

The Importance of Vermiculite Fire Spray





VERMICULITE FIRE SPRAY APPLIED AT CAMDEN SYDNEY RECYCLING PLANT

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What is Vermiculite Fire Spray?

Vermiculite Fire Spray is a lightweight coating that provides very efficient fire resistance with minimal thickness to concrete slabs, mechanical ductwork, steel beams and columns, metal floors and roof decks.

Vermiculite Fire Spray is a mineral based industrial coating that may contain vermiculite, gypsum, cement, perlite or other similar materials.

Often considered the most cost-effective way of protecting structural steel on projects where large amounts of steel must be fire protected, Vermiculite Fire Spray is suitable for both internal and external applications.

In the instance of a fire, Vermiculite Fire Spray slows the heating of the steel allowing it to maintain its load-bearing capacity for up to four hours.

Vermiculite Fire Spray can also be used to create a physical barrier between fire compartments.

The application of Vermiculite Fire Spray is a highly specialised skill and Bowers' Fire Spray department is extremely experienced in this process. With expert project management, we can offer the most appropriate solutions for all your needs in this area. All works are guaranteed and certified.



VERMICULITE FIRE SPRAY APPLIED AS PART OF WATER RECYCLING PLANT UPGRADE

Why use Bowers?

Bowers is a specialist applicator of Vermiculite Fire Spray having completed thousands of projects. Our lengthy project portfolio and extensive experience makes us a leader in the application of Vermiculite Fire Spray. Bowers have been working as a passive fire rating contractor for over 50 years and our experience means we:

- Are methodical in our site preparation, ensuring correct protection to surrounding area and straight edge masking to achieve a clean and professional finish.
- Ensure the correct coverage of Vermiculite Fire Spray is applied that is fully compliant with Australian Standards.
- Offer flexibility to work around your trades and services and can schedule works in stages if required.
- Are highly efficient and professional resulting in a clean finish, tidy work site with no over spray on surrounding surfaces.
- Schedule works to meet your required construction programme.
- Can work off the grid and provide the required services and power, if required.
- Are experienced in working in live environments and offer detailed planning and staging of works to minimise disruption.
- Provide carefully considered materials handling and daily communication forms part of Bowers essential mandate for our team of applicators.
- Have highly skilled applicators performing works with a high level of supervision whilst coordinating works with other trades on site.
- Provide certification for the application of Vermiculite Fire Spray.



Bowers' Services

- Bowers' experienced team can recommend the best Vermiculite Fire Spray solution for your project.
- Bowers is licenced with the Fire Protection Accreditation Scheme (FPAS) and is an accredited applicator of a range of approved products to the relevant Australian Standards.
- We are also independently accredited by Greencap Cm3.
- **BOWERS IS AN ACCREDITED APPLICATOR FOR A RANGE OF FIRE RATED PRODUCTS USED IN THE INDUSTRY.**

Bowers offers comprehensive services and delivery of Passive Fire Protection including Vermiculite Fire Spray across various sectors. Its offering includes:

- Vermiculite fire spray
- Intumescent coatings
- Audits
- Compliance reports
- Rectification of existing passive fire protection systems
- Installation of new passive fire protection systems
- Certification of installed systems
- Technical advice

