

41266**Install complex compliant passive fire protection systems and complete internal quality checks**

Kaupae Level	4
Whiwhinga Credit	40
Whāinga Purpose	This skill standard is intended for people who are already working in the passive fire protection industry. People credited with this skill standard will be able to plan and install complex compliant passive fire protection systems, complete a quality assurance check and quality assurance package. This skill standard aligns with the New Zealand Certificate in Passive Fire Protection Systems (Level 4) with strands in Routine Compliance Inspections, Construction Monitoring, and Advanced Installation [Ref: 2581].

Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Plan installation of compliant passive fire protection systems.	a. Obtain and accurately interpret documentation and project specifications to identify passive fire protection requirements.
	b. Develop an installation and quality management plan for passive fire protection systems using technical drawings, specifications, solutions, floor plan and site requirements.
	c. Co-ordinate team and liaise with other site personnel to plan sequencing of passive fire protection installation.
2. Identify and resolve non-conformance or clash between passive fire components and other building elements in a construction site.	a. Identify non-conformance or clash between passive fire components and other building elements.
	b. Identify potential solution to maintain integrity of passive fire protection systems and escalate issue to relevant site personnel.
	c. Apply interpersonal skills to co-ordinate with relevant site personnel to resolve non-conformance or clash.
	d. Adapt installation to resolve non-conformance or clash where required.

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
3. Install complex compliant passive fire protection systems.	a. Assess as-built materials to identify any issues and compare site conditions with installation plan to determine if modifications are required.
	b. Research options to resolve identified issues or non-compliance at the installation site.
	c. Present options to resolve non-compliance to appropriate third parties for approval or consultation.
	d. Install approved compliant passive fire protection systems.
	e. Document approval of compliant passive fire protection systems.
4. Conduct internal quality assurance check of passive fire protection installation.	a. Review documentation and installation specifications.
	b. Conduct visual inspection of passive fire protection installation.
	c. Identify and report any non-conformance or clash and initiate corrective actions.
	d. Confirm passive fire protection installation is compliant.
5. Complete a quality assurance package for compliant passive fire protection systems.	a. Verify installation documentation is complete and accurate.
	b. Undertake visual inspection to confirm passive fire protection installation meets specified solution.
	c. Compile quality assurance documentation into a package ready for client handover or review by Building Consent Authority (BCA).
	d. Complete Producer Statement (PS) 3 form accurately and undertake sign off procedure in accordance with project requirements.

Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria**Assessment specifications:**

- Evidence must include a minimum of 3 different passive fire protection projects (which must collectively cover a minimum of 20 different complex passive fire protection installations performed by the candidate) except for assessment criterion 2c which only needs to be demonstrated once. Sub-projects within a very large project will be accepted as different projects.
- Evidence presented for assessment criteria 5c and 5d does not require actual client handover or PS3 sign off on behalf of a passive fire installation company. Candidates are required to complete quality assurance package and PS3 in preparation for client handover (or review by BCA) for an authorised person to then complete as per company authorisation procedure.
- Evidence presented for assessment against this skill standard may include oral, visual, video, written and/or practical activities demonstrated in the workplace.
- Evidence presented for assessment against this skill standard must be consistent with safe working practices and be in accordance with applicable service information, workplace procedures and legislative requirements.
- It is recommended people hold unit standard 31915, *Demonstrate knowledge of passive fire protection systems, roles and responsibilities, and installation practices* and 31916, *Install compliant passive fire protection systems* before being assessed against this skill standard.

Definitions

Accepted industry practice refers to approved codes of practice and standardised procedures accepted by the wider construction industry as examples of best practice for a fire stopping specialist.

ANARP refers to As Near As is Reasonably Practicable. The process for an ANARP solution to be accepted will involve coordination and consultation with the design engineer, building territorial authority, and building owner. It may include basic or complex installation requirements.

Appropriate third parties refer to fire engineer, fire consultant, passive fire protection supplier or relevant site personnel.

Building elements refer to 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 refer to 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.

Clash refers to a physical conflict between a passive fire protection component and another building element or service which compromises the integrity of the passive fire protection system.

Complex passive fire protection installation includes multiple penetration systems, retro fit installation where services need to be relocated or altered, untested scenarios that require engineering judgement, alternative solution or ANARP (as per definition), atypical or missing substrates, or seismic joints.

Construction site refers to new building, building extension or building renovation.

