ASSOCIATION OF BUILDING COMPLIANCE

Code of Practice

CODE OF PRACTICE FOR

PASSIVE FIRE PROTECTION INSPECTIONS

DRAFT FOR CONSULTATION OCT 2025

Prepared by the Association of Building Compliance

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1. INTRODUCTION

1.1 The importance of passive fire protection and the need for change

It is an expectation of society to be safe in the built environment and all professionals in the building industry, from designers to builders and *IQP*s, and *Building Owners*, have a critical role to play in keeping our communities safe.

Ensuring that building occupants are safe in a fire typically requires the installation of a range of fire safety systems such as fire alarms, illuminated exit signage, emergency lighting, smoke extraction, stairwell pressurisation, sprinkler protection and passive fire protection.

All but the simplest and smallest buildings will typically have at least 3 or 4 of these safety systems. These systems support each other and provide a level of redundancy so if one does not perform as intended, the others can support occupants in their safe evacuation of the building.

Passive fire protection has an essential role to play in most buildings by preventing the spread of fire and smoke throughout the building, protecting escape routes and giving occupants more time to escape therefore reducing the risk of injury or death.

Following high-profile incidents such as Grenfell Tower and Loafer's Lodge the public are becoming increasingly aware of the potentially disastrous consequences when a building's fire safety systems are ineffective or poorly maintained.

However, there is a large body of anecdotal evidence that a sizeable portion of our older building stock has significant passive fire safety issues - large holes and gaps in fire rated walls and faulty fire doors - which persist despite regular Owner's Checks and annual inspections by *IQP*s. This represents a significant risk and warrants prompt remediation of these defective buildings before there is loss of life.

1.2 Using this document

Section 3 of this document gives useful background information for understanding passive fire systems and how they work and what are the compliance requirements for these systems.

Section 4 summarises the various legal obligations of *IQP*s and *Building Owner*s relevant to passive fire systems.

Section 5 describes the process by which a building's *Compliance Schedule* can be written or updated to provide sufficient information to ensure thorough, effective inspections of *Specified Systems SS*15/3 and *SS*15/5. For buildings with well-prepared *Compliance Schedules,* where the passive fire systems and Inspection, Maintenance and Recording procedures (IMR's) are well documented, the *Compliance Schedules* can remain unaltered.

The purposes of **Section 6** are twofold:

- To discover if a building has defective PFP systems and if required, develop a full building wide scope of remedial works in conjunction with a *Passive Fire Consultant*
- Once it is established that the building's PFP systems are not defective, or a building wide scope of remedial works is completed, specify a regular annual survey to ensure the PFP systems remain defect free.

The remaining Sections and Appendices offer further guidance and information to assist the *IQP* and *Building Owner* in their inspections and understanding their legal obligations.

Definitions of a number of terms and expressions are given in the following section and where they appear in the document, they are italicised.

1.3 Definitions

Aerated concrete: Aerated concrete is a lightweight concrete made using a process that induces air bubbles in the concrete matrix. Examples of proprietary aerated concrete products include Speedwall/ Speedpanel/Hebel.

Annual Survey: The regular annual survey to be carried out by an *IQP* before issuing a *Form* 12A and as defined in section 6.1 of this document.

Assessment Survey: A survey based on the *risk category* of the subject building, following the procedures given in section 6.1 of this document.

B-RaD: "BWOF Report and Declaration". To be issued when a building's scheduled IMRs has been missed and so a *Building Warrant of Fitness* cannot be displayed. To be accompanied by the applicable *S-RaD* documents.

Building Owner: in relation to land and any buildings on the land, —

(a) means the person who—

(i) is entitled to the rack rent from the land; or

(ii) would be so entitled if the land were let to a tenant at a rack rent; and

(b) includes—

(i) the owner of the fee simple of the land; and

(ii) any person who has agreed in writing, whether conditionally or unconditionally, to purchase the land or any leasehold estate or interest in the land, or to take a lease of the land, and who is bound by the agreement because the agreement is still in force.

Building Warrant of Fitness (BWOF or Form 12): - a *building owner*'s annual statement confirming the *specified system*s in the *Compliance Schedule* for their building have been maintained and checked for the previous 12 months, in accordance with the *Compliance Schedule*. The owner is required by s108(3) of the Building Act to supply the *BWoF* on the anniversary of the issue of the *Compliance Schedule*, to the *Territorial authority* and display it publicly.

Chartered Fire Engineer: A person holding the protected title of 'Chartered Professional Engineer' under the Chartered Professional Engineers of New Zealand Act 2002, registered with the Registration Authority for Chartered Professional Engineers (*Engineering New Zealand Te Ao Rangahau*) and with the recognised practice field of 'Fire Engineering'.

Compliance Schedule (CS): A document, issued under section 102 of the Building Act 2004, that lists and describes the *specified system*s within a building, the performance standards for those systems and the \ inspection, maintenance and reporting procedures (IMR's) that must be carried out in order for the systems to continue to perform to the performance standards.

Composite flooring: Floor systems using a combination of concrete and a steel tray or concrete on timber planks (commonly referred to as 'rib and timber infill').

Critical defect: A defect that renders the passive fire system inoperative - as discussed and further defined in section 6.1.5.

Fire resistance rating (FRR): The term used to describe the minimum fire resistance required of primary and secondary elements as determined in the standard test for fire resistance, or in accordance with a specific calculation method verified by experimental data from standard fire resistance tests. It comprises three numbers giving the time in minutes for which each of the criteria structural adequacy, integrity and insulation are satisfied and is presented always in that order.

Fire separation: Any building element which separates *firecell*s or *firecell*s and *safe path*s and provides a specific *fire resistance rating*.

Firecell: Any space including a group of contiguous spaces on the same or different levels within a building, which is enclosed by any combination of *fire separations*, external walls, roofs and floors.

Form 11: A prescribed form under s106(3)(a) of the Building Act requesting the *Territorial authority* to amend a *Compliance Schedule.*

Form 12A: A prescribed form under s108(3)(c) of the Building Act and issued by an *Independent Qualified Person* stating that the Inspection, Maintenance and Reporting Procedures (IMR's) prescribed on the *Compliance Schedule* for one or more *Specified Systems* have been carried out.

Independent Qualified Person (IQP): A person accepted by a *Territorial authority* as being qualified to carry out or supervise all or some of the inspection, maintenance and reporting procedures for a *specified system* stated in a *Compliance Schedule*.

Means of escape: In relation to a *building* that has a floor area—

a) means continuous unobstructed routes of travel from any part of the floor area of that *building* to a place of safety; and

b) includes all active and passive protection features required to warn people of *fire* and to assist in protecting people from the effects of fire in the course of their escape from the fire.

Non-conformance: A system impairment not likely to critically affect the operation of a passive fire system - as discussed and further defined in section 6.1.5.

Non-critical defect: A system impairment not likely to critically affect the operation of a passive fire system - as discussed and further defined in section 6.1.5.

Passive Fire Consultant: Someone with expertise in the design, installation, and inspection of passive fire protection systems. This typically would be someone with at least a Level 4 New Zealand Certificate in Passive Fire Systems or a *Chartered Fire Engineer* with a thorough knowledge of passive fire systems and products.

Risk Category: As defined in section 5.4 of this document and based on the building's characteristics. A building is assigned being either category A (highest risk), B or C (lowest risk).

S-RaD: "Specified System Report and Declaration". To be issued when a scheduled IMR procedure for a *Specified System* has been missed. One declaration is required for each *Specified System*.

Safe path: That part of an exitway which is protected from the effects of fire by fire separations, external walls, or by distance when exposed to open air.

Service penetration: Services or building components that penetrate a *fire or smoke separation*

Smoke Separation: Any building element able to prevent the passage of smoke between two spaces. *Smoke separation*s shall:

Be a smoke barrier complying with BS EN 12101 Part 1, or comply with the following:

a) Consist of rigid building elements capable of resisting without collapse:

i) a pressure of 0.1 kPa applied from either side, and

ii) self-weight plus the intended vertically applied live loads, and

b) Form an imperforate barrier to the spread of smoke, and

c) Be of non-combustible construction, or achieve a *FRR* of 10/10/-, except that non-fire resisting glazing may be used if it is toughened or laminated safety glass.

Specified System: As defined by s7 of the Building Act 2004. These are critical systems within a building which could threaten the life of its occupants if they do not operate correctly and as listed in Schedule 1 of the Building (*Specified system*s, Change the Use, and Earthquake-prone Buildings) Regulations 2005.

Territorial authority **(TA):** As defined by the Local Government Act 2002, being a city council or district council (and listed in Schedule 2).

2. PURPOSE AND SCOPE

2.1 Purpose

The primary goals of this document are:

- To provide *IQP*s and *Building Owners* with an understanding and awareness of passive fire systems so that they can then efficiently and cost-effectively find, inspect, and where necessary, remediate passive fire systems.
- Specify best practice procedures that progressively improve the level of passive fire safety across our built environment and therefore the safety of our community.

To assist with these goals, this document will give *Building Owners* and *IQP*s the basic knowledge they need to:

- Understand the importance of passive fire protection
- Understand their legal obligations and duty of care responsibilities regarding the inspection, maintenance and reporting procedures required in the *Compliance Schedule* or if not defined, what would likely be considered as 'due diligence'.
- Identify the nature, and extent of passive fire protection in a specific building
- Plan and undertake cost-effective and efficient passive fire protection inspections
- Judge when to escalate their inspections to involve a *Chartered Fire Engineer*, *Passive Fire Consultant,* the local *Territorial authority* or FENZ
- In addition, much of the content of this document will also be useful for Property Managers, Body Corporate committees and other parties with obligations under the Building Act to maintain the fire safety of the building stock of New Zealand.

2.2 Scope

The guidelines and procedures given in this document are intended for existing building stock, which have had their Code Compliance Certificate (CCC) issued by a Building Consent Authority (BCA).

It is not intended to be used for the inspection of buildings undergoing construction, or to bring the level of passive fire protection above the standard required at the time it was first constructed.

> **For the purposes of this document, it is assumed that when a building was first constructed, it was fully compliant with the statutory requirements at that time. The only time that a building is required to be altered to comply to a higher level than when it was first constructed, is when a Building Consent is issued for later alterations or a change of use[1].**

For buildings which are very large or have other complexities such as staged evacuations or hazardous environments, specialist advice is likely to be required. Examples could include sports stadiums, casinos, very large footprint campuses/complexes with several interconnected buildings, hospitals or hazardous facilities.

It is recommended that a Chartered Fire Engineer and/or Passive Fire Consultant is engaged to assist with both the assessment of the locations of fire separations, as well as specifying the scope and locations of an Assessment Survey (see procedures outlined in Section 6).

[1] Refer s112, s115, s116A or s133AT of the Building Act for improvements required to upgrade a building to comply with some clauses of the current NZ Building Code 'as near as is reasonably practicable'

3. PASSIVE FIRE PROTECTION

3.1 Importance

Passive fire protection works in conjunction with other fire safety systems of a building and has a critical role to play in protecting the building occupants.

However, Passive Fire Protection (PFP) systems, as opposed to active systems, use elements that generally do not rely on activation from technology or human intervention to perform as intended and therefore tend to me more reliable and effective.