50+

years in the Passive Fire Protection industry

25+

Employees with 10 years average service

90%

Repeat Clients

100%

of our work is certified to the relevant Building Codes and Standards

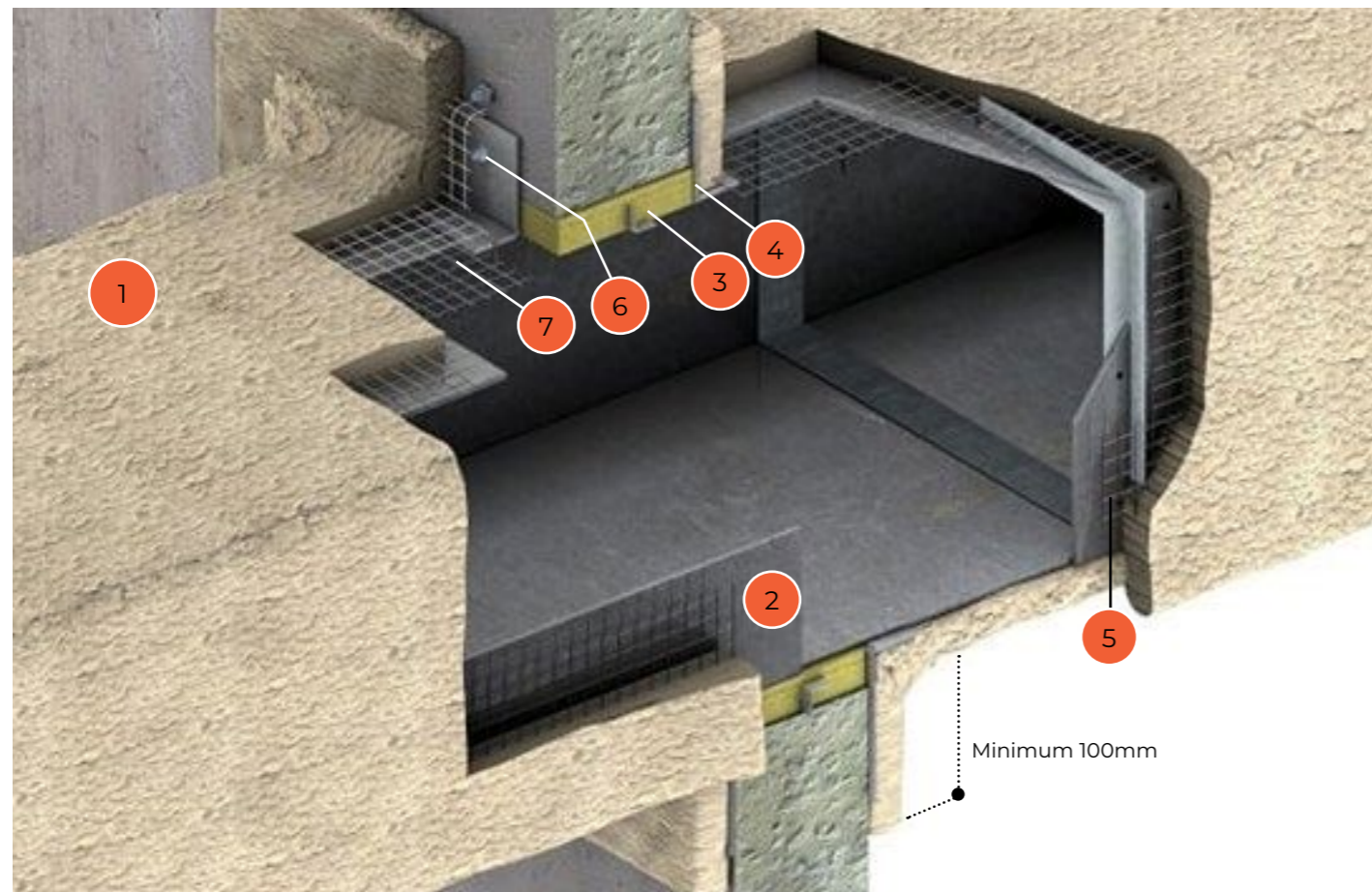
1500+

projects and audits successfully completed annually

Vermiculite Fire Spray for Steel Air Duct Fire Protection

Penetration Sealing System

Where the duct penetrates the compartment wall, mineral wool is tightly packed into the gap between the duct and the building element. Steel angles 11mm x 50mm x 1mm thick are fixed around the perimeter of the duct and to the wall. See drawing for details.



