Title	**Install compliant passive fire protection building elements and products**		
Level	**3**	**Credits**	**35**

Purpose	This unit standard is for the training of fire stopping specialists. 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.

Classification	Mechanical Engineering > Passive Fire Protection

Available grade	Achieved

Guidance Information

1 Legislation and References
Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:
Building Act 2004,
New Zealand Building Code,
Building (Forms) Regulations 2004,
Health and Safety at Work Act 2015,
Ministry of Business, Innovation and Employment (MBIE) New Zealand Building Code Handbook,
MBIE *Acceptable Solutions (AS) and Verification Methods (VM)*,
Association of Wall and Ceiling Industries of New Zealand Inc,
Code of practice For Design, Installation and Seismic Restraint of Suspended Ceilings,
Guide to Passive Fire Protection in Buildings 2017,
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 door sets,*
AS 4072.1-2005, *Components for the protection of openings in fire-resistant separating elements* – Service penetrations and control joints,
Standards can be found at Standards New Zealand.

Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.

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 complaint 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) refers to components or systems of a building or structure that slows or impedes the spread of the effects of fire or smoke without system activation, and usually without movement. Examples of passive systems include floor-ceilings and roofs, fire doors, windows, and wall assemblies, fire-resistant coatings, and other fire and smoke control assemblies. Passive fire protection systems can include active components such as fire dampers.

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

Workplace 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 Assessment information

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 Range

Competence must be demonstrated on installations at three different sites.

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 PFP 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 PFP 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.

2.2 Fixings, fastenings, and supports are installed.

2.3 Sealant is selected and used.

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.

Range fire stopping and smoke sealing materials for sealing service penetrations may include but are 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.

Outcome 4

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 PFP systems resulting from penetrations done after the completion of the installation are identified and reported to the supervisor.

Planned review date	31 December 2028

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	22 August 2019	31 December 2026
Review	2	28 March 2024	N/A

Consent and Moderation Requirements (CMR) reference	0013

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

Please contact the Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.