The main benefits of PFP systems:

- They are always available to protect building occupants.
- By delaying or preventing the spread of fire and smoke, they give occupants more time to react to a fire and find their way out of a building before potentially being exposed to harmful conditions. This is particularly important where occupants are asleep, unfamiliar with the escape routes or delayed due to large queues.
- They are critically important in buildings with staged or horizontal evacuation strategies, where occupants are expected to stay in the building for a prolonged period. Such evacuation philosophies are common in hospitals and aged care where a full building evacuation is not practical.
- By preventing the collapse of critical structural elements, PFP systems can protect the stability of key escape routes as well as lower the risk of building collapse and the subsequent risks to escaping occupants as well as adjacent property.
- Assisting FENZ search and rescue operations by limiting fire and smoke spread.

Additional benefits of PFP include:

- Reducing potential property damage caused by the spread of smoke and fire throughout the building (and therefore the cost of remedial works and delays in being able to reoccupy the building or part thereof).
- Protection of adjacent property beyond the building affected by fire.

3.2 Examples of Passive Fire Protection systems

3.2.1 Fire and smoke separations

The simplest PFP system is a *fire separation* or *smoke separation* between two compartments or sections of a building, more commonly referred to as *firecells* or smoke cells. These walls and floors are most commonly built from:

- Fire rated plasterboard linings on timber or light gauge steel framing, or
- Precast concrete slabs or filled concrete block, or
- Concrete flooring systems with preformed steel trays and concrete poured on top as shown in Figure 1, or
- Concrete ribs with timber formwork between and concrete poured on top ('Rib and timber infill'), as shown in Figure 2 or
- Aerated concrete panels encased in profiled sheet steel (e.g. '*Korok*' panels*)*

Figure 1 - Example of composite concrete flooring systems

Figure 2 - Example of rib and timber infill flooring systems

There are many other specialist products available in the New Zealand market that can be used to provide fire-rated walls and floors.

All *firecells* have necessary holes and openings such as doors, windows and service penetrations which must include further PFP systems to maintain the integrity of the fire separation and are therefore included in this category of passive fire systems. Common examples of these systems include:

- Fire-rated doors and windows
- Fire collars around plastic pipes
- Fire and/or smoke dampers in ducting
- Fire wraps, sleeves, pillows
- Mastics for smaller penetrations, such as electrical cabling and steel pipes

It is important to note here that PFP systems are not normally individual components or products, but assemblies of individual components. For a system to perform adequately, all of the constituent parts must perform together and be tested and approved together as a complete system.

For example, a plasterboard wall is only a correctly built PFP system when the correct plasterboard, with the correct screws, sealants and framing are also included, ~~as~~ tested together when the fire resistance rating was demonstrated. Replacing one component (such as the screws) with an alternative product that was not included within the system when tested, may result in the system not performing to the required level of fire resistance.

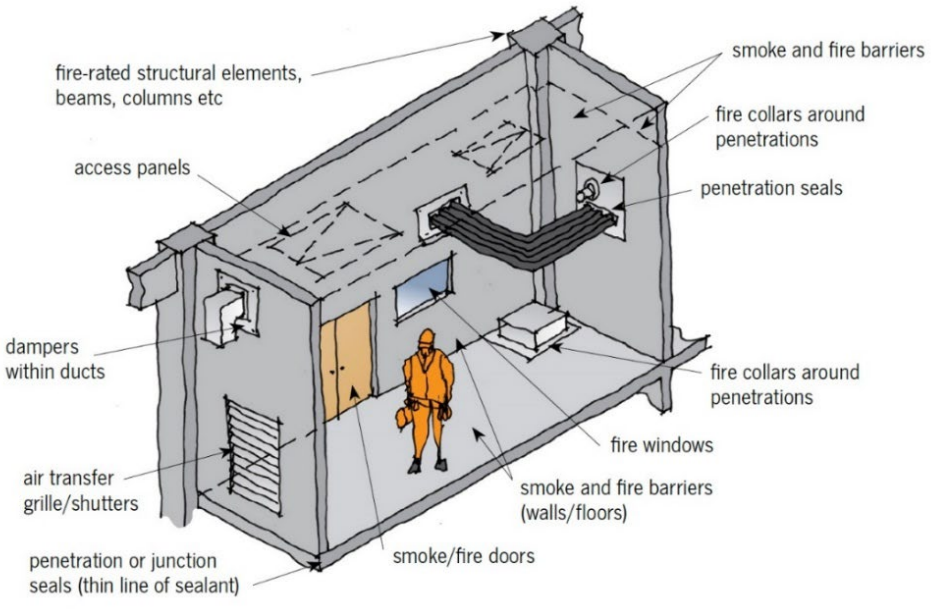


Figure 3 - Examples of passive fire building protection components.

(SOURCE: - BRANZ "Guide to Passive Fire Protection in Buildings")

3.2.2 Fire rated elements

The second category of PFP systems are those that protect structural elements from collapse during a fire. These structural elements normally provide support for fire separations, or key escape routes (such as floors, mezzanines or external walkways and stairs).

Examples of these systems include:

- Spray Applied Fire Resisting Materials (SFRM) such as intumescent coatings (paints) or cementitious coatings (e.g. '*Cafco')*
- Board/cladding systems (e.g. calcium silicate-based boards, fire-rated plasterboards)

3.2.3 PFP systems which are not *Specified systems*

The Building Regulations[3] define Specified systems 15/3 and 15/5 as fire or smoke separations that form part of a building's means of escape from fire which also include specified systems 1 to 6, 9 & 13.

However, some PFP systems in a building will not necessarily fall into this definition and therefore would not necessarily appear in the Inspection, Maintenance and Reporting procedures (IMR's) specified in the Compliance Schedule.

These could include:

- Structural elements protected by one of the systems listed in Section 3.2.2
- Internal and external load bearing walls, where not part of a *fire separation* themselves but providing stability to other *fire separations* (such as floors or walls)
- Mezzanine or intermediate floors and their access stairs (typically a 30-minute fire rating required to the underside)
- Fire rated external walls or ceilings/roofs on or near property boundaries protecting other buildings

However, given that the failure of most of these systems to operate could present a **significant life safety risk,** they shall still be inspected as a matter of due diligence by *building owners* and their agents (see Sections 1 & 4.4).

3.3 What is a Fire Resistance Rating?

A *Fire Resistance Rating* (*FRR*) is a measure of the ability of a PFP material or system to resist a standard fire resistance test. The numbers stated are the time (in minutes) for which each of three separate criteria are satisfied when the element is exposed to the temperature, pressure and applied load specified in the test procedure.

A **'2-hour fire rating' is not a complete specification**; it must include the ratings for structural adequacy, integrity, and insulation (the three test criteria mentioned above) and is expressed as xx/yy/zz (e.g. 120/120/120 for an element achieving a 2-hour fire resistance for all three criteria).

[3] Building (*Specified Systems*, Change the Use, and Earthquake-prone Buildings) Regulations 2005

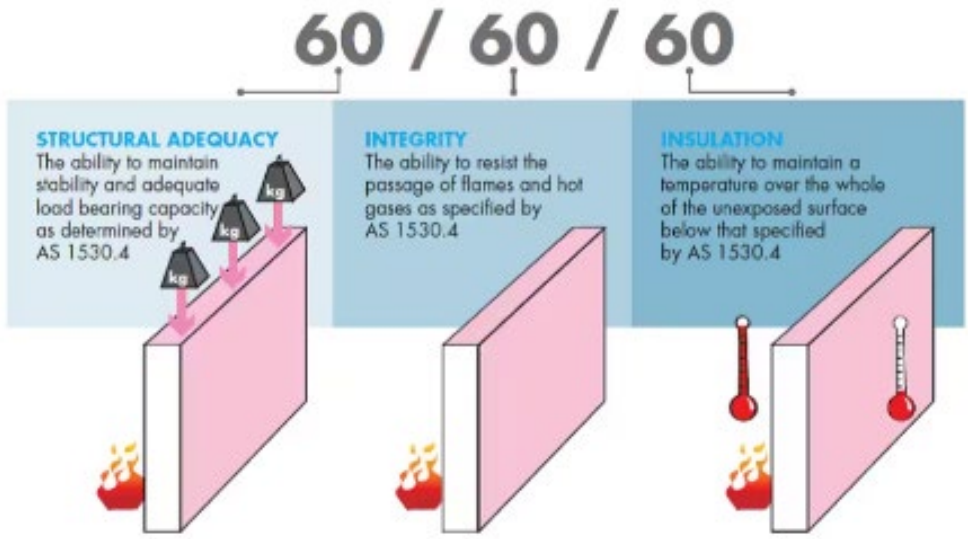


Figure 4 - The 3 elements of a fire resistance rating

Structural adequacy is the ability to support a load during a fire and therefore only applies to loadbearing elements of a structure. A column or beam may have an *FRR* of 120/--/--, or a loadbearing wall may have an *FRR* of 60/60/60. Fire doors and windows, as well firestopping systems to a *service penetration* will never have a structural adequacy rating (e.g. --/60/30 or --/60/--)

Integrity is the ability to prevent the passage of flame and hot gases. During the standardised test it is determined by the creation of a gap or ignition of a cotton pad on the non-fire (unexposed) face.

Insulation is the ability to limit the temperature rise on the non-fire (unexposed) face. In certain circumstances, a PFP system **may** not require this rating (for example in a sprinkler protected building or if combustible materials are at a minimum distance of 300mm from the *service penetration* - consult a *Chartered Fire Engineer* or *Passive Fire Consultant* to determine if this rating is required).

Smoke rating – Is an additional term 'SM' indicating smoke protection. For example, a smoke control door will have an SM added to the FRR, for example, -/60/30 SM. Some partitions (e.g. walls, ceilings) in a building may only be required to have a smoke rating (typically designated as --/--/-- sm).

3.4 How do passive fire systems work?

The majority of PFP systems function in one of two ways to prevent the transmission of heat, flame and smoke:

- Static/non-intumescing (non-expanding) – fire-resisting materials that resist fire and heat (e.g. mastics, cementitious coatings, plasterboard).
- Intumescing – materials that expand when heated. As well as having the ability to expand and fill gaps or holes, intumescing materials can act as an excellent insulator to prevent heat transfer. This is the operating principle of intumescent coatings which protect steel members.

PFP systems for plastic pipes or other combustible services normally include an intumescent material to fill the hole or gap left behind once a service softens and collapses or burns away.

Figure 5 -The operation of a fire collar with intumescent material

Other PFP systems which use different mechanisms to operate include:

- ‘Curtain’ or ‘drop down shutter’ dampers in ventilation ducts which rely on a fusible link (a small piece of metal which breaks when heated) to allow the shutter to close under gravity when exposed to heat
- Mechanical/actuated smoke and fire dampers in ducting and interfaced with the fire alarm system
- Motorised fire and smoke curtains which are interfaced with the fire alarm system and close off large openings in *fire or smoke separations* when a fire is detected.

3.5 What are the compliance requirements for new PFP systems?

Generally, PFP systems installed in New Zealand are tested to one of only a few approved test standards[4] (see Section 7.2), by an organisation that has been independently accredited by an internationally recognised accreditation body (such as IANZ in New Zealand or NATA in Australia).

The manufacturer must be able to provide a copy of the test report on request to demonstrate that their product performs to the test standard.

[4] These are the approved test standards in section 8.2 of the *Building Product Specifications* (July 2025)

4. LEGISLATIVE FRAMEWORK

4.1 Legal obligations of *IQPs*

It is an offence (under s108A of the Act) for an *IQP* to state in a *BWoF* (or any other document like a *Form 12A*) that the IMR procedures for a *Specified System* on the *CS* have been complied with in the previous 12 months , if those procedures have not been fully complied with during that period (unless they can demonstrate this was due to a reasonable mistake or reasonable reliance on information provided by others or they took reasonable precautions and exercised due diligence to avoid this mistake).

