

Title	Install lead flashings to concrete or clay roof tiles		
Level	4	Credits	7

Purpose	<p>This unit standard is for people carrying out concrete or clay roof work and covers the installation of lead flashings.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> - demonstrate knowledge of lead used as a roof flashing material for concrete or clay roof tiling; and - install lead flashings specified as the work of the concrete or clay roof tiler.
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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 on-job and 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;
NZS 4206:1992, Concrete interlocking roofing tiles;
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 or 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**

Demonstrate knowledge of lead used as a roof flashing material for concrete or clay roof tiling.

Performance criteria

- 1.1 Describe the composition of lead used for flashing material and explain the effect of the inclusion of copper in terms of its use for concrete or clay roof tiling.
- 1.2 Outline the production methods of lead sheet used for flashing in terms of the specifications for each method.

Range machine casting, milling.
- 1.3 Describe the application of patination oil, identify the reason for its use on lead, and explain its benefits to the overall performance of the roof.
- 1.4 Describe the characteristics of lead in its use as a flashing material.

Range thermal movement, weight, low melting point, ductility, malleability, corrosion resistance, low mechanical strength.

Outcome 2

Install lead flashings specified as the work of the concrete or clay roof tiler.

Performance criteria

- 2.1 Select, maintain, and use tools to achieve specific outcomes.
- 2.2 Install lead flashings in accordance with the material manufacturers' recommendations and job specification.

- 2.3 Ensure exposed edges of flashings are straight and external edges retain contact with the roof surface.
- 2.4 Install flashings so that laps at joints and corners form a watertight finish.
- 2.5 Apply patination oil to the lead flashings.
- 2.6 Remove surplus material and leave roof and site in a tidy and safe condition that allows any further work to be carried out safely.

Replacement information	This unit standard, unit standard 1692, and unit standard 25276 were replaced by skill standard 40193.
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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	24 April 1997	31 December 2020
Review	2	28 April 1997	31 December 2020
Review	3	27 October 2006	31 December 2020
Rollover and Revision	4	22 August 2008	31 December 2020
Review	5	16 March 2017	31 December 2027
Rollover	6	25 August 2022	31 December 2027
Review	7	28 November 2024	31 December 2027

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>.