- 1 PROMASPRAY® P300 around galvanised steel duct
- 2 Galvanised steel duct
- 3 Mineral wool tightly packed into aperture between substrate
- 4 100mm x 100mm x 1mm, steel angle fixed to both the duct and the surrounding building element
- 5 Square wire mesh 25mm x 25mm x 1mm
- 6 M6.5 x 25mm steel masonry anchors anchor bolts at nominal 200mm centres
- 7 M4 x 25mm self-tapping Teks screws at nominal 200mm centres

VERTICAL DUCTS

The construction of the vertical system is the same as the horizontal, but with the following variations;

- The duct must be supported at each floor level so that the weight of the duct is taken by the floor. The penetration seal must not be compromised
- If the distance between floors is greater than 5 metres, then intermediate supports must be fitted

“Bowers provides practical and fully compliant solutions to all passive fire rating issues. We pride ourselves on our technical knowledge and our capability to deliver over 1500 projects and audits annually to our wide and varied client base.

Dominic Neate, Managing Director

VERMICULITE FIRE SPRAY APPLIED TO A NEWLY BUILT 8,830M² DEXUS INDUSTRIAL WAREHOUSE COMPLEX



Case Study: Water Recycling Plant Upgrade, Vermiculite Fire Spray

SECTOR:

Infrastructure (Water Recycling)

CLIENT:

Tallai Project Management

PROJECT COMPLETION:

May 2023

ADDRESS:

West Camden, NSW

PROJECT OVERVIEW:

Sydney Water is currently upgrading the West Camden Water Recycling Plant (WRP) to double its treatment capacity and to service 176,000 people in the catchment. Part of the upgrade includes constructing four Membrane Bioreactors (MBRs) to treat the wastewater to a very high quality. Bowers was engaged by Tallai Project Management to deliver the application of Vermiculite Fire Spray across 2 stages, supporting the upgrade.

SERVICES OFFERED:

Bowers' highly specialised team methodically applied Vermiculite Fire Spray to structural steel beams, across 2 stages. Each stage needed to be completed within a 7-day period, starting with the ground floor, and followed closely with Level 1. Vermiculite Fire Spray was the preferred material as it is designed to insulate the steel and prevent it from yielding under extreme heat and providing a 4-hour fire rating (240/-/- FRL).

Key challenges included ensuring each stage was completed within the client's 7-day mandate, inclusive of 2-3 days site preparation, which included the protection to the walls and floor and straight edge masking to the underside of the slab. Additionally, the site did not have any access to power.

Careful planning and preparation by Bowers ensured we were able to schedule the work in accordance with the client's stringent schedule. Bowers were proactive to organise additional provisions, including a power generator. By being methodical in their planning, the team successfully prepared the site and applied the correct coverage of Vermiculite Fire Spray in a timely manner and most importantly ensured compliance with Australian Standards.

The client has been very pleased by the efficiency and professionalism of the Bowers team, who completed the project on time and within budget. Careful planning ensured a seamless process, and the spray application was impeccable resulting in a clean finish. The site was left in a tidy manner with no over spray on surrounding surfaces.



Case Study: Shark Park, Vermiculite Fire Spray

SECTOR:

Building (Stadium)

CLIENT:

Parkview Constructions

PROJECT COMPLETION:

2023

ADDRESS:

Woolooware, NSW

PROJECT OVERVIEW:

Shark Park, notably the home ground of the Cronulla Sharks, is a 20,000 capacity Rugby League Stadium in the southern Sydney suburb of Woolooware. Bowers recently completed Stage One of a three-stage project, applying Vermiculite Fire Spray to 3,000sqm of structural steel supporting the stadium's three-tier VIP seating.

SERVICES OFFERED:

Bowers' highly specialised team applying Vermiculite Fire Spray to structural steel supporting the Ground Floor, Level 1 and Level 2 of the reserved seating area. This is designed to insulate the steel and prevent it from yielding under extreme heat. Stage 1 was completed by a 2 person team in under 6 weeks with all works guaranteed and certified.