An *IQP* who commits an offence under Section 108A is liable on conviction, in the case of an individual, to a fine not exceeding $50,000 and in the case of a body corporate, to a fine not exceeding $150,000.

4.2 Legal obligations of *building owners*

It is not the intention of this document to give a full explanation of all the legal obligations of a *Building Owner*[5] however, the key requirements with regard to PFP systems are as follows.

The Building Act (s108) requires the owner of a building for which a *Compliance Schedule* (*CS*) has been issued to:

- Supply a *Building Warrant of Fitness* (*BWOF*) to the *Territorial authority* (Council) on the anniversary of the issue of the *Compliance Schedule* which confirms that the inspection, maintenance and reporting procedures (IMR's) of the *CS* have been fully complied with in the past year
- Attach to the *BWOF*, all certificates issued by an *Independent Qualified Person* (*IQP*) confirming that the IMRs for the *Specified systems** have been completed (*form 12A*s)
- Publicly display a copy of the *BWOF*

*In relation to PFP systems, the applicable *Specified systems* are:

- SS 15/3 *Fire separations*
- SS 15/5 *Smoke Separations*

[5] Refer to s105 of the Building Act and the MBIE website for further information

A *Building Owner* should be familiar with the IMR's specified in the *Compliance Schedule* for their building which normally include monthly, six monthly, annual and sometimes daily checks to be carried out for *fire and smoke separation*s.

The *Compliance Schedule* (CS) is the key document for all Building Owners and IQP's to meet their legal obligations under s108 of the Building Act.

Its primary purpose is to ensure *Specified Systems* continue to perform to the performance standards by outlining the regular inspection, maintenance and reporting requirements (IMRs).

These are then formally verified as being completed by the completion and signing of a *Form 12A* by an *IQP.*

If, on further investigation, it is discovered that a *Specified System* is not listed correctly (does not feature on the *CS*), or a *Specified System* that appears on the *CS* is not in fact installed in the building, **it is the IQP's duty to instruct the Building Owner that they need to apply to the *Territorial authority* (TA) for any necessary amendments to the CS.**

It is also a requirement of s108(2) of the Building Act for any recommendations made by an *IQP* for amendments to the CS, to be attached to the *BWOF*.

A *Form 11* shall be completed and submitted to the TA to request this amendment which may in turn require a building consent or certificate of acceptance (COA).

In terms of *Specified Systems* 15/3 and 15/5, it is expected these amendments would include the addition of drawings specifying the location of *fire and smoke separations* (if not already included) and thoroughly described IMRs referring to this code of practice – refer to section 5 for more guidance.

Beyond the legal minimum obligations stipulated in the *Compliance Schedule* and Building Act, Building Owners also have other legal obligations under the **Fire and Emergency New Zealand (Fire Safety, Evacuation Procedures, and Evacuation Schemes) Regulations 2018**.

These may include (but are not limited to):

- Establishing and maintaining an evacuation procedure and erecting and maintaining clear signage advising of this procedure.
- Submitting an Evacuation Scheme to FENZ for approval and keeping it up to date
- Maintaining clear escape routes

4.3 Requirement for a Building Consent

Any remedial works to a building's PFP systems is considered building work and therefore requires a Building Consent (refer s40 of the Building Act).

Examples of building work to repair PFP systems could include:

- Repairs to *fire separations* including new plasterboard linings, or repair to plasterboard linings
- Fitting, or replacing PFP products or systems such as fire collars and mastics
- Repair or replacement of fire doors

Some building work is exempt from a Building Consent as discussed below but must still comply fully with the Building Code.

4.3.1 Urgent works without Building Consent

If it can be justified to the BCA that the building work must be carried out urgently for the purpose of saving or protecting life, and a Building Consent cannot therefore practicably be obtained in advance, the BCA may agree for the remedial works to be completed without a Building Consent under s41(1)(c) of the Act.

When the remedial works are completed, a Certificate of Acceptance (COA) application must be submitted (refer s42 of the Act).

In the context of PFP systems, this may be an appropriate course of action for a high-risk category building (risk category A) with widespread severe defects (refer section 6.2.2).

4.3.2 Discretionary exemption for building work

Schedule 1 Part 1 Clause 2 of the Building Act permits a BCA to grant a discretionary exemption if they believe that:

- The completed work is likely to comply with the Building Code, or
- If the completed building work does not comply with the building code, it is unlikely to endanger people or any building, whether on the same land or on other property

For remedial work to PFP systems the following information is recommended to be included with any application for a discretionary exemption:

- Full itemised schedule of the works including the location of works on a floor plan and 'before' photographs
- Information on all products and systems to be used, how they are to be installed (e.g. firestopping system data sheets) and evidence these comply with Building Code requirements (e.g. cited test reports).
- Details of who will carry out the works and what compliance documentation they will provide on completion (e.g. full itemised schedule with 'after' photos and PS3)
- Details of a *Passive Fire Consultant* who will undertake construction monitoring and issue a PS4 on completion.

4.3.3 BC Exempt building work – Schedule 1

Any building work described in the other clauses of Schedule 1 of the Building Act is exempt from a Building Consent. It is recommended that an IQP consults with the BCA and/or a *Chartered Fire Engineer* to determine whether the proposed remedial works is described in one of these categories.

If it is determined that the building work is described in Schedule 1 (and therefore exempt) it is recommended that the BCA are informed so it can be recorded on the property file.

Examples of building works in Schedule 1 that could be applicable to the remediation of PFP systems include:

- Part 1 Clause 1: Replacement of a building product or assembly with a comparable product in the same position (unless it is considered to be a 'complete or substantial' replacement[6])
- Part 1 Clause 12: Any building work associated with the internal linings in an existing residential dwelling (e.g. a fire wall between two apartments)

[6] Refer MBIE determinations 2013-071 and 2015-072, where "substantial" is considered to be 50% or greater of a building product or assembly (e.g. fire wall or fire door)

4.4 Other legal obligations

The Building Act (s116B) states that:

No person may -

(a) use a building, or knowingly permit another person to use a building, for a use for which the building is not safe or not sanitary; or

(b) use a building, or knowingly permit another person to use a building, that has inadequate means of escape from fire"

The Crimes Act 1961 at clause 145 (Criminal nuisance) also states that:

> *Everyone commits criminal nuisance who does any unlawful act or omits to discharge any legal duty, such act or omission being one which he or she knew would endanger the lives, safety, or health of the public, or the life, safety, or health of any individual.*

It is the ultimate responsibility of the *Building Owner,* and their representatives engaged (such as *IQP*s), to understand their legal obligations.

Beyond the legal minimum obligations stipulated in the *Compliance Schedule*, *Building Owner*s are reminded that they have a duty of care to ensure the occupants of their building can escape a building safely during a fire.

5. BUILDING ASSESSMENT

5.1 Introduction

The process described in this section is only intended to be done once for a new building or an existing building with poorly specified IMR's.

Once this is completed, the IMR's shall be detailed based on the content of this document and record the assessed Building *risk category* (A, B or C)

For an existing building, an application must be made to the TA for a *CS* amendment to include these IMRs under s106 of the Act. It is the duty of the *IQP* to make the *Building Owner* aware of this requirement and ensure these amendments are made.

If the existing *CS* has IMR's which are well described and give an equivalent level of thoroughness to this document, the *IQP* may elect to not use this Code of Practice.

5.2 Citing this COP on a Compliance Schedule

Whether writing a new *CS* for a new building using this document or requesting an alteration to a CS to refer to this document, the suggested citation is as follows (for the IMRs under SS15/3 and SS15/5):

> *'ABC Code of Practice for Passive Fire Protection Inspections (2025), Part 6: Passive Fire Inspections, Sections 6.1.5, 6.1.7 Figure 11: Annual Survey, 6.1.8, 6.1.9 and 6.2, Risk Category X Building'*

Refer section 5.4 for assigning the building risk category.

5.3 Locating the *fire and smoke separations* in existing buildings

To identify if there are any passive fire protection deficiencies it is essential to know where to look and to identify which building elements are required to have a fire or smoke rating.

Effective, accurate inspections of PFP systems cannot be carried out without this information and if it is not available, an *IQP* or *Building Owner* must make reasonable attempts to source this information.

For a new building, this information will ordinarily be provided in either the fire report or architectural drawings, however for an older existing building, a suitable fire report or architectural drawings may not exist.

Sourcing this information may incur costs and the IQP should discuss these with the *Building Owner* and seek their approval before proceeding. The IQP must consider whether or not a lack of this documentation may prevent them from being able to certify the system and if the *Building Owner* refuses to pay these costs the IQP should consider withdrawing their services (refer section 6.2.3).

Step 1: **Read the existing Compliance Schedule**

A *Compliance Schedule* should have an indication of where the *fire and smoke separations* are located, and their required fire or smoke rating.

Step 2: **Source the property file**

If the existing *Compliance Schedule* does not provide an indication of the location of fire and *smoke separated* building elements (and there are no other drawings made available by the *Building Owner*) approach the applicable *Territorial authority (TA)* and request copies of the documentation they hold on file (the process for this varies for each TA) and look for the most recent applicable documentation.

If the building was built or significantly altered after 1995, this will likely include a fire report and attached drawings to help locate the fire separations and understand other critical fire safety features.

Step 3: Ascertain the locations of the *fire and smoke separations* on site

It is possible, especially for older buildings, that after searching all the documents that are available, there may still be insufficient information to locate the *fire and smoke separation*s.

In these instances, it is still possible to identify the likely locations of *fire separations* by looking at plan drawings and/or surveying the building.

Presented below is a list of elements of a building's construction that are likely to require a fire rating and are defined as a Specified System:

- Walls around stairwells (especially for buildings three levels or greater)
- The middle dividing wall in a scissor stair (as well as the stair treads)
- Walls between apartments, separate dwellings & households, hotel rooms
- Walls between sleeping spaces and shared corridors
- All floors/ceilings of buildings three levels or greater
- Walls around lift shafts
- Walls around and above fire-rated doors (look above the door if there is a suspended ceiling or hatch)

- Walls around service risers where there are no separations at each floor level
- Walls around transformers and gas-burning plant

The following list of elements of the building fabric are also very likely to require a fire rating but are not defined as a *Specified System* (see Section 1.1.1 and refer also below):

- Gravity load-bearing walls of a multi-storey building below the topmost floor (i.e. those holding up fire-rated floors)
- Walls on title boundaries
- The ceiling below a mezzanine floor
- Structural columns and beams in a multi-storey building

This guidance is intended to give an *IQP* or *Building Owner* an indication of the location of *fire and smoke separations* only and it is strongly recommended that a *Chartered Fire Engineer* is consulted to review and confirm the likely locations of the *fire and smoke separations* within a building when no other information is available.

For especially complex or very large buildings, it is strongly recommended that a *Chartered Fire Engineer* is engaged to provide marked up drawings with their assessment of the required locations of *fire and smoke separations* as well as recommended *fire ratings*.

