

Title	Demonstrate knowledge of maintaining structural integrity and weather tightness of building penetrations		
Level	4	Credits	8

Purpose	<p>This unit standard is for people who work in the plumbing or gasfitting industries.</p> <p>People credited with this unit standard are able to demonstrate knowledge of:</p> <ul style="list-style-type: none"> – requirements to maintain structural standards when making penetrations through building elements; and – means of achieving requirements of applicable codes and standards when making penetrations through building elements.
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Classification	Plumbing, Gasfitting and Drainlaying > Core Plumbing, Gasfitting, and Drainlaying
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Available grade	Achieved
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Guidance Information

- 1 References

Building Act 2004;
 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*
 NZS 4219:2009, *Seismic performance of engineering systems in buildings*;
 The following clauses, current versions, and any related compliance documents, which are available at <https://www.building.govt.nz>:
 New Zealand Building Code Clause B1 Structure
 New Zealand Building Code Clause C Protection from fire
 New Zealand Building Code Clause E2 External moisture
 New Zealand Building Code Clause E3 Internal moisture
 New Zealand Building Code Clause G6 Airborne and impact sound
 New Zealand Building Code Clause G11 Gas as an energy source;
 and all subsequent amendments and replacements.
- 2 Definition

EIFS – exterior insulation finishing system.
- 3 Candidates must hold a current limited certificate or exemption under supervision as issued under the Plumbers, Gasfitters, and Drainlayers Act 2006.

- 4 All practical activities are to be carried out in a way that avoids harm to people and damage to property, environment, existing installed services, materials, tools, and equipment.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of requirements to maintain structural standards when making penetrations through building elements.

Performance criteria

- 1.1 Describe the requirements to prevent moisture ingress in accordance with New Zealand Building Code Clauses E2 and E3.
- Range must include but is not limited to – roof, exterior wall, sub floor moisture barrier.
- 1.2 Describe the requirements to maintain structural integrity in accordance with New Zealand Building Code Clause B1 and NZS 3604.
- Range must include but is not limited to – joists, studs, top/bottom plate
- 1.3 Describe the requirements to maintain seismic clearances in accordance with NZS 4219.
- 1.4 Describe the requirements to maintain fire rating accordance with New Zealand Building Code Clause C.
- 1.5 Describe the requirements to achieve acoustic performance in accordance with Zealand Building Code Clause G6.

Outcome 2

Demonstrate knowledge of means of achieving requirements of applicable codes and standards when making penetrations through building elements.

Performance criteria

- 2.1 Describe the means of preventing moisture ingress in accordance with New Zealand Building Code Clauses E2 and E3.
- Range must include but is not limited to – roof, exterior wall, sub-floor moisture barrier;
roof types – profiled metal cladding, one other material;
exterior wall cladding – material wooden weatherboards, fibrolite, profiled metal, brick, block, plaster, EIFS.
- 2.2 Describe means of achieving the requirements to maintain structural integrity in accordance with New Zealand Building Code Clause B1 and NZS 3604.

- 2.3 Describe means of achieving the requirements to maintain seismic clearances in accordance with NZS 4219.
- 2.4 Describe means of achieving the requirements to maintain fire rating accordance with New Zealand Building Code Clause C.
- 2.5 Describe means of achieving the requirements to achieve acoustic performance in accordance with Zealand Building Code Clause G6.

Planned review date	31 December 2022
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	28 September 2017	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 Skills Organisation reviewcomments@skills.org.nz if you wish to suggest changes to the content of this unit standard.