essential components of assessment of this unit standard.
 - c All activities and evidence presented for all outcomes and performance criteria in this unit standard must be in accordance with:
 - i legislation;
 - ii policies and procedures;
 - iii ethical codes;
 - iv Standards – may include but are not limited to those cited in the New Zealand Building Code Hand Book;
 - v applicable site, enterprise, and industry practice; and,
 - vi manufacturers' instructions, specifications, and data sheets.

Outcomes and performance criteria

Outcome 1

Identify common residential metal roof tile parts and types.

Performance criteria

- 1.1 Identify common roof types using industry terminology.
- Range includes but is not limited to – gable, dutch gable, four hip, straight gable, skillion, mansard, dutch barn.
- 1.2 Identify the parts that form a common roof using industry terminology.
- Range includes but is not limited to – dormer, eaves, fascia board, flashing, collar flashing, penetration, fascia gutter, ridging, ridge cap, flat roof, gable, hip, hip end, ridge, soffit, valley, down pipe, chimney penetration.
- 1.3 Describe roof pitch in terms of defining roof slope.

Outcome 2

Identify support framing for metal roof tile systems.

Performance criteria

- 2.1 Identify structural components used for the roof support framework.
- Range purlins, rafters, valley, fascia, portal frames, trusses, battens.
- 2.2 Identify the uses of timber and steel as support frameworks in terms of building type and size.

Outcome 3

Demonstrate knowledge of metal roof tiles.

Performance criteria

- 3.1 Describe the characteristics of metal tiles in terms of how they are formed, base metal, coatings, accessories, strength and durability.
- 3.2 Identify metal tile terms.
- Range side lap, head lap, course of tiles, ponding, swarf.
- 3.3 Identify a range of metal tile profiles and finishes.
- Range profiles include but are not limited to – pan, shingle, shake, translucent;
finishes include but are not limited to – textured, Saturn.

Outcome 4

Demonstrate knowledge of battens for metal roof tiles.

Performance criteria

- 4.1 Describe the size, construction, and spacing of battens in accordance with the New Zealand Building Code.

Outcome 5

Demonstrate knowledge of underlays used under metal roof tiles.

Performance criteria

- 5.1 Identify the purpose of underlays in terms of their function in roof tile systems.
- 5.2 Identify common underlay types in terms of their use in metal roof tile applications.

Outcome 6

Demonstrate knowledge of fastenings used for metal roof tiles.

Performance criteria

6.1 Identify types of metal roof tile fastenings in terms of their purpose.

Range screw, nail, rivet.

6.2 Describe fastening material options in accordance with fastening size, type, use, and material compatibility.

Range may include but is not limited to – stainless steels, zinc coatings, nails, nail head type.

Outcome 7

Demonstrate knowledge of flashings and finishing trims used on metal roof tiles.

Performance criteria

7.1 Explain the purpose of trims and flashings.

7.2 Identify three types of finishing trims used on metal tile roofs.

7.3 Identify three examples of standard flashings.

7.4 Describe two examples of areas where specialist flashings may be required.

Outcome 8

Describe the roles and responsibilities of people involved on a roofing project.

Performance criteria

8.1 Describe the roles and responsibilities of project people.

Range project people may include but are not limited to – site supervisor, foreperson, architect, roofing installation gangs, owner.

Outcome 9

Demonstrate knowledge of specifications and regulations relevant to metal roof tile installation.

Performance criteria

9.1 Identify and describe specifications and regulations relevant to metal roof tile installation and explain how to access them.

9.2 Identify manufacturer information that specifies roof tile installation.

- 9.3 Describe the regulations affecting the use of roof tiles in accordance with the New Zealand Building Code.

Range Acceptable Solutions, alternative solutions, local council regulations.

Planned review date	31 December 2023
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	23 January 2009	31 December 2020
Review	2	16 March 2017	N/A
Rollover	3	25 August 2022	N/A

Consent and Moderation Requirements (CMR) reference	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 the Waihanga Ara Rau Construction and Infrastructure Workforce Development Council qualifications@waihangaararau.nz if you wish to suggest changes to the content of this unit standard.