

# The Importance of Passive Fire Protection Services



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## Why is Passive Fire Protection Important?

Passive fire protection measures help limit the spread of smoke and fire in buildings, potentially saving lives.

If a fire starts, passive fire protection measures will help contain the fire and smoke within the originating fire compartment of the building. Containing the fire at its point of origin will allow occupants to safely evacuate the area. Passive fire protection slows down the spread of fire giving occupants more time to evacuate and preserves a building's integrity, making fire-fighting easier and safer.

Structural fire protection and compartmentation are the cornerstones of passive fire protection. Incorporating passive fire containment measures into the fabric of the building will limit the spread and possible damaging effects from the fire.

Periodic inspections and maintenance of your passive fire protection systems ensures proper performance when required. Maintenance procedures are outlined in the **Australian Standard, AS 1851 – 2012 Routine service of fire protection systems and equipment.**

Through the correct installation of passive fire protection systems you:

- Increase the safety of the occupants
- Limit the spread of fire
- Protect building structure
- Protect assets
- Meet legal regulations





## About Bowers

Established over 100 years ago and working in the Passive Fire Protection industry since 1968, Bowers is a leading passive fire rating contractor operating nationally in the building, industrial, infrastructure and bushfire protection sectors.

With our Queensland based team, Bowers can assist you and your organisation with the following integrated installation and consulting passive fire protection services.

### INSTALLATION

- Fire and Smoke Dampers
- Fire Seals
- Blast Walls
- Lightweight Construction
- Bushfire Protection

### CONSULTING

- Technical Advice
- Compliance Audits
- Fire Safety Statements
- Certification

### Bowers Accreditation & Licences:

- FPAS – Fire Protection Association Accreditation Scheme
- QBCC – Queensland Building and Construction Commission
- Greencap CM3
- Range of Fire Rated Products used in the industry



## Why use Bowers?

- Bowers is accredited with the Fire Protection Association Accreditation Scheme (FPAS) and the Queensland Building and Construction Commission (QBCC) and is an accredited applicator of a range of approved products to the relevant Australian Standards.
- Bowers is independently risk accredited by Greencap Cm3.
- Bowers is an accredited applicator for a range of fire rated products used in the industry.



<p><b>50+</b> years in the Passive Fire Protection industry</p>	<p><b>25+</b> Employees with 10 years average service</p>	<p><b>90%</b> Repeat Clients</p>	<p><b>100%</b> of our work is certified to the relevant Building Codes and Standards</p>	<p><b>1500+</b> projects and audits successfully completed annually</p>
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## Installation of Fire and Smoke Dampers

Whenever an air conditioning duct passes through a fire (or smoke) barrier, it must have a device installed at the point of penetration to prevent the passage of fire (or smoke) through the duct from one side to the other. These devices are called fire (or smoke) dampers. They are essentially “gates” within the ductwork that are left open during the normal operation of the air conditioning system.

However, upon activation, in the event of a fire, the damper closes to prevent the passage of fire and smoke between compartments. Like any fire protection measure, these devices should be installed and maintained by specialist passive fire protection contractors. Their initial installation must be certified to comply with the National Construction Code (formerly the Building Code of Australia) and various Australian Standards.

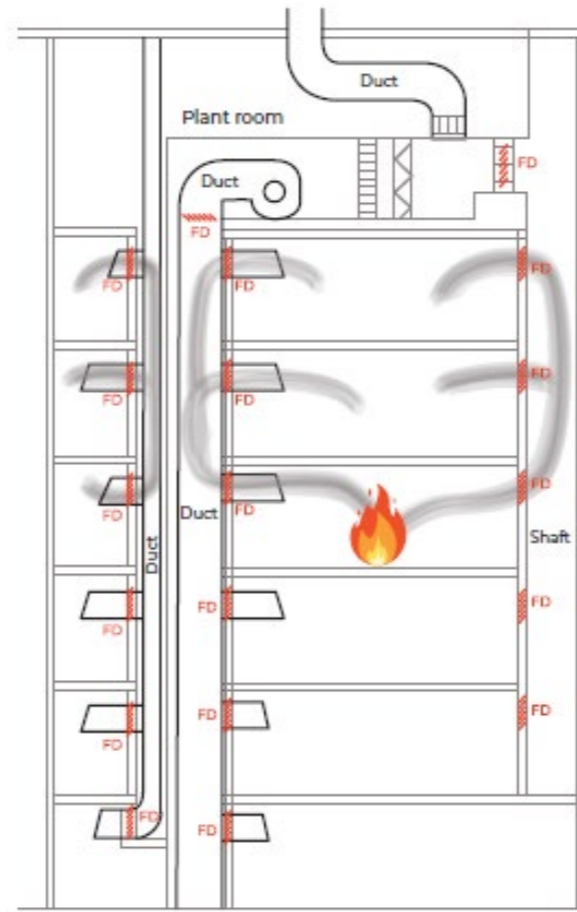
This certification is vital as it forms part of the documentation required to enable the building to be occupied. The installation of the fire / smoke dampers requires co-ordination between the contractors installing the ductwork and the ones building the barrier.