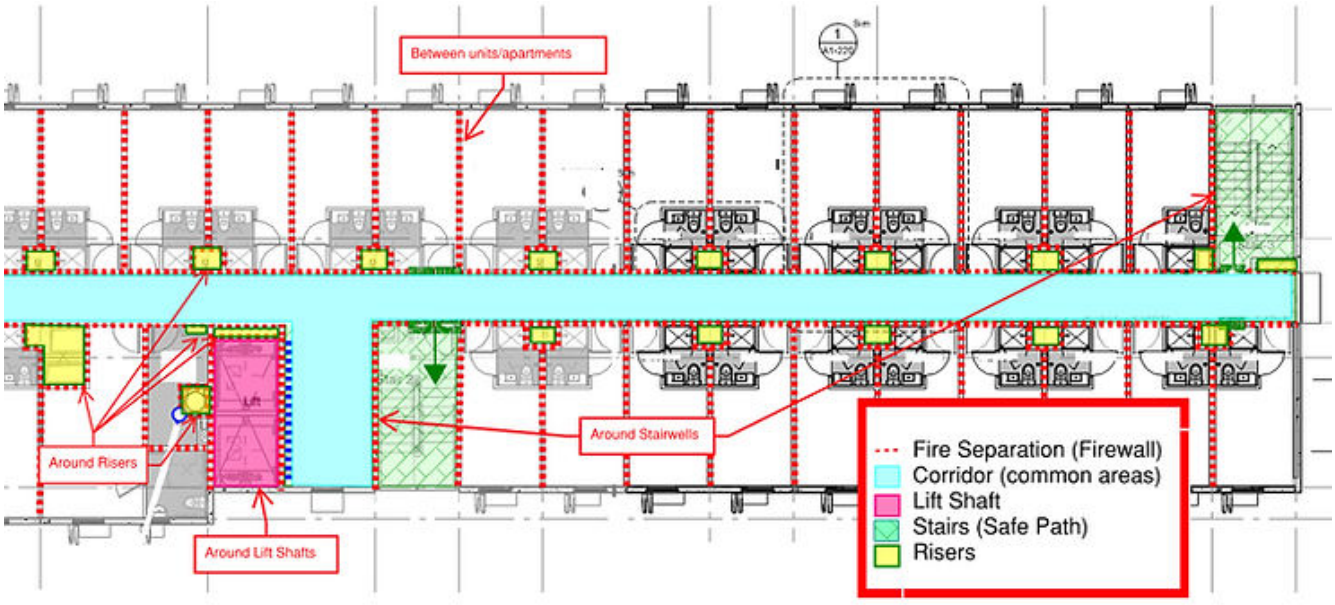


Figure 6 - Likely locations of fire walls in a typical apartment building

5.4 Assessing the building risk category

In this section and Section 5.5, a risk-based approach is presented to help decide where to concentrate inspections and how extensive the inspections should be (including whether invasive inspections are required).

A key consideration for this methodology is assessing the risk profile of your building.

In terms of PFP systems, the key risk factors which should be considered for each building are:

- Occupant characteristics, or evacuation philosophy that may delay evacuation (e.g. sleeping accommodation, elderly residents, lawful detention, staged evacuations)
- High occupancy that may result in long queues at fire exits
- Length and complexity of escape routes resulting in long evacuation times (e.g. building height)
- Level of protection offered by active systems such as fire alarms and sprinklers
- Building Age (older buildings are less likely to have effective PFP systems)
- Special fire risks such as basement carparks, storage of hazardous substances, large fuel loads (especially racked pallet storage)

The scoring system below gives a methodology for assigning a *risk category* to a building based on four key factors. This *risk category* then dictates the thoroughness and scope of your PFP inspections.

		SCORE
Levels above ground (see note 1)		
9 floors or more	22	
4-8 floors	12	
2 or 3 floors	6	
single level	0	
Evacuation & Occupancy type (see note 2)		
Hospitals, Lawful detention	25	
Other Staged or horizontal evacuation	25	
All out - Elderly care	10	
All out - Sleeping occupants	8	
All out - Early childhood education	6	
All out - Large crowd spaces	6	
All out - Awake and alert	2	
Alarm system		
None or manual call points only	10	
Domestic, non-interconnected smoke detection	8	
Hard wired or interconnected heat or smoke detection	4	
Sprinkler protection	0	
Means of escape		
Single stair	13	
Double scissor stair (see note 3)	6	
Two or more stairwells	4	
Single level building	0	
	SUM	

SCORE	BUILDING RISK CLASSIFICATION
> 24	Category A
14 – 24	Category B
< 14	Category C

Notes:

1. ‘Levels above ground’ is intended to represent the number of levels above the point at which occupants have reached a place of safety, e.g. the assembly point or street.

2. Where multiple occupancy types exist in one building enter the value for the use with the highest score.

3. Scissor stairs can present a greater risk than two independent stairs due to the risk of smoke spread between the dividing wall or edges of treads.

5.5 Assign PFP system risk levels

Once the risk category of the building is determined and the locations of *fire and smoke separations* are known (or identified to the best of your ability), the separations and fire-rated elements shall be assigned a risk category as listed in the table below. This information shall be included on the drawings which indicate the locations of the *fire and smoke separations*, which are attached to the *CS*.

Table 1 - Element risk level

Fire separation (risk level defined by the *firecell* or area of building protected)	Fire rated element	RISK LEVEL
• Vertical *safe paths*/ Stairwells • Large fire rated service risers* and lift shafts • Middle dividing wall of a double scissor stair, including treads (and seal between edges of treads and walls) • Large *firecells* with high occupancies (e.g. conference centres, theatres) • Evacuation zones for staged evacuation strategy buildings (e.g. hospitals or rest homes) • Horizontal *safe paths*, corridors • Rubbish rooms adjacent to escape routes • Transformer rooms or fuel burning equipment rooms • Floor below a high occupancy space or *safe path* • Junction of floor edges and curtain walls • Electrical or equipment rooms that open onto *safe paths*	• Structural columns for multi-storey buildings • Inter-storey cavity barriers • External steelwork supporting escape routes • Steel beams • External wall of multi-storey buildings • Internal loadbearing walls	HIGH RISK

• Between two low occupancy spaces or firecells on the same level • Floors between two low occupancy firecells (such as sleeping accommodation or offices) • Electrical or equipment rooms (except transformer rooms, or those that open onto safe paths)	• Ceiling below a mezzanine floor or stair • Floor below a low occupancy space. • Single level external walls on title boundaries	LOW RISK

*These can easily be identified as any door or hatch to the riser on each floor level will be fire rated and there will likely be openings/gaps at each floor level.

6. PASSIVE FIRE INSPECTIONS

6.1 Inspection procedure

6.1.1 Introduction

This code of practice specifies two inspection types: an 'Assessment Survey' and an '*Annual Survey*' to be conducted by an *IQP*.

When this document is used to assess a building for the first time, an *Assessment Survey* is required unless there is a reasonable level of certainty that the PFP systems throughout the building are free of defects. If this is not the case, the purpose of an *Assessment Survey* is to establish whether the building's PFP systems are defective, what is the extent of the defects and then use the findings to plan a scope of remedial works.

This code of practice also specifies three 'response levels', based on the *risk category* of the building and the outcome of a Survey. These response levels include further recommended actions for an *IQP* to work with the *Territorial authority* to remediate a building with defective PFP systems.

The *IQP* may elect to lower the response level by one level (i.e. level 3 to 2 or level 2 to 1) if, and only if, the building is currently unoccupied.

Once an *Assessment Survey* has been completed and:

- It is established that the building's PFP systems are free of *critical defects* (or it is likely to be the case based on a random inspection), or
- *Critical defects* are discovered, and a full scope of remedial works is completed (and so the buildings PFP systems are no longer defective),

Then the building can be inspected using an *Annual Survey* and continue to be regularly inspected to this level.

6.1.2 Procedure for assessing an existing building

The flow chart presented in Figure 7 outlines when an *Assessment Survey* or *Annual Survey* shall be carried out for an existing building when using this code of practice.

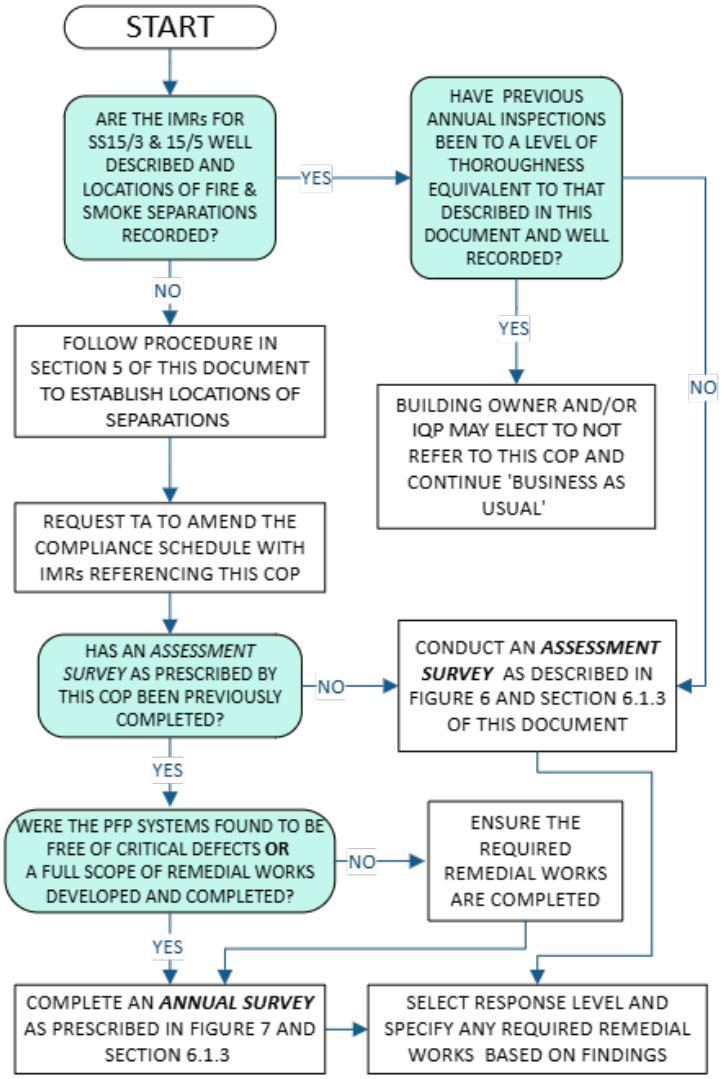


Figure 7 - Assessing an existing building

6.1.3 Consider recent building history

In the period since the last *Annual Survey*, or if this is the first inspection, anything that can be discovered about recent alterations, maintenance or fitouts, may assist in focusing or prioritising inspections. For example, if fibre optic cables or new plumbing has recently been installed in a building, where exactly was this done? Did this pass through any *fire separations*?

If building works within a building reveal high risk *fire separations* which are not normally easy to view, it is recommended that the *Building Owner* contacts their *IQP* or a *Chartered Fire Engineer or Passive Fire Consultant* to view these before works are completed.

Presented in Appendix E is a *Building Owner*'s questionnaire with suggested questions to present to the *Building Owner* and/or Property Manager, the answers to which will likely assist with an inspection.

6.1.4 Selecting *fire separation*s for inspections

The procedures described in this code of practice require a minimum portion of high-risk *fire separation*s to be investigated depending on the building *risk category* and the points below offer guidance for how this shall be done:

- For multi-level buildings with more than 5 levels, calculate 20% (*risk category* B) or 30% (*risk category* A) of floors (rounded up to the nearest whole number)
- Ensure to select floors which are evenly distributed up the building (e.g. a 22-level building would require 9 levels to be inspected with levels 1, 4, 6, 8, 11, 13, 16, 19 & 21 representing an even distribution).
- If a building has multiple uses (e.g. accommodation above retail) ensure to select at least one floor from each of these uses
- If a building has multiple management entities or body corporates, ensure to select at least one floor which is managed by each of these entities
- Inspections must include all high-risk *fire separations* on each selected floor level.
- For each high-risk *fire separation* selected, inspection from one location is considered sufficient (e.g. a ceiling hatch) if a significant portion of that separation can be viewed (generally at least 3 or 4 metres) otherwise multiple non-invasive inspections may be required.
- If it is not possible to inspect a significant portion of all high-risk *fire separations* on a floor, include a second location where this *fire separation* (or another example of the type of *fire separation*) is visible on another floor.