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

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.

Multiple penetration systems refer to 'systems where large service openings are provided in a fire-separating element and are filled with infill material through which the services penetrate and are

sealed individually or in groups to the infill material rather than to the parent element' (defined as per AS/NZ 4072.1).

Non-conformance refers to a deviation from the specified passive fire protection requirements such as incorrect installation techniques or product selection.

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 refer to the manufacturer's specifications for installation and performance of their product.

Project specifications refer to the detailed requirements that define the type, location, fire resistance rating, and approved installation methods for passive fire protection systems within a building.

Quality assurance package refers to a set of documents that verifies passive fire protection installation conforms to specified requirements. It typically includes product design documentation, compliance certificates, installation records, photographs, as-built documentation, PS3 form, and verification reports.

Relevant site personnel refers to site manager, building services manager, project manager or trades people working at the installation site, for example in construction, Heating, Ventilation and Air Conditioning (HVAC), telecommunications, active fire protection, plumbing or electrical.

Systems documentation refers to the documentation required to be maintained by the relevant fire protection standards, and may include compliance schedules, building consents, codes of practice, contracts, drawings, fire reports, installation instructions, logbooks, photographic evidence, product specifications, specifications, standards, test and commissioning procedures, test and maintenance records, and test reports.

Workplace procedures refer to organisation policies and procedures that are documented in memo, electronic, or manual format and available in the workplace. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, manufacturer's requirements, references, approved codes of practice, housekeeping standards, environmental considerations, on-site briefings, supervisor's instructions, and procedures to comply with legislative and local body requirements relevant to the passive fire protection industry.

***Ngā momo whiwhinga* | Grades available**

Achieved

Ihirangi waitohu | Indicative content

Resolution of installation issues, non-conformance or clash

- Identification of non-compliant detail.
- Identification of required remediation work or relocation of services.
- Identification of appropriate tested solution.
- Consultation with fire engineer, third party inspector, consent authority or specialists (if required).

Quality assurance documentation

- Fire stopping register.

- Installation records including photographic evidence, floor plans with as-built drawings, mark ups and ratings.
- Product and compliance documentation.
- Completed quality assurance checklists.

Interpersonal skills

- Active listening.
- Questions to clarify understanding or find out further information.
- Communication and negotiation skills.
- Positively influence outcomes.

Rauemi | Resources

Legislation, regulations and industry guidelines relevant to this skill standard include but are not limited to:

- Building Act 2004.
- Health and Safety at Work Act, 2015.
- Building (Forms) Regulations 2004.
- New Zealand Building Code.
- 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.
- 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. Available from: <https://awci.org.nz/>.
- Association for Specialist Fire Protection (ASFP), Red Book Fire-stopping. Linear join seals, penetration seals & cavity barriers (current edition). Available from: <https://asfp.org.uk/>.
- Association for Specialist Fire Protection (ASFP), Yellow Book. Fire protection for structural steel in buildings (current edition). Available from: <https://asfp.org.uk/>.
- Fire Protection Association New Zealand (FPANZ), Codes of Practice. Available from: <https://www.fpanz.org/>.
- Ministry of Business, Innovation and Employment (MBIE), New Zealand Building Code Handbook. Available from: <https://www.building.govt.nz/>.
- MBIE, Acceptable Solutions and Verification Methods. Available from: <https://www.building.govt.nz/>.

Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this skill standard will take precedence for assessment purposes, pending review of this skill standard. Legislation can be accessed at:

<https://www.legislation.govt.nz>. Standards can be accessed at: <https://www.standards.govt.nz/>.

Pārongo Whakaū Kouna | Quality assurance information

Ngā rōpū whakatau-paerewa Standard Setting Body	Manufacturing and Engineering Industry Skills Board
Whakaritenga Rārangi Paetae Aromatawai DASS classification	Engineering and Technology > Mechanical Engineering > Passive Fire Protection
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga CMR	0014

Hātepe Process	Putanga Version	Rā whakaputa Review Date	Rā whakamutunga mō te aromatawai Last date for assessment
Rēhitatanga Registration	1	26 March 2026	N/A
Kōrero whakakapinga Replacement information	N/A		
Rā arotake Planned review date	31 December 2030		

Please contact Manufacturing and Engineering Industry Skills Board at qualifications@maeisb.nz to suggest changes to the content of this skill standard.