

<b>Title</b>	<b>Install compliant passive fire protection building elements and products</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>35</b>

<b>Purpose</b>	<p>This unit standard is for the training of fire stopping specialists.</p> <p>People credited with this unit standard are able to: plan and prepare for installation of compliant passive fire protection building elements and products; install compliant passive fire protection building elements and products; manage and seal service penetrations; and complete installation documentation and reporting.</p>
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<b>Classification</b>	Mechanical Engineering > Passive Fire Protection
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<b>Available grade</b>	Achieved
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## Guidance Information

- 1 Legislations and References
  - Building Act 2004 and New Zealand Building Code
  - Health and Safety at Work Act 2015
  - MBIE *Acceptable Solutions (AS) and Verification Methods (VM)*, available at <https://www.building.govt.nz/>.
  - AS/NZS 1668.1:2015, *The use of ventilation and air conditioning in buildings*, Part 1: Fire and smoke control in buildings.
  - AS 1530.4-2014, *Methods for fire tests on building materials, components and structures – Fire-resistance test of elements of construction*.
  - NZS/BS 476.20:1987, *Fire tests on building materials and structures – Method for determination of the fire resistance of elements of construction (general principles)*.
  - NZS 4219:2009, *Seismic performance of engineering systems in buildings*.
  - NZS 4520:2010, *Fire-resistant doorsets*.
  - AS 4072.1-2005, *Components for the protection of openings in fire-resistant separating elements – Service penetrations and control joints*.
  - Association of Wall and Ceiling Industries of New Zealand Inc., *Code of practice For Design, Installation and Seismic Restraint of Suspended Ceilings*, available at <https://awci.org.nz/wp-content/uploads/AWCI-CoP-Web.pdf>.
  - Guide to Passive Fire Protection in Buildings 2017*, available at <https://www.branz.co.nz/>.
- 2 Definitions
  - Accepted industry practice* – approved codes of practice and standardised procedures accepted by the wider construction industry as examples of best practice for a fire stopping specialist.

*Building elements* are the primary parts or components of a building such as floors, walls, doors, windows, roofs, steps, stairs and lifts, finishing work, building services.

*Building services* are the services installed in buildings to make them functional, comfortable, efficient and safe. They may include electricity supply, water supply, Information and communication network, sanitation, gas supply, air-conditioning, HVAC (heating, ventilation and air conditioning), sprinkler systems, fire detection and alarm systems, security systems, escalators and lifts.

*Evidence of compliance* refers to documents that certify that the building elements and products used are in compliance with the New Zealand Building Code.

*Fire stopping specialist* refers to installers of compliant passive fire elements, products, and systems.

*Installation specifications* refer to the approved specifications for the details of a compliant passive fire installation. Typically, this includes installation drawings, installation procedures, parts and schedules.

*Passive fire protection* (PFP) is an integral part of the three components of structural fire protection and fire safety (i.e. Fire Resistance Rating) in a building. PFP attempts to contain fires or slow the spread by compartmentalising the building and through the use of fire resistant walls, floors, doors, ceilings, and roofs.

*Product specifications* are the manufacturer's specifications for installation and performance of their product.

*Worksite procedures* refer to the procedures used by the organisation carrying out the work and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site safety procedures, equipment operating procedures, codes of practice, building consent, quality assurance procedures, housekeeping standards, charging of time and materials, management of drawings and documentation, procedures to comply with legislative and local body requirements.

### 3 Range

- a All activities must comply with relevant legislative and/or regulatory requirements, recognised codes of practice, industry standards, and building consent.
- b All work must be carried out in accordance with accepted industry practice, worksite procedures, and manufacturers' instructions.
- c All activities must be completed and reported within agreed timeframes.

### 4 Assessment

- a Competence must be demonstrated on installations at three different sites.
- b All installations must be in accordance with approved plans and specifications (building consent and/or building code where applicable), and manufacturers' instructions.

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## Outcomes and performance criteria

### Outcome 1

Plan and prepare for the installation of compliant passive fire protection building elements and products.

**Performance criteria**

- 1.1 Site access, and timing of the installation work are established from contract, and installation specifications, and agreed with customer.
- 1.2 Site occupational safety and health implications identified by supervisor are noted and control measures put in place.
- 1.3 Evidence of compliance for the building element given in the installation plan is obtained.
- 1.4 Installation plan to be used and the latest fire report are read and interpreted.
- Range includes identification of standard and any special requirements of the passive fire protection system.
- 1.5 Manufacturers' installation instructions are obtained, read and interpreted.
- 1.6 A schedule of works document is developed for the installation including service penetration management and compliance.
- 1.7 Building elements and products are obtained and their delivery to the site is confirmed.
- 1.8 Building elements and products are checked for compliance with the installation plan and specifications.
- Range includes but is not limited to – ratings, dimensions, fixings, finishing.
- 1.9 Products are stored and handled in accordance with product specifications.

**Outcome 2**

Install compliant passive fire protection building elements and products.

Range building elements may include but are not limited to – doors, walls, floors, windows, ceilings.

**Performance criteria**

- 2.1 Elements and products are positioned and installed without damaging the surroundings in accordance with the installation plan and specifications.
- 2.2 Fixings, fastenings, and supports are installed in accordance with the installation plan and specifications.
- 2.3 Sealant is selected and used in accordance with the plan, specifications and manufacturer's instructions.
- 2.4 Site is cleared and restored to a clean and tidy state in accordance with worksite procedures following completion of installation.

**Outcome 3**

Manage and seal service penetrations.

**Performance criteria**

3.1 Fire stopping and smoke sealing materials are selected and used in accordance with the installation plan and specifications, and manufacturers’ instructions.

Range fire stopping and smoke sealing materials for sealing service penetrations may include but is not limited to – sleeves, collars, wraps, bandages, blocks, plugs, cushions or pillows, sealants, sprays, foam, putties, coatings, mortars, boards, batts, transit devices.

3.2 Service penetrations are sealed.

3.3 All penetrations are numbered and labelled prior to capturing photographic evidence, and a PFP register completed for all penetration seals including marked up-to-date site plans.

**Outcome4**

Complete installation documentation and reporting.

**Performance criteria**

4.1 Drawings are marked up to show as-built condition, and processed.

4.2 Installation documentation including photographic records of before, during, and at completion is completed, distributed, and filed at completion of installation work.

4.3 Potential adverse effects to the integrity of passive fire protection systems resulting from penetrations done after the completion of the installation are identified and reported to the supervisor.

<b>Planned review date</b>	31 December 2024
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	22 August 2019	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0013
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

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**Comments on this unit standard**

Please contact Competenz at [qualifications@competenz.org.nz](mailto:qualifications@competenz.org.nz) if you wish to suggest changes to the content of this unit standard.