- For floors with plan area exceeding 2000m^2, within the selected floors at least three, well distributed, separate locations can be selected.

- If there have been recent alterations or repair works to these *fire separations*, ensure to include them within your inspection.

- When a building is undergoing refurbishment or repair, and high-risk *fire separations* are revealed which are not normally easily viewed, it is recommended that an IQP or *Passive Fire Consultant* inspects these before being closed up

It is imperative that **all high-risk fire separations are inspected at an interval not exceeding 5 years** (20% each time) - it is not the intention of this document for an *IQP* or *Building Owner* to select *fire separations* based only on ease of access or likeliness of being defect free.

For low-risk *fire separation*s and *smoke separations* there is no set minimum level of inspection, however it is expected that at least some portions of these *smoke and fire separations* are inspected while inspecting other high-risk *fire separation*s (where they are easily viewed), hence these are not included in the flow charts below.

- As with inspection of high risk *fire separations*, it should be recorded which low risk *fire separations* or *smoke separations* have been inspected so that in subsequent inspections, different areas are inspected.

- If there have been alterations or repair works to these separations, ensure to include them within your inspection.

6.1.5 Defect categorisation

In this code of practice, defects are specified into one of three categories. These definitions are based on AS1851[7] as follows:

Critical defect

"A defect that renders the passive fire system inoperative".

Within the context of performance to NZ Building Code, this would mean a defect which presents more than a low risk to building occupants. For the purposes of this code of practice, examples of a *critical defect* would be:

- Holes or gaps in a *fire separation* aggregating more than 0.05m^2 (as a rough guide, equal to an A4 sheet of paper) EXCEPT for safe paths, where any visible gaps or holes are classified in this category

[7] AS1851:2012 "Routine service of fire protection systems and equipment" Section 1.5.6

- A large combustible pipe (100mm or greater) without firestopping, or multiple smaller combustible pipes without firestopping
- Large cable bunches or cable trays without firestopping, or multiple smaller bunches
- Fire rated plasterboard with inadequate support and/or screws
- Fire doors which do not fully close/latch when released
- Intumescent coatings with large areas of damaged or missing paint
- Ventilation ducts without dampers

It is recommended that all *critical defects* are remedied in a *risk category* A or B building before a *Form 12A* can be issued (see section 6.2.2).

See also Appendix A for photos of common passive fire defects and suggested categorisation.

Non-critical defect

"A system impairment not likely to critically affect the operation of a passive fire system".

Within the context of performance to NZ Building Code, this would mean a defect which is likely to only present a low risk to building occupants or unlikely to not perform as required. For the purposes of this code of practice, examples of a *non-critical defect* would be:

- Small holes or gaps in construction of a *fire separation* (EXCEPT for *safe paths*, where any visible gaps or holes are considered as *critical defects*)
- Small gaps (10mm or less) around fire collars or non-combustible pipes as they penetrate a *fire separation*
- Fire doors with gaps marginally exceeding 10mm to the finished floor level
- Intumescent coatings with small, localised areas of damage

Non-Critical defects should not prevent the issue of a *Form 12A* (see section 6.2.2).

Non-conformance

“A missing or incorrect feature that does not affect, or is unlikely to affect, the system operation”.

Within the context of performance to NZ Building Code, this would mean a defect which is very likely or certain to not affect the required performance. This may mean the passive fire installation has not fully adhered to all manufacturer’s instructions but will still perform to the required level (a judgement which only a *Chartered Fire Engineer* and/or the manufacturer can make).

For the purposes of this code of practice, examples of a non-conformance defect may include:

- Missing badges or tags on a fire door (see further comment in section 6.1.9)
- Fire rated mastic sealants which are marginally thinner or shallower than the minimum specified by the manufacturer
- A fire collar fitted with screws which are different to those specified by the manufacturer

6.1.6 Inspection procedures

Figures 8-10 prescribe the process for the three *Assessment Surveys* relevant to each building *risk category* while figure 11 prescribes the process for an *Annual Survey.*

