

# Case Study



**boardex**  
exterior sheathing

## Boardex – Residential Property on Whale Beach

In the face of the stringent demands imposed by constructing in a BAL-FZ designated area, this project in Whale Beach NSW sought an innovative approach. The use of Trafalgar's FyreROOF system, prominently featuring Boardex, stands as a testament to overcoming the challenges inherent in bushfire-prone construction with advanced material technology.

### Project Description

The project, undertaken by NL Celtic Construction, was a residential build located in the bushfire-prone area of Whale Beach, NSW. Tasked with meeting BAL-FZ requirements, the construction needed materials that ensured safety, compliance, and durability, amidst the environmental and regulatory challenges of such high-risk areas.



### Challenges

#### Compliance Complexity

Navigating the maze of compliance with AS 3959-2018 standards for BAL-FZ construction required materials that not only offered fire resistance but were also environmentally and health-conscious.

#### Material Workability

Typical bushfire-resistant materials are known for their heaviness and difficulty in installation, presenting a significant challenge for a team new to bushfire construction.

#### Chemical Hazards

Commonly used materials in the sector pose health risks due to chemical content, necessitating a safer alternative.

#### Unexpected Humidity

The construction period coincided with record high humidity levels in NSW, elevating the risk of accelerated mould growth within the building structure.

### Solution



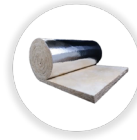
**Boardex:** Selected for its rigidity, vapour permeability, and ease of use, the 12.5mm thick board with orange fibre matt face was pivotal in meeting fire resistance and moisture management needs.



**T-Board:** Complementing Boardex, this foil-faced insulation board enhanced the thermal performance of the structure, crucial for energy efficiency.



**T-Stop:** A polyurethane sealant, ensuring all joints and seams were effectively sealed against moisture ingress.



**T-Rock:** Thermal wool blanket insulation added another layer of thermal resistance, fortifying the building against both fire and cold.

## Benefits



### Exceptional Fire Resistance:

Boardex's fire resistance capabilities are unmatched, meeting and exceeding the requirements for BAL FZ areas. Its compliance with AS 1530.8.2, AS3959 and AS 1530.4-2014 standards assures top-tier protection against bushfires, a critical advantage for buildings in fire-prone regions like Whale Beach.

### Ease of Installation (no powertools needed):

Boardex lightweight property significantly reduced the logistical challenges of handling and installation. Its capacity for being easily cut and shaped on-site negated the need for heavy machinery, simplifying the construction process. The material's ease of installation and minimal maintenance requirements make Boardex a cost-effective solution for both short-term construction and long-term building management.

### Weather and Mould Resistance:

With the ability to withstand external exposure for up to 12 months, Boardex offers exceptional durability and weather resistance, ensuring construction can progress without interruption, regardless of climate conditions. In a year marked by high humidity, Boardex's vapour-permeable yet water-resistant properties prevent moisture accumulation and mould growth, ensuring buildings remain healthy and structurally sound.

### Sustainability:

Boardex aligns with sustainable construction practices. It is a low carbon emission product and free from crystalline silica, contributing to a healthier environment without sacrificing performance.



## Benefits Continued

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### Thermal Insulation and Energy Efficiency

BoardeX contributes to a building's thermal insulation, meeting stringent energy efficiency requirements. This leads to reduced energy costs and a smaller carbon footprint.

### Trafalgar Support:

Throughout the project, Trafalgar provided unparalleled support, from supplying materials to offering expert advice and site visits. This assistance was instrumental in navigating technical challenges and ensuring the project's success.



## Conclusion

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By centering on the technical attributes and performance of the FyreROOF system, particularly BoardeX, this case study aims to offer a comprehensive understanding of its advantages in addressing the multifaceted challenges of bushfire-prone construction. The Whale Beach project illustrates the system's capability to meet stringent standards, promote ease of installation, and ensure environmental and health safety, making it a compelling choice for consultants and builders alike.