This large scale project required all of Stage 1 works completed within a live stadium environment, during the busy NRL season. Detailed planning and staging of works was imperative to the success of the project and ensured the Stadium's daily operations continued uninterrupted. Material handling considerations and daily communication with stadium staff formed part of Bowers' essential mandate. Works were quarantined from all operational areas of the Stadium and Bowers' highly experienced applicators thoroughly masked up and prepared the spray area. Scrupulous precision and equipped with their own purpose designed fire spray equipment, resulted in an incredibly tidy finish with no residue spray in unwanted areas.

The client has been extremely pleased by the results of Stage 1 works and the nominal disruption caused during the process. Bowers experience assures the appropriate fire resistance that meets Australian Standards, guaranteed.



Case Study: Dexus Industrial Complex, Vermiculite Fire Spray

SECTOR:

Industrial (Warehouse)

CLIENT:

Richard Crookes Constructions

PROJECT COMPLETION:

May 2020

ADDRESS:

Rydalmere, NSW

PROJECT OVERVIEW:

Bowers were engaged by Richard Crookes Constructions to ensure a newly built 8,830m² Dexus Industrial warehouse complex (offering five tenancies with two storey offices and a basement carpark) met the mandatory four hour fire rating of both structural steel columns and linear gaps along a fire wall.

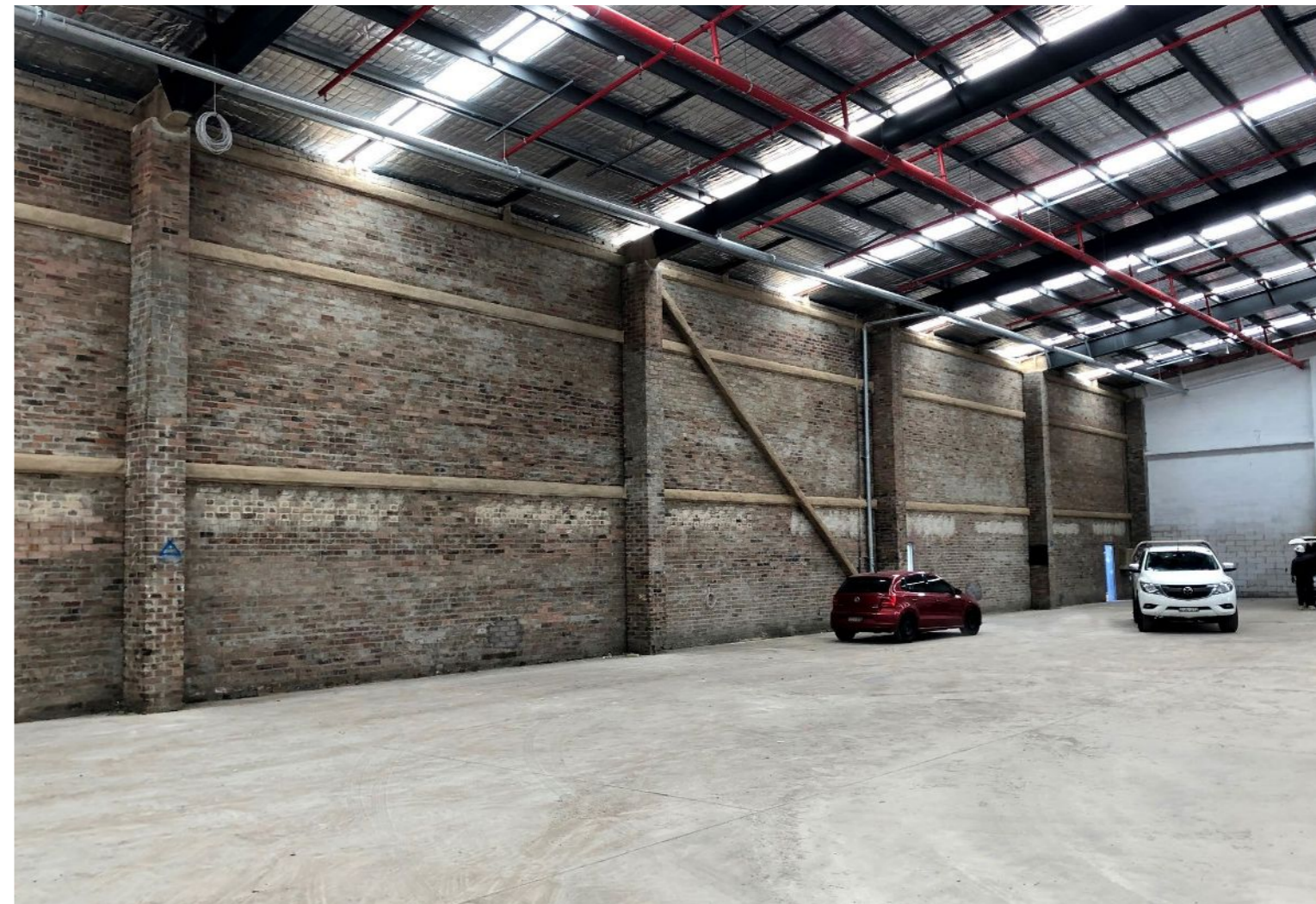
SERVICES OFFERED:

Scope of works included application of fire spray to structural steel and installation of fire rated batt systems to penetrations.

A required four hour fire rating is rare and infrequent. As such, specialised systems and applications are essential to ensure 100% compliance.

Bowers' thorough product knowledge ensured the best solutions were applied to achieve the stringent four hour fire rating compliance. Just as important as functionality, was the aesthetics and the fire spray was expertly applied by Bowers' highly competent fire spray applicators using straight edge masking. In some cases the columns were eight metres high, requiring specialised height access. Bowers' applicators are highly trained in the use of elevated work platforms making ease of a potentially challenging situation.

The works were completed efficiently and the required finish on the fire spray was a success with the client being thrilled by the overall project outcome.



Case Study: Industrial Warehouse, Vermiculite Fire Spray

SECTOR:

Industrial Development

CLIENT:

Prime Projects

PROJECT COMPLETION:

September 2023

ADDRESS:

Southern Distribution Centre

PROJECT OVERVIEW:

In Alexandria a dynamic new industrial landscape of warehouses and offices is emerging. Prime Projects are completing the repurposing and repositioning of an existing industrial asset for Goodman, namely Southend Lane. Bowers was engaged by Prime Projects to deliver the application of Vermiculite Fire Spray across 9 hybrid warehouse and office units, each spanning 1,765-2,963sqm.

SERVICES OFFERED:

Bowers' specialised team carefully applied Vermiculite Fire Spray to the building's Y-frame structural beams that were retained, along with the carefully preserved brickwork for its rich, textural character. Vermiculite Fire Spray was the preferred material as it is designed to insulate the steel and prevent it from yielding under extreme heat and providing a 4-hour fire rating (240/-/- FRL).

Given the project's aesthetic of architecturally inspired 'woolsheds', a clean finish was required and no over spray permitted. With a premium 12m high clearance warehouse space, equipment planning, and site preparation was critical. Time was of the essence and Bowers had a limited window to complete the project allowing the client to continue the next phase of development.

By being methodical in their planning, the team successfully prepared the site and applied the correct coverage of Vermiculite Fire Spray in a timely manner and most importantly ensured compliance with Australian Standards.

Careful planning ensured a seamless process. The spray application was immaculate with no over spray on surrounding surfaces. Bowers' level of service saw the team consistently being punctual and diligently tidied up at project completion. The result successfully supports the client's goal of creating warehouse and office spaces that merge contemporary with an edgy industrial finish.



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