The penetration through which the ductwork passes, must be constructed in a very specific manner. The damper must be correctly affixed within that penetration. Then the ductwork must be correctly connected to the damper using a special “breakaway joint”. This joint is a special connection that permits the ductwork to collapse in the event of a fire, without pulling the fire damper out of the penetration.

Once the fire damper is correctly installed, access must be provided to enable it to be routinely inspected and serviced. Typically, an access panel is installed within the ductwork to enable this.

Fire and smoke dampers must be serviced to ensure their correct operation in the event of a fire.

In Australia, the current standard prescribing the maintenance procedure is AS 1851-2012.



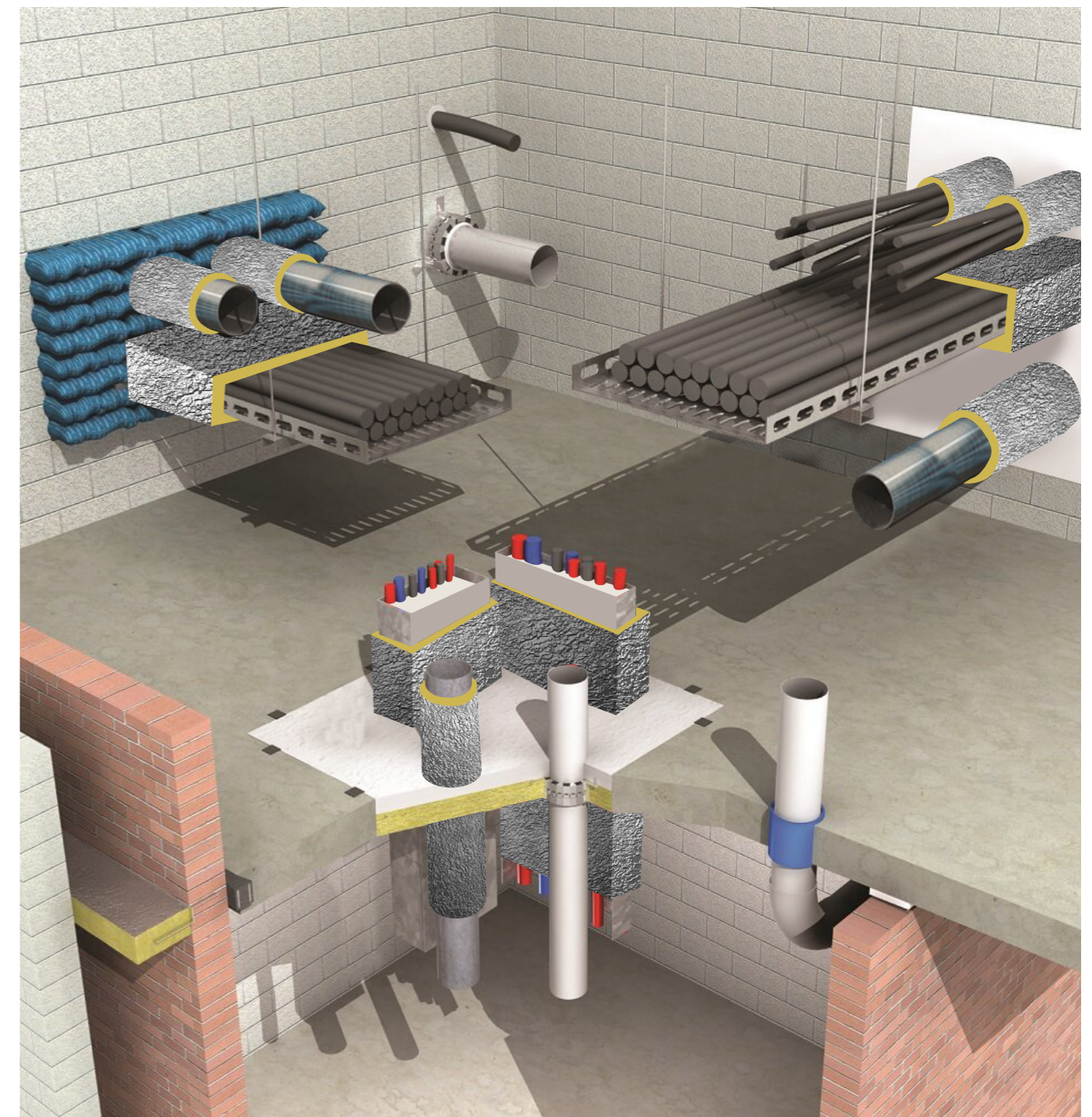
## Fire Seals

Fire seals are used to protect openings in fire-resisting components of buildings and are extremely important in restricting the spread of fire throughout the property.

Fire seals are best defined as systems installed to openings that prevent fire, smoke and heat from passing through the building. Their main goal is to protect building occupants and can also be used to protect the structure of the property, preserve its infrastructure and safeguard adjacent properties.

