

Title	Describe metal roof and wall cladding preparation and installation procedures		
Level	3	Credits	10

Purpose	<p>People credited with this unit standard are able to describe: the planning and checks required prior to installing a roof; material checks for metal roof and wall cladding; the underlay installation process for metal roof and wall cladding; insulation installation process for metal roof and wall cladding; the process of laying out, cutting, drilling, and preparing profiled metal roof sheets; the use of drill drivers and screw guns; the causes of fastener failure; and the fixing requirements for metal roof and wall cladding.</p>
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Classification	Plumbing, Gasfitting and Drainlaying > Roofing
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Available grade	Achieved
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Explanatory notes

- 1 Legislation relevant to this unit standard includes but is not limited to – Health and Safety in Employment Act 1992, Building Act 2004.
- 2 Reference
The *NZ Metal Roof and Wall Cladding Code of Practice*, 2008 is available from the New Zealand Metal Roofing Manufacturers Inc – <http://www.metalroofing.org.nz>.
- 3 The following applicable documents are available for download on the Department of Building and Housing website: <http://www.dbh.govt.nz/>;
Building Code compliance document Clause E2, containing Acceptable Solution E2/AS1 for External Moisture;
Building Code compliance document Clause H1, Energy Efficiency.
- 4 The New Zealand Building Code (NZBC) is a schedule to the Building Regulations 1992. It provides requirements for compliance with the Building Act when constructing a new building or altering an existing one. The Building Code sets out performance standards that building work must meet and covers aspects such as structural stability, fire safety, access, moisture control, durability, and services and facilities.
- 5 Definitions
Company requirements – include the policy, procedures, and methodologies of the company. They include requirements documented in company and site health and safety plans, quality assurance documents, and contract work programmes.
Industry practice – sound industry practice that meets legislative requirements.

Job specifications – refer to the documented information found in construction drawings, project specification documents, legislation, regulations and codes.

Site procedures – refer to the procedures which are required to be observed for safe work practices at a particular site.

6 This unit standard may be assessed against off-job.

Outcomes and evidence requirements

Outcome 1

Describe the planning and checks required prior to installing a roof.

Evidence requirements

- 1.1 Purpose of the work sheet, plan, or job schedule is described in accordance with industry practice.
- 1.2 Site check activities are described in accordance with site procedures.
- Range preparing the site, health and safety checks and signs, site hazards.
- 1.3 Roof framing checks are described in accordance with company requirements.
- Range includes but is not limited to – structure, layout.

Outcome 2

Describe material checks for metal roof and wall cladding.

Evidence requirements

- 2.1 Delivered materials checks are described in accordance with industry practice.
- Range materials include – profile sheets, flashings, fasteners, underlay support, underlay, insulation; description includes – quality, condition.

Outcome 3

Describe the underlay installation process for metal roof and wall cladding.

Evidence requirements

- 3.1 Process for installing underlay support is described in accordance with industry practice and NZBC Acceptable Solution E2/AS1, paragraph 8.1.5.
- 3.2 Process for installing metal roof and wall cladding underlay is described in accordance with industry practice and NZBC Acceptable Solution E2/AS1, paragraph 8.2.6, figure 23.

Outcome 4

Describe insulation installation process for metal roof and wall cladding.

Evidence requirements

- 4.1 Process and order of installing insulation is described in accordance with industry practice.
- 4.2 Insulation R-value requirements for roofs and walls are described in accordance with NZBC compliance document Clause H1, Energy Efficiency.
- 4.3 Importance of not compressing or wetting bulk insulation during installation is described in terms of impact on the insulation properties.

Outcome 5

Describe the process of laying out, cutting, drilling, and preparing profiled metal roof sheets.

Evidence requirements

- 5.1 Order of sheet laying is described in terms of overlaps.
- 5.2 Sheet layout on a simple hipped roof is described in accordance with job specifications.

Range includes but is not limited to – avoiding unnecessary waste.
- 5.3 Layout and lap order for roof components is described in accordance with job specifications.

Range sheets, all flashing types, all gutter types, weather conditions.
- 5.4 Process for making downturns and stop ends and their purpose are described in accordance with industry practice.

Outcome 6

Describe the use of drill drivers and screw guns.

Evidence requirements

- 6.1 Drill drivers and screw guns are described in terms of advantages and disadvantages.
- 6.2 Speed, clutch adjustment, and torque are described in terms of meeting varying job and fastener requirements.

Outcome 7

Describe the causes of fastener failure.

Evidence requirements

7.1 The different modes of fastener failure are described.

Range pull over, pull out, thread strip out, back out, fastener shear.

7.2 Factors causing corrosion of fasteners are identified.

Outcome 8

Describe the fixing requirements for metal roof and wall cladding.

Evidence requirements

8.1 Crest, pan, and clip fixing methods are described in accordance with industry practice and NZBC Acceptable Solution E2/AS1, paragraph 8.4.

Replacement information	This unit standard and unit standards 25275 and 25290 were replaced by unit standards 30011 and 30012.
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This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

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	31 December 2020

Consent and Moderation Requirements (CMR) reference	0227
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing

to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

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