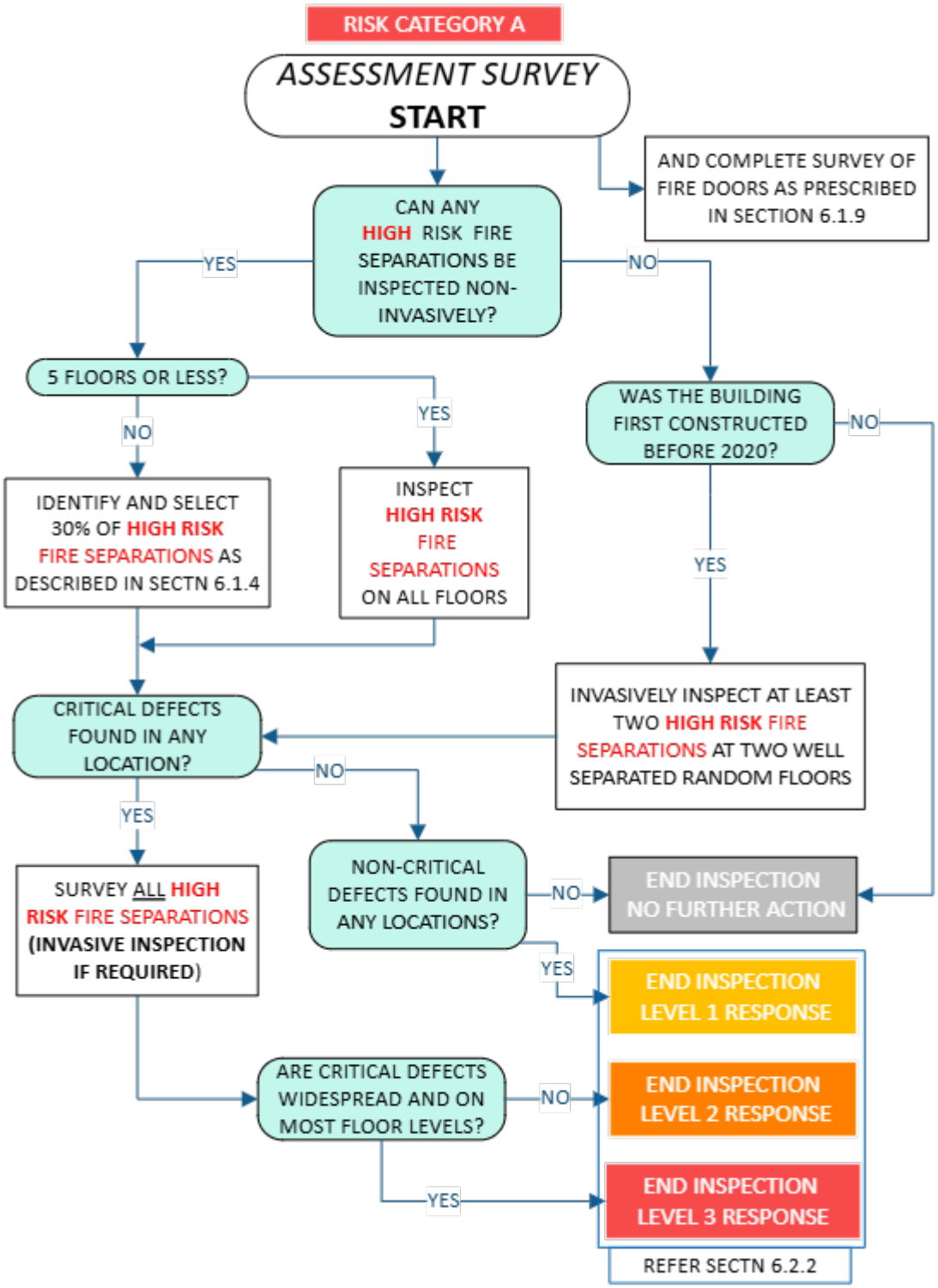


Figure 8 - Assessment Survey procedure for a risk category A building

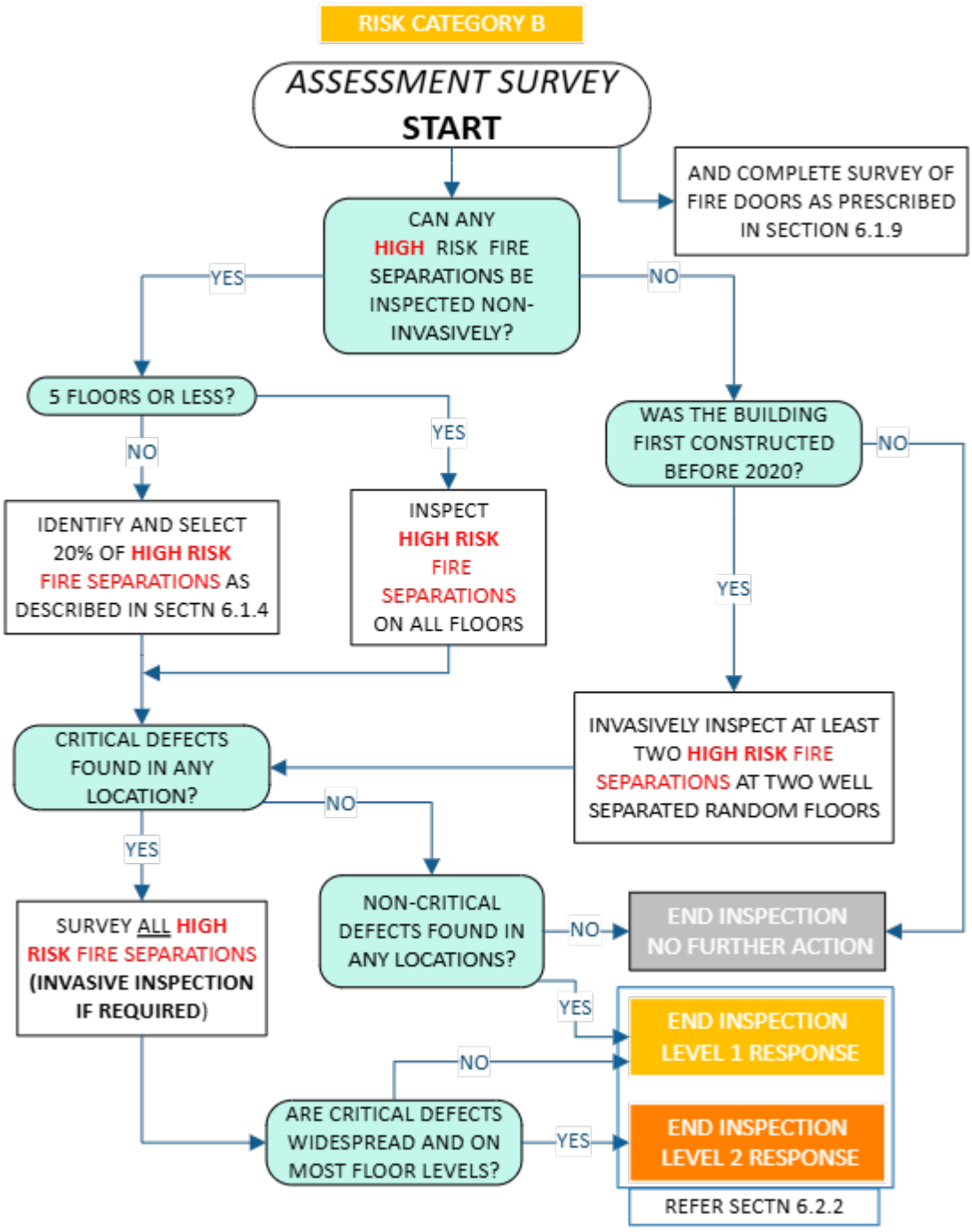


Figure 9 - Assessment Survey procedure for risk a category B building

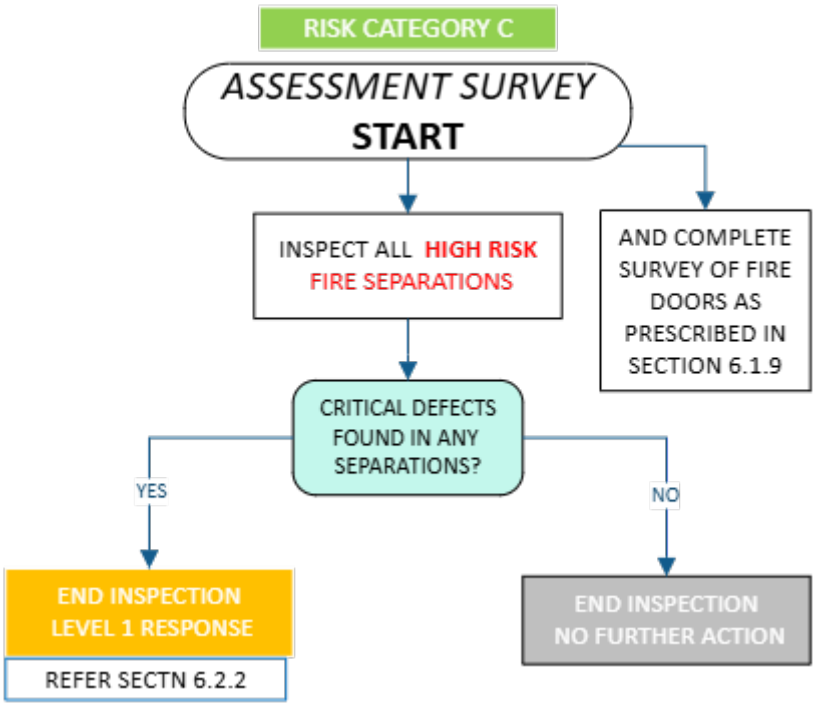


Figure 10 - Assessment Survey procedure for a risk category C building

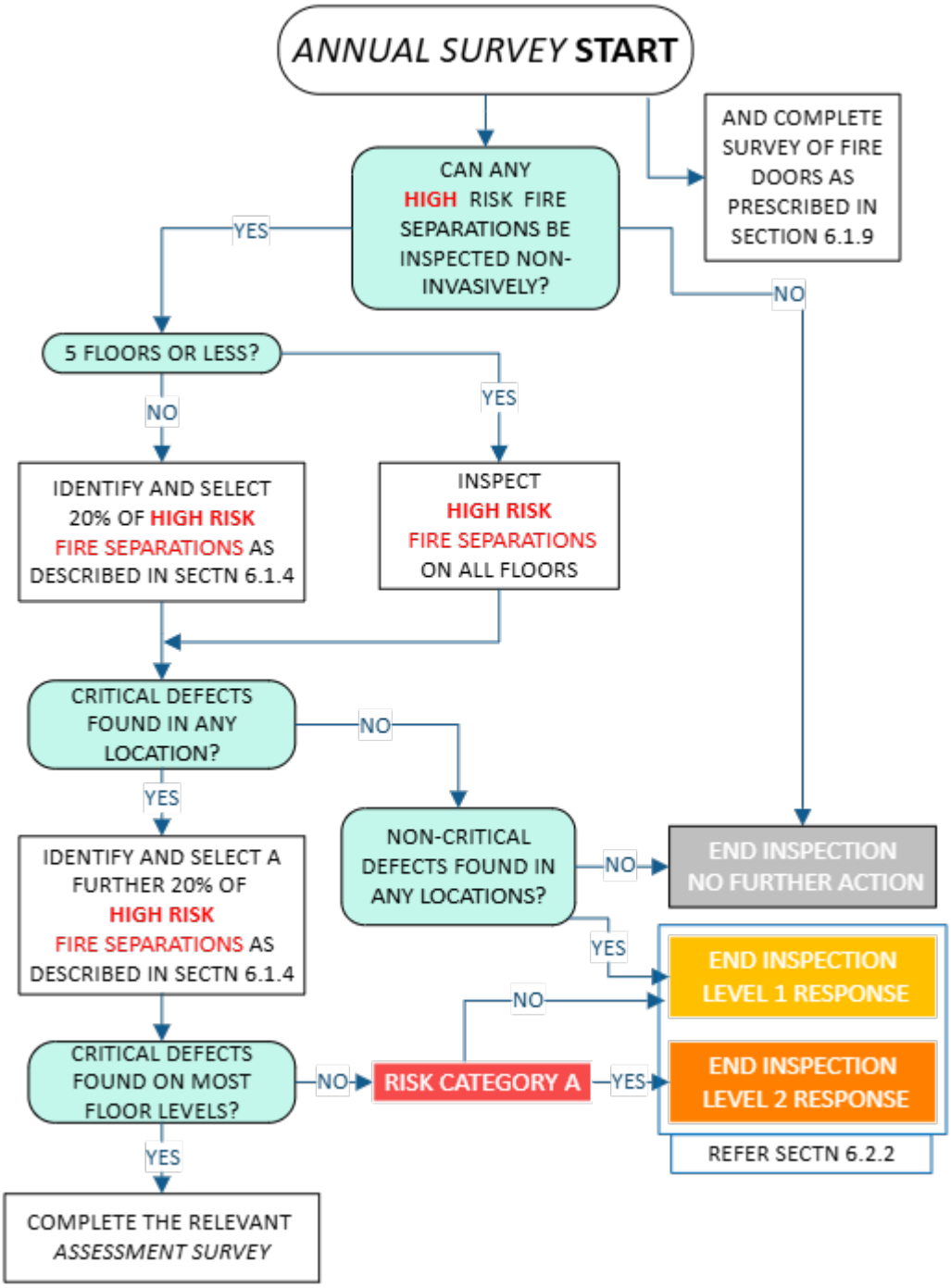


Figure 11 - Procedure for an Annual Survey

6.1.7 Invasive inspections

Invasive inspections are those which require damaging the building fabric in any way (e.g. cutting through plasterboard linings).

The following inspection techniques/methods are NOT considered to be invasive inspections:

- Ladder access through ceiling hatches (ensure you have carried out any necessary risk assessments required by your firm for ladder use and all reasonably practicable steps are taken to reduce the risks to yourself and others).
- Lifting of suspended ceiling tiles
- Unlocking of ceiling and wall access hatches, distribution board cupboards etc…
- Relocating furniture and other easily relocatable items to gain access to spaces.
- Coordinating with the *Building Owner* or building manager to access to private property (unless due notice is given and appropriate arrangements made with the owner and/or tenant)
- Coordinating with the *Building Owner* or building manager to inspect parts of a building where access is restricted for operational or health and safety reasons (e.g. surgeries, classified or secure areas)

Where full/bodily access to the void above the ceiling is not possible, but it is visible, inspections should include a torch and assistance with a zoom lens and/or endoscopes. Refer to section 6.1.8 for health and safety considerations.

It is possible that a *building owner* will not approve an invasive inspection and/or damage to their building for the purposes of inspecting the passive fire systems.

However, it is expected that in the vast majority of cases, the inspection of high-risk *fire separations* can be achieved non-invasively in at least a few locations and this would be sufficient to reveal an endemic, widespread passive fire protection issues.

If it is not possible to inspect any high-risk *fire separations* without invasive techniques, and the *building owner* and/or client refuses to approve this, the *IQP* shall consider refusing to issue their *form* 12A, especially if some of the following risk factors exist:

- The building was constructed before 1992
- The building has had known recent works to install/change services (such as new plumbing or fibre optic cables)
- The building has regular changes of tenants who were likely to have run new services or altered fire separations
- The building is in a general state of disrepair and is poorly maintained

If an invasive inspection does not reveal any *critical defects*, further invasive inspections in subsequent years is not deemed necessary if the *IQP* has reasonable grounds to believe that any modifications to high-risk *fire separations* (including addition of new *service penetrations*) were carried out correctly.

The *building owner* should provide documentation such as schedules of passive firestopping, producer statements and photos to give this confidence.

<u>Suggestions for carrying out invasive inspections</u>

- For plasterboard ceilings which are not fire rated, engage a building contractor to cut a square hole and fit an access hatch (thus enabling future inspections).
- It is important to ensure that the plasterboard ceiling is not a *fire separation* (e.g. to the floor above) before inserting a non-fire rated hatch. This can be checked by referring to the building drawings and/or fire report or consulting with a *Chartered Fire Engineer*. If there is any doubt, install a fire rated hatch.
- For plasterboard to fire rated *fire and smoke separations,* consider drilling/cutting small holes and using an endoscope.
- To potentially avoid invasive inspections, try and time your inspections with maintenance work by other trades where, for example, ceilings may be removed.

6.1.8 Health and Safety considerations

Before beginning any inspection work, *IQP*s and *Building Owners* shall consider their duties under the Health and Safety at Work Act 2015 (for example refer s36, s37 & s45 for the duties of a PCBU and workers). A risk assessment is required, and all risks shall be removed 'so far as is reasonably practicable' as defined in s22.

Risks that *IQP*s and *Building Owners* may be exposed to during an inspection include (but are not limited to):

- Asbestos
- Electric shock (particularly if removing flush boxes or light fittings)
- Confined spaces
- Working at height (e.g. ladder use to access ceiling hatches or remove suspended ceiling tiles)

6.1.9 Fire and smoke rated doors

A fire door which allows the passage of fire or smoke can have a detrimental impact on the life safety of a building far exceeding that of *service penetrations* which are not adequately firestopped, simply due to the potential size of the opening.

The survey expectations for these elements are therefore higher than that given in the previous sections for *fire separation*s.

This code of practice requires the following doors to be checked as part of any *Assessment Survey* or *Annual Survey*:

- For multilevel buildings, ALL fire doors leading into the vertical safe path stairwells shall be checked, and at least one other fire door on each floor level.
- A random inspection of at least 10% of fire doors leading into other safe paths or main escape routes (includes doors leading into private residences). These shall be randomly inspected and recorded so within 10 years all doors have been inspected. If there are repeating defects within this 10% sample (e.g. gaps below the door leaf are commonly exceeding 10mm) then it is recommended to expand the survey to include all fire doors within the building.
- Similarly for a building with horizontal or staged evacuation, ALL fire doors dividing evacuation zones (generally within corridors) shall be checked for correct operation.

If not already specified on the *Compliance* Schedule, these checks shall include, as a minimum, all items as specified in one of the following standards:

- NZS 4520:2010 Appendix C, or
- AS1851:2012 (table 12.4.3.1 for hinged and pivoted doors or table 12.4.3.2 floor sliding doors)

Template checklists for these two standards are provided in Appendix B to assist with fire door inspections.

In the instance when a fire or smoke door assembly is not 'tagged' or 'badged' the opinion of a *Chartered Fire Engineer* shall be sought as to whether the door can be considered as providing the necessary rating on an 'as near as is reasonably practicable' basis.

