

<b>Title</b>	<b>Install lead flashings to concrete or clay roof tiles</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>7</b>

<b>Purpose</b>	<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"> <li>– demonstrate knowledge of lead used as a roof flashing material for concrete or clay roof tiling; and</li> <li>– install lead flashings specified as the work of the concrete or clay roof tiler.</li> </ul>
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<b>Classification</b>	Plumbing, Gasfitting and Drainlaying > Roofing
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<b>Available grade</b>	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.

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## 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.

<b>Planned review date</b>	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	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	N/A
Rollover	6	25 August 2022	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 the Waihanga Ara Rau Construction and Infrastructure Workforce Development Council [qualifications@waihangaararau.nz](mailto:qualifications@waihangaararau.nz) if you wish to suggest changes to the content of this unit standard.