Bowers specialises in the fire sealing of services which penetrate fire rated elements. These include hydraulic and electrical services. Risk occurs when these services pass through the fire rated elements without adequate fire protection, potentially exposing the building to the spread of fire between fire compartments.

Building compliance and certification is only valid when the choice of passive fire sealing system matches the tested prototype.



## Routine service of fire protection systems and equipment

The maintenance procedure assesses the installation of the fire damper, ensures there is suitable access to maintain it and confirms that it has not been damaged or deteriorated to a point where it cannot function.

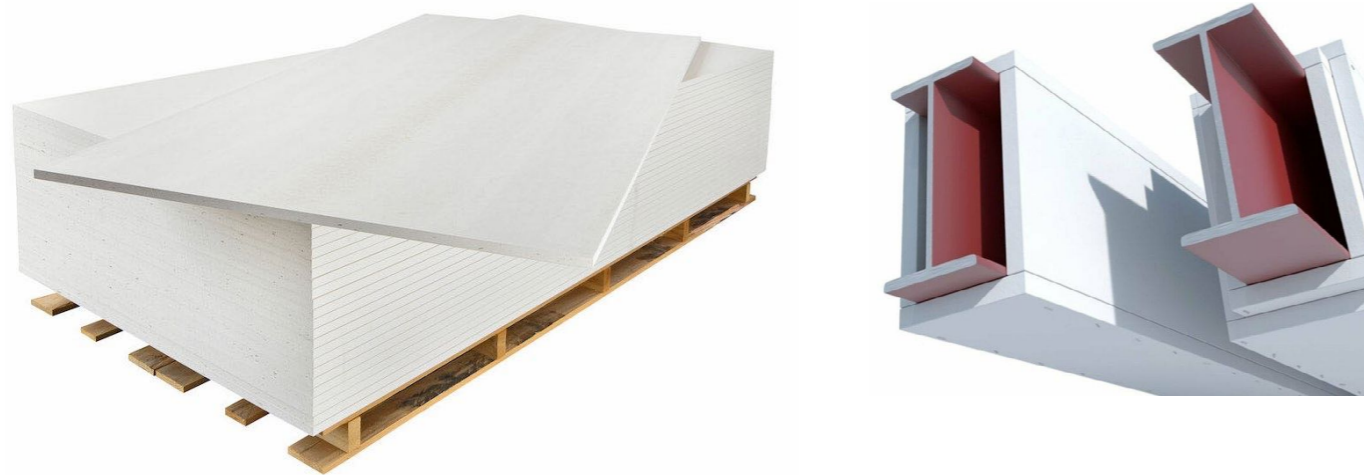
**As a minimum, 20% of a building's fire (and smoke) dampers must be inspected annually so that over the course of 5 years, they have all been assessed.** It is vital this annual maintenance inspection be conducted by an experienced contractor able to interpret all the requirements of the National Construction Code, Australian Standards and product manufacturer's guidelines.

## PROMATECT® XS

PROMATECT® XS is a high performing fire protective board, specially designed for the fire protection of structural steel elements. Combining high fire protection performance and easy installation, Bowers offers PROMATECT® XS Next generation hybrid board technology that has only just been released in Australia.