If these checks are not currently specified in the *CS*, an application shall be made to the TA for a *CS* amendment to include these IMRs under s106 of the Act, with reference to NZS 4520:2010 Appendix C.

6.1.10 Recommended inspections for other fire rated elements

The following inspections are also strongly recommended for PFP systems which are not classified as *Specified systems*:

- Protection of exposed structural steel members (random, non-invasive inspection of at least 10% of structural elements)
- External fire rated walls of multi-level buildings (check plasterboard linings for holes, gaps, non-firestopped service penetrations)
- Underside of mezzanine floors and access stairs (again checking plasterboard linings for gaps, holes and non-firestopped service penetrations)

6.2 After your inspection

6.2.1 Record details of your inspection

For a building that is being assessed and inspected to this COP for the first time, it is recommended to record the locations of the inspections you're performing and what information you were relying on when planning your inspections (a template worksheet is included in Appendix B).

For any survey work, photographic records are strongly encouraged and should include:

- All locations of all *fire separations* inspected, even if no defects were found
- Close up photos of any discovered *critical defects* (as well as a wider context photo to help identify the location)
- All fire doors inspected (preferably including a label to positively identify the specific door)

There are several software packages available on the market, with mobile phone apps which can save considerable time recording these surveys and normally include the capability of marking up floor plans with a 'pin' or marker to identify where the photo was taken.

The following actions are also recommended (as discussed earlier in this document):

- Record the building information that is missing and could not be obtained, and if necessary, outline your interpretation of where the fire and smoke separations are located (seek expert advice from a *Chartered Fire Engineer* or *Passive Fire Consultant* to review your conclusions).
- Write your own IMR's based on the content of this document and/or the MBIE Compliance Schedule Handbook (and then apply to the TA for a CS Amendment under s106 of the Act). These IMR's shall list the assessed Building Category (A, B or C).
- In subsequent inspections, record any other PFP systems that you have inspected which are not *specified system*s (see section 3.2.3).

6.2.2 Recommended further actions on completion of inspection

The response levels given in the survey flow charts (figures 8-11) are listed below with recommended actions.

Level 1 Response	
Result	• *Non-critical defects* only found in some locations for a *risk category* A or B building, or • Any defects found in a *risk category* C building
Actions	• Advise *building owner* that all defects identified must be remedied in a timely manner • If a *Non-critical* defect continues for more than 12 months, then it is considered a *Critical defect* • If defects have not been remedied within 12 months, refer to Level 2 Response actions
Level 2 Response	
Result	• *Critical defects* which are not widespread in a *risk category* A building, or • *Critical defects* which may or may not be widespread in a *risk category* B building
Actions	• Engage a *Passive Fire Consultant* to conduct a full review of the building's PFP systems and specify those defects which shall be immediately rectified • BWOF/Form 12a may not be issued until these defects are remedied. • Advise *Building Owner* that remaining *non-critical defects* must be remedied before next year's inspection • Advise *Building Owner* to consult with their Insurer • If *non-critical defects* are not remedied within 12 months, BWOF/Form 12a may not be issued until these are remedied (unless advised otherwise by a *Passive Fire Consultant)*.

Level 3 Response	
Result	• Widespread *critical defects* found in a *risk category* A building
Actions	• Advise *Building Owner* in writing that they may be in breach of s116B of the Building Act. • Advise *Building Owner* to consult with their Insurer • Advise the *Building Owner* to immediately engage a *Passive Fire Consultant* to conduct a FULL, building wide passive fire review of the building and specify those defects which shall be immediately rectified. • BWOF/12a may not be issued until ALL *critical defects* are remedied • If *non-critical defects* are not remedied within 12 months, BWOF/Form 12a may not be issued until these are remedied (unless advised otherwise by a *Passive Fire Consultant)*. • Ask the *Passive Fire Consultant* to assess whether they believe the building is considered to be Dangerous as defined by s121 of the Act and whether they believe it is appropriate to escalate the issue by notifying the *Territorial Authority* and/or FENZ • If the *Building Owner* refuses to engage a *Passive Fire Consultant* to undertake a full building assessment or is otherwise uncooperative or unresponsive, immediately escalate the issue by notifying the *Territorial authority*. The advice of a *Chartered Fire Engineer* or *Passive Fire Consultant* (by the IQP) should be considered to support this escalation. • See further recommendations below for when an IQP is dismissed by their client.

6.2.3 Guidelines for remedial work

It is not within the scope of this document to offer guidance on how to specify and complete remedial works. This will ordinarily be done by a *Passive Fire Consultant* or *Chartered Fire Engineer* in collaboration with a specialist passive fire contractor, the *building owner, TA* and a possibly also a builder.

However, on completion of remedial works, to satisfy the *IQP* and *territorial authority* that the works have been completed in a compliant manner, and to the extent agreed, the following minimum documentation is expected to be provided:

- Floor plans indicating the location of the fire and smoke separations and the required fire rating of these separations.
- On these floor plans, marked locations of the individual firestopping work completed with a unique reference number or label.
- A schedule of the firestopping work completed with information as prescribed by Appendix B of AS4072.1, complete with reference number or label matching the location indicated on the floor plans
- Evidence of compliance for each firestopping system/solution installed (e.g. test report reference or suppliers' data sheet)

6.2.4 Recommendations for when an IQP is dismissed

In some cases, a client may choose to terminate the engagement of an *IQP* following an *Assessment Survey*, particularly when the survey identifies defects that will result in substantial remediation costs. This decision could be made in an attempt to find an *IQP* who will not conduct a thorough *Assessment Survey* and/or ignore the guidance in this document and still provide them with a *Form 12A.*

This could also be more likely to occur when the *IQP* withholds their 12A due to the extent of the defects discovered.

As discussed in section 5.3, the *IQP's* client may also refuse to pay for essential additional services (such as engaging a *Chartered Fire Engineer* to assist in identifying the location of fire separations).

In either of these circumstances, it is recommended that the *IQP* notify the TA of this and provides any relevant information about the condition of the PFP systems within the building and, if the decision was made to withhold the 12A, an outline of why this decision was made.

7.1 Acts and Regulations

Building Act 2004

Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005

Building (Forms) Regulations 2004

Building Regulations 1992 (Schedule 1 – Building Code)

Fire and Emergency New Zealand (Fire Safety, Evacuation Procedures, and Evacuation Schemes) Regulations 2018

7.2 MBIE Documents

Building Product Specifications (1st ed. July 2025)

The Verification Method C/VM2 (2nd ed. July 2025)

Acceptable Solution C/AS2 'Acceptable Solution for Buildings other than Risk Group SH' (2nd ed. July 2025)

Compliance Schedule Handbook (Amd.3)

7.3 Standards

AS1851:2012 "Routine service of fire protection systems and equipment"

AS1530.4:2014 "Methods for fire tests on building materials, components and structures. Part 4: Fire-resistance tests for elements of construction"

AS4072.1 - Components for the protection of openings in fire-resistant separating elements. Part 1: *Service penetrations* and control joints

AS1905.2:2002 "Components for the protection of openings in fire-resistant walls. Part 2: Fire-resistant roller shutters"

AS/NZS 1668.1:2015 "Fire and smoke control in buildings"

NZS 4232:1988 "Fire resisting closures"

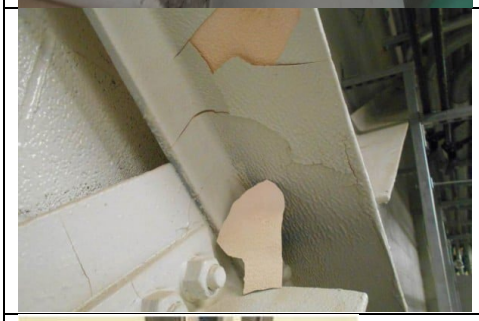
NZS 4520:2010 "Fire-resistant doorsets"

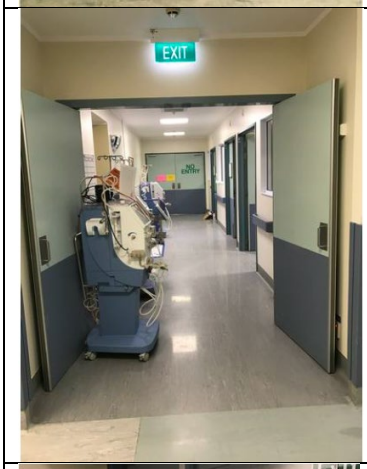
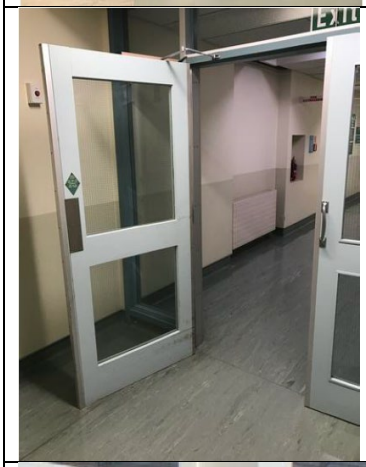
7.4 Practice notes, guidance documents and others

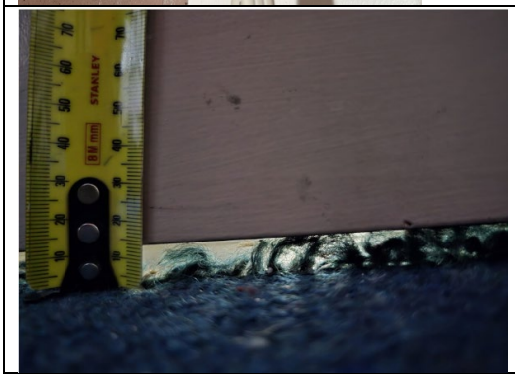
- Auckland Council Practice Note AC2226 Version 7 March 2015 (Applying the term as near as is reasonably practicable)
- Auckland Council Position Statement AC1825 v2 for acceptance of fire stopping
- Auckland Council Fire Protection Guide AC1826 v1
- SFPE NZ 'Construction Monitoring Guide' August 2021
- "Register of Passive Fire Protection Products" Issue 1 Revision 4 – Fire Protection Association of New Zealand (FPANZ)
- FPANZ Position Statement PFPS-01 Passive Fire Fundamentals Version 1.0 – Issued: 01/09/20
- FPANZ Position Statement PFPS-02 Fire and Smoke Stopping Methodology Version 1.0 – Issued: 07/08/20
- FPANZ Position Statement PFPS-04 Fire and Smoke Stopping Methodology Version 1.0 – Issued: 07/08/20
- FPANZ Code of Practice for the Specification and Application of Intumescent Coatings for the Fire Protection of Structural Steel Version 1.0 – Issued: 1/10/20

APPENDIX A – COMMON PFP SYSTEM DEFECTS

Photo	Comment
	Although popular, fire rated 'pink foams' are only tested and approved in a small number of cases and the widespread use of these products in a building indicates a level of ignorance when it comes to PFP systems. If this product is widely used, it should be assumed that most if not all systems will not perform adequately. *CRITICAL DEFECT*
	Large holes and openings in fire walls. *CRITICAL DEFECT*
	Large holes around service penetrations *CRITICAL DEFECT*
	A poorly applied intumescent pipe wrap or collar. *CRITICAL DEFECT*

	Oversized hole in concrete floor with collar applied. *CRITICAL DEFECT*
	Flaking intumescent coatings *CRITICAL DEFECT*
	Double leaf fire door that does not meet and creates a gap. *CRITICAL DEFECT*
	Damaged Intumescent *CRITICAL DEFECT*

