

CASE STUDY- Part 2

FORMA & CONTRA BY BUILDFORM

FyreBOX Cast-In

Trafalgar's FyreBOX Cast-In is a versatile multi-service passive fire penetration system that can be directly cast into building floor slabs. It is designed to prevent the spread of fire through service penetrations while minimizing the space required for riser shafts and cupboards.

Project Description

The CONTRA & FORMA project, executed by Buildform, successfully utilized Trafalgar's FyreBOX Cast-In. Designed by renowned architects Turner Studio, this building consists of 100 apartments. The extensive land area allowed for the creation of landscaped spaces on the ground, upper ground, and rooftop, providing residents with exceptional communal areas. Additionally, the building incorporates 700m² of retail tenancy and 153 car spaces.

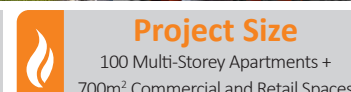
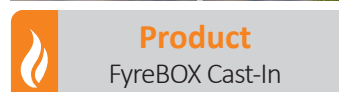


Benefits of Using FyreBOX Cast-In in the CONTRA & FORMA Project:

- **Replaces fire rated risers:** The FyreBOX Cast-In offers a practical alternative to fire rated risers, allowing non-rated risers to be built without the need for fire stopping at every floor. This simplifies the construction process and eliminates the use of traditional fire stopping methods at every floor of the building.
- **Reduces riser footprint:** By replacing fire rated risers, the FyreBOX Cast-In minimizes the required space for risers, resulting in more sellable space within the building. This can enhance the project's profitability.
- **Installed before concrete pour:** The system is installed prior to the concrete pour, streamlining the construction process and reducing the risk of errors or delays.

FyreBOX Cast-In Features:

- **Intumescent Lined System:** The FyreBOX Cast-In features an intumescent lining that expands in the event of a fire, effectively sealing off the penetration.
- **Tight seal and crushes off plastic pipes during a fire:** In case of a fire, it forms a tight seal around services and can crush plastic pipes and pipe insulation, ensuring a secure barrier against fire spread.
- **Intumescent foam plugs:** Fitted with intumescent foam plugs, the system offers superior reliability and acoustic properties as well as a smoke seal.
- **Allows for flexibility and Future Proofing:** The FyreBOX Cast-In allows for easy adds, moves, and changes, providing flexibility in the building's service layout, throughout the life of the building.
- **Compliance with industry standards:** It has been rigorously tested to meet the AS1530.4-2014 standard for a range of mixed services.
- **High Fire Resistance Levels (FRLs):** The system offers industry-leading FRLs of **-/90/90**, **-/120/120** and **-/240/240** (system specific), ensuring effective fire containment.



Benefits of Using FyreBOX Cast-In in the CONTRA & FORMA Project: (contd.)

- **Eliminates need to remove formwork or drill core holes:** The FyreBOX Cast-In eliminates the need to remove formwork or drill core holes for service installation. This saves time, reduces construction costs, and minimizes disruptions during construction.
- **Accommodates a variety of services:** The FyreBOX Cast-In can accommodate various services, including Copper Cold/ Hot Water & Gas pipes, Power and communication cables and conduits, and AC insulated pipework. This versatility makes it an ideal solution for diverse building and construction projects.
- **Custom Cast-ins built based on client's requests:** Trafalgar Fire offers custom cast-ins tailored to clients' specific requirements. We are committed to meeting the unique needs of our clients. For this project, we manufactured FyreBOX Cast-Ins that were 700mm and 600mm high, some the largest boxes, we have put into production, to meet the clients specifications.



Conclusion:

Trafalgar FyreBOX Cast-In proved to be a convenient and effective solution for the CONTRA & FORMA project undertaken by Buildform. Its ability to replace fire rated risers, reduce riser footprints, simplify construction processes, accommodate a variety of services, and provide customized solutions, showcases its value as an innovative solution for the building and construction industry. Buildform's project achieved enhanced fire protection, optimized space utilization, and streamlined construction operations, by utilizing FyreBOX Cast-In.