The benefits are twofold including:

- Low board thickness needed for any given fire protection.
- Easy installation with staple fixings and no glue or filler.
- Suitable for semi-exposed external conditions.



## Bushfire Protection

Bowers provides bushfire protection systems for homes and other structures located in bushfire zones classified as "Flame Zone" areas.

Following the devastating Victorian Black Saturday bushfire fires in 2009 and the subsequent Victorian Royal Commission, the new Australian Standard AS3959 -2009 was created to effect changes to planning regimes for greater bushfire protection.

Bowers, being the exclusive distributor of Promat's Bushfire Roof and Wall Systems in NSW, has successfully worked with home owners, roofing contractors, and builders over the past 10 years to provide BAL-FZ (flame zone) compliant solutions. These solutions are tested to AS1530.8.2 (2007) and meet the requirements of the Rural Fire Service to protect property against the direct impact of a bushfire.



## Blast Walls

Bowers is a recognised approved installer of DURASTEEL® systems in Australia.

DURASTEEL® offers blast protection of up to 200 kPa and Fire Resistance Levels (FRLs) of up to 4 hours. It is suitable for use in hydrocarbon fire applications as well as typical cellulosic (building) fire applications; combining, strength, impact resistance and durability with exceptional fire resistance.

Installed as mechanical ventilation ductwork, walls, or ceilings, DURASTEEL® systems have been successfully used on rail and metro projects. Other uses include military facilities, commercial buildings, substations, pharmaceutical and petrochemical plants.

## Lightweight Construction

Lightweight construction is used to describe the application of intumescent coatings, fire spray or the construction of fire rated bulkheads and enclosures. It can also be used to describe fire rated walls and ceilings constructed from plasterboard or similar materials.

Bowers uses fire rated boards specially designed for use in lightweight construction applications.

Typically, we construct fire rated enclosures around services. There are many products suitable for this use and Bowers' expert knowledge ensures a fully compliant and certified system is installed.

## Consulting

### Technical Advice:

Bowers can provide specialist advice in the early stages of design to clients. This includes technical advice, buildability, costing and programming advice to enable optimal compliant solutions to be developed for builders and building services work as well as building owners. We work closely with Building Certifiers and Fire Engineers in order to optimise strategies for all types of assets.

### Fire Safety Statements and Certification:

Annual Fire Safety inspections are required for multi-unit residential developments, commercial or industrial buildings. These statements need to be submitted to Councils or relevant fire authorities. They ensure the fire safety systems are maintained correctly and will operate as intended. Bowers is one of the few companies in Australia with a dedicated team of highly trained and experienced passive fire auditors.

### Compliance Audits:

Bowers specialises in the annual maintenance inspection and assessment of passive fire systems. Clients benefit from the development of passive fire maintenance registers that can be used for maintenance planning and asset management.

Current service agreements cover the following sectors:

- Building
- Industrial
- Infrastructure



## Case Study: The Wesley Hospital, Western Annexe

### SECTOR:

Building (Health)

### CLIENT:

The Wesley Hospital

### PROJECT COMPLETION:

November 2019

### VALUE:

\$220,000

### ADDRESS:

451 Coronation Drive,  
Auchenflower QLD

### PROJECT OVERVIEW:

The Wesley Hospital is one of Australia's iconic and largest private not-for-profit hospitals. Following an onsite audit of fire dampers and fire seals, Bowers was engaged to carry out all rectification works within a live and fully operational hospital.

### SERVICES OFFERED:

Bowers initially conducted a full audit of the fire walls, floors, and ceilings of the Western Annexe section of the hospital and were subsequently engaged to conduct all rectification works.

All works were completed within a live, sensitive hospital environment, covering multiple departments. Minimal disruption and 100% safety to staff and patients was critical, as was site cleanliness and hygiene. With an emphasis on planning and communication, Bowers worked co-operatively with the Hospital Maintenance Engineers and Fire Safety Manager ensuring a seamless project outcome. Bowers' highly experienced auditors completed a thorough audit of the Western Annexe and our experienced operational team, with their understanding of live hospital environments, were instrumental to the project running smoothly. Bowers' experience of working in a live hospital was invaluable. The Hospital Engineers and Fire Safety Manager were extremely impressed by Bowers' communication, attention to detail, professionalism and planning, ensuring overall project success.