	Damaged Smoke Seal *CRITICAL DEFECT*
	Wedged open *CRITICAL DEFECT*
	Insufficient clearance causes door leaf to be stuck open *CRITICAL DEFECT*
	Small areas of damage to intumescent coatings. *NON-CRITICAL DEFECT*

	Mastic poorly applied to cable penetration. *NON-CRITICAL DEFECT*
	Mastic poorly applied to gap around collars (not part of tested system), small gap exists between collars. *NON-CRITICAL DEFECT*
	Small gap at edge of steel flush box *NON-CRITICAL DEFECT*
	No sealant to small cable penetration *NON-CRITICAL DEFECT*
	Gap under fire door marginally exceeds 10mm *NON-CRITICAL DEFECT*

APPENDIX B1 – EXEMPLAR WORKSHEET FOR PLANNING PASSIVE FIRE PROTECTION INSPECTION

Worksheet for Passive Fire Protection (PFP) Inspection – SS15/3 & 15/5

SECTION 1: BUILDING AND INSPECTION DETAILS

Building Address:	
Compliance Schedule Number:	
Date of Inspection:	
Inspector (IQP) Name:	
Risk score total (see below)	
Building Risk Category (A, B, or C):	

		SCORE
Levels above ground (see note 1)		
9 floors or more	22	
4-8 floors	12	
2 or 3 floors	6	
single level	0	
Evacuation & Occupancy type (see note 2)		
Hospitals, Lawful detention	25	
Other Staged or horizontal evacuation	25	
All out - Elderly care	10	
All out - Sleeping accommodation	8	
All out - Early childhood education	6	
All out - Large crowd spaces	6	
All out - Awake and alert	2	
Alarm system		
None or manual call points only	10	
Domestic, non-interconnected smoke detection	8	
Full hard wired or interconnected heat or smoke detection	4	
Full sprinkler protection	0	
Means of escape		
Single stair	13	
Double scissor stair	6	
Two or more stairwells	4	
Single level building	0	

SCORE	BUILDING RISK CLASSIFICATION
> 24	Category A
14 – 24	Category B
< 14	Category C

SECTION 2: PRE-INSPECTION CHECKLIST

☐ Compliance Schedule reviewed and fire/smoke separations identified.
☐ Property file reviewed and drawings/fire report obtained from TA.
☐ Recent alterations, maintenance, or fitouts reviewed.
☐ Building Owner questionnaire completed (see Appendix C).
☐ Documentation of previous PFP inspections and repairs obtained.

SECTION 3: INSPECTION SCOPE SUMMARY

Summarise the scope of inspection below, including selected floors, types of separations inspected, and any known limitations.

SECTION 4: HIGH-RISK FIRE SEPARATIONS INSPECTED

Location (Floor/Area)	Type of Separation	Condition / Observations	Defect Category (if any)

SECTION 5: OTHER PFP SYSTEMS INSPECTED (OPTIONAL)

☐ Fire rated walls and ceilings (not specified systems)

☐ Structural steel protection

☐ Mezzanine floors and stairs

☐ External fire rated elements

Further Notes

SECTION 6: POST-INSPECTION ACTIONS

☐ Documented findings and defect categories.
☐ Informed building owner of required remedial actions.
☐ Updated inspection records and locations for future surveys.
☐ Form 12A withheld (if applicable) and TA notified.
☐ Recommendation to engage Passive Fire Consultant (if applicable).

Further Notes

APPENDIX B2 – EXEMPLAR WORKSHEETS FOR FIRE & SMOKE DOOR INSPECTIONS

The following is a proposed worksheet using NZS 4520 and the next 2 as using AS1851 as guidance. The choice of worksheet is determined by which standard is referred to for inspections in the Compliance Schedule. These are the minimum standard. However, it is recommend to develop you own worksheet which combines the both to allow you to use one worksheet for all of your inspections regardless of the standard referenced in the Compliance Schedule.

ANNUAL INSPECTION OF FIRE-RESISTANT DOORSETS – NZS4520				
Item No			**Results Pass/Fail**	**Comments**
	Door Clearances	Between the leaf and the top of any floor covering - not less than 3 mm and not more than 10 mm		
		Between the leaf and top of the floor covering: (a) Not more than 10 mm where there is no combustible floor covering (b) Not more than 25mm where there is a combustible floor covering present		
	Side-hung door, leaf to frame	Door leaves side-hung into rebated frames should be clear of the door frame and should have mean clearances, in the closed position, between the leaf and the head, and between the lead and each stile, of not more than 3mm		
	Double-acting doorsets	Clearances between the edges of the door leaf and the wall, floor, head, and frame should be not greater than that necessary for the operation of the doorset		
	Sliding doorsets	When closed, the door leaf of the sliding doorset should: (a) Overlap the clear opening by not less than 75 mm at each jamb and at the door head; (b) Have an average clearance between the face of the door leaf and the return of the frame or wall face within the area of required overlap at the top and sides of not more than 10 mm; (c) Have a maximum clearance at any point of 15 mm.		
	Latch handles	Where knobs are used to operate the latch bolt, the clearance between the surface of the knob and the face of the doorstop should be maintained at not less than 35 mm.		
		It is recommended that the latch handle is located between 900 mm and 1100 mm above the finished floor.		

	Travel-limiting devices	Side-hung or double-acting fire-resistant doorset should have one of the following: (a) buffers, or (b) stops, or (c) other travel-limiting devices		
	Counterweighting system for sliding doors	**Protection** The counterweights should be not less than 150 mm clear of the floor in the door-closed position. **Adjustment** The counterweighting systems should be as follows: (a) Where it is necessary to pass through the fire-resistant doorset to reach the required exit, the force required to achieve the following should not exceed 110 N: *i.* To move the door leaf from its closed position *ii.* To move the door lead from its stationary position after the release mechanism has operated *iii.* To operate the door lead through its full travel; (b) In other cases, the force required should be as follows: *i.* To move the door leaf from its closed and stationary position after the release mechanism has operated not more than 180 N *ii.* To operate the door leaf through its full travel (that is not more than 135 N)		
	C2.4 Final check	The fire-resistant doorset should latch satisfactorily from the fully open position and from any intermediate position, and closers should demonstrate satisfactory back-checking actions.		
		The metal label of the fire-resistant doorset should be checked that it is permanently fixed and the information on the label is legible.		

Side-hung doors

Item No	Item	Action required and Pass/Fail requirement	Result (Pass/Fail)	Comments
1	Location	Check relevant documents if fire doors in the building have been modified.		
2	Metal tags	Check that door leaves and door frames as tagged in accordance with AS 1905.1.		
3	Signage	Check that all required signage is applied, and that the location of the signage is compliant. Check that no non-required signage are installed.		
4	Clearances in the closed position	Check that dimensions of the gaps around the door leaf are in accordance with AS 1905.1 or the relevant test report		
5	Fittings and hardware	Check that all fittings and hardware that are installed on the fire door set are compatible with the fire door.		
6	Opening and closing forces	Check that the doors can be easily opened and closed in normal conditions and fire mode, considering any pressurisation systems within the building.		
7	Self-latching	Check that the door is self-latch on the closed position from the fully open position and from any intermediate position from any angle of swing taking into account any pressurisation systems within the building.		
8	Obstruction	Check for any signs of obstruction to the fire doors		
9	Handle and locking devices	Check handles and locking devices to make sure the fire doors are openable as required by the BCA. Check that locking devices does not prevent fire doors from self-latching.		
10	Orientation	Check the fire door is installed as per the manufactures requirement where the hardware fixing points, like the hinges, knobs and self-closers, are reinforced with metal plates.		
11	Door closers	Check that closers are in a good conditions and free from oil leakages.		

Side-hung doors (ct'd)

12	Seals (where applicable)	Check that installed door seals are approved for use on the door, and not damaged.		
13	Door leaves	Check the leaves for any visible holes, dents or significant damage.		
14	Door frames	Check that door stop dimensions are approved for the door type and FRL. Check the frames for any visible holes, dents or significant damage.		
15	Vision panels (where applicable)	Check that glass panel is fixed and approved for the door type, in sound condition and free from cracks and is installed as per the manufacturer's instructions.		
16	Fire-rated air transfer grilles or fire dampers (where applicable)	Check that the door type is approved for use with the fire-resistant air transfer grille or fire damper and is installed per the manufacturer's instructions.		
17	Multiple-leaf doors	Check that meeting stile astragals are correct for door type, installed as per manufacturer's instructions, are in good condition.		
18	Automatic closing doors	Test automatic closing doors to ensure the door closes satisfactorily upon power failure or detector activation.		

Sliding fire doors

Item No	Item	Action required and Pass/Fail requirement	Result (Pass/Fail)	Comments
1	Automatic closing	Test automatic sliding doors, to ensure the door closes satisfactorily upon power failure or detector activation.		
2	Location	Check relevant documents if fire doors in the building have been modified.		
3	Metal tags	Check that door leaves and door frames as tagged in accordance with AS 1905.1.		
4	Signage	Check that all required signage is applied, and that the location of the signage is compliant. Check that no non-required signage are installed. Check arrows indicating opening direction are fixed to each side of the door leaves.		
5	Clearances in the closed position	Check that dimensions of the gaps around the door leaf are in accordance with AS 1905.1 or the relevant test report.		
6	Opening force	Check that the doors can be easily opened and closed in normal conditions and in fire mode.		
7	Fittings and hardware	Check that all fittings and hardware that are installed on the fire door set are compatible with the fire door. Check that cables of the counterweight system are free from kinks and corrosion.		
8	Door leaf	Check the leaves for any visible holes, dents or significant damage.		
9	Door frame (where applicable)	Check the farmers for any visible holes, dents or significant damage.		
10	Multiple-leaf doors	Check that door leaves at meeting stiles are in proper alignment and comply with manufacturer's specifications.		
11	Wicket doors or personnel access doors	Check that wicket or personnel access doors operate satisfactorily in accordance with the side-hung door requirements, and in accordance with the manufacturer's test approval.		

APPENDIX C - BUILDING OWNER'S QUESTIONNAIRE

Please complete the following

BUILDING ADDRESS:

COMPLIANCE SCHEDULE NO.:

1. *Do you know where all the fire and/or smoke separations are located within your building? Can you provide drawings?*

   ……

   ……..

2. *Have you had new services (e.g. fiber optic cable, plumbing, security systems) installed within the building since the last BWOF was issued?*

   YES / NO (please circle) …. if yes

   a. *Have they installed services through fire separations? ……...*

   b. *Have the services been fire stopped?.....*

   If so, please provide details of who completed the fire stopping

   ……
   ……

3. *Have any other trades altered, added, changed or installed / altered services through fire separations since the last BWOF audit? (give details)*

   ……
   ……

4. *Have any fire rated doors been altered e.g. new hardware, hardware changed (give details and locations)*

   ……

5. *Have any air conditioning systems been added /altered?*

   ……

6. *Have you had any incidents of flooding or leaks in your building?*

   YES / NO (please circle) …. If yes, who completed the repairs, where were the repairs completed and were any *fire separation*s affected?

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7. *Have you had any new tenancy fitouts?*

   YES / NO (please circle) …. If yes, where and what was the extent of the fitout

   …….. and were any *fire separation*s altered or damaged

   …….

8. *Do you have a log in procedure for people entering the building including service/maintenance personnel for the building? Are we able to view it to check for maintenance companies etc….. YES / NO (please circle)*