SHERATON GRAND MIRAGE RESORT, GOLD COAST



BLAST WALL INSTALLATION AT TEYS AUSTRALIA, ROCKHAMPTON

## Case Study: Sheraton Grand Mirage Resort, Gold Coast

### SECTOR:

Building / Hotels

### CLIENT:

Airmaster Australia

### PROJECT COMPLETION:

March 2018

### VALUE:

\$250,000+

### ADDRESS:

71 Sea World Drive,  
Main Beach, Gold Coast

### PROJECT OVERVIEW:

In the lead-up to hosting the 2018 Commonwealth Games Federation members and officials, the resort tendered an upgrade of fire dampers in each of the 284 rooms and 11 suites, service rooms and resort corridors. Bowers was engaged by Airmaster Australia to carry out the works within a limiting 26-week timeframe.

### SERVICES OFFERED:

Bowers undertook the replacement of all fire dampers in the tender specifications to comply with the relevant Building Codes and Australian Standards.

In addition to completing the project within the timeframe, it was critical works did not impede the resort's daily operations. The resort was fully operational with occupancy rates upwards of 80%.

Carefully curated planning and communication with the hotel reservation and maintenance teams enabled Bowers to meet the requirements of the project while minimising disruption to the Resort's operations. Minimal work noise was only permitted during certain hours to ensure the comfort of guests. The client and resort management were extremely happy with the project which was completed on time and within budget. Bowers' communication, familiarity of working in fully functioning hotels, as well as their expertise, ensured a successful project outcome.

## Case Study: Teys Australia, Rockhampton

### SECTOR:

Industrial (Meat Processing)

### CLIENT:

Tey Australia, Rockhampton

### PROJECT COMPLETION:

June 2017

### VALUE:

\$239,000

### ADDRESS:

Lakes Creek Road,  
North Rockhampton

### PROJECT OVERVIEW:

Following an annual insurance inspection, a Teys Rockhampton transformer bay which supplies power to the entire site, was identified as having no fire or blast measures installed. This posed a potential risk of a transformer chain reaction fire event, which could result in production loss and damage.

### SERVICES OFFERED:

Scope of works included the supply, installation, and certification of 13 insulated Durasteel® partitions located between each of the transformers and the adjacent building. Each partition providing a 3-hour fire resistance level (FRL) and 2kPa blast rating.

Given the Queensland location, Bowers needed to source and coordinate local suppliers and contractors. Pre-operation site inspections and pre-planning with the client, multiple contractors, and suppliers was critical to project success. Bowers worked closely with a local steel fabricator and crane operator to prefabricate all partition framing and bracing. This enabled finished frames to be craned safely into position and firmly anchored in place. This construction approach effectively halved the amount of time installing on site and the associated power outages / isolations required.

The project was completed 2 days ahead of schedule and the quality finish Bowers provided, exceeded client expectations. Since 2017, Bowers has completed further installations of insulated Durasteel® partitions to transformer bay areas at Teys Rockhampton and Biloela sites.



RYDGES ESPLANADE RESORT CAIRNS



## Case Study: Rydges Esplanade Resort Cairns Fire Seal Repairs

**SECTOR:**

Building / Hotels

**CLIENT:**

Rydges Esplanade Resort Cairns

**PROJECT COMPLETION:**

December 2020

**VALUE:**

\$0.2M+

**ADDRESS:**

209-217 Abbott Street, Cairns

**PROJECT OVERVIEW:**

Rydges Esplanade Resort with both its guest rooms and serviced apartments is a tourism and accommodation mecca in the heart of Cairns that overlooks the Coral Sea. Bowers were engaged to repair fire seal defects – providing all labour and materials required.

**SERVICES OFFERED:**

Bowers completed fire sealing to service penetrations throughout the entire resort ensuring compliance with all WHS requirements, including COVID-19 safe practices. Bowers provided certification and a photographic report of all completed work including over 1,200 separate items.

Being Cairns' premier and bustling resort, Bowers were required to complete the work with minimal disruption to the resort's daily operations. Additionally, Bowers carefully managed the logistics of getting materials and labour from the Gold Coasts to Cairns.

The client was extremely happy with the outcome and the standard of fire safety works completed by Bowers. Bowers worked closely with the client adopting strong and constant communication to ensure works did not impede with the resorts' daily activities. Bowers' understanding of working within a live operational resort while maintaining 100% safety of all guests, staff and the neighbouring community was paramount to the project's success.



