

IMPROVING FIRE DETECTION SYSTEMS IN VENTILATED HOMES, WITH FLAGSHIP HOUSING

March 2026





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OBJECTIVES AND SAFETY PRIORITIES

Flagship Housing is a UK social housing provider, managing over **33,000 homes** across the East of England. The organisation not only builds, lets, maintains and improves homes for rent and sale, but also reinvests profits to fund more affordable housing and community-focused services.

Positive Input Ventilation (**PIV**) and Mechanical Ventilation with Heat Recovery (**MVHR**) systems are increasingly used within social housing to improve indoor air quality and address damp and mould. While these systems deliver clear health benefits, they also introduce important fire-safety considerations, particularly around ductwork, compartment penetrations, and the potential for smoke movement within a dwelling.

Since Davin Gee joined Flagship Housing three years ago as Compliance Manager (Electrical), Aico has worked closely with him to develop a robust, standards-led solution that improves resident safety while providing meaningful compliance assurance.

The project was designed to achieve two primary objectives:

- Improve resident safety in properties fitted with PIV or MVHR systems
- Provide live compliance data and remote notification of fire alarm activations

A key requirement was ensuring fire detection coverage met the intent of **BS 5839-6**, particularly in areas where higher-risk ventilation equipment is installed.

“We at Flagship Housing continuously look at ways to prioritise our residents safety whilst at home.

One way that we could do that was by increasing fire detection within properties with MVHR and PIV systems. Due to the potential for mechanical ventilation and interconnected ductwork to accelerate the spread of smoke and fire, enhanced detection ensures earlier warning for occupants, mitigates ventilation-related risks, and provides an appropriate level of life safety, particularly for vulnerable residents.”

Davin Gee
Compliance Manager (Electrical) at Flagship Housing



FIRE-RISK DRIVERS AND LIFE SAFETY CONSIDERATIONS

Fire-safety risks associated with ventilation systems do not generally arise from the units themselves. Instead, guidance consistently highlights risks linked to ductwork, compartment penetration, specification of materials, and the movement of smoke through properties.

England fire stats

Year ending September 2024



(Home Office, 2025)

Many of the most serious incidents continue to involve smoke spread and compartment failure, reinforcing the importance of effective containment measures.

For Davin Gee, the primary driver for this project was the need to prevent smoke being moved throughout a property during a fire event. While ventilation systems are essential for everyday living conditions, active airflow during a fire can unintentionally aid smoke spread.

By ensuring fire detection is installed in the same areas as PIV and MVHR units, and by automatically isolating ventilation systems when an alarm activates, the approach directly targets one of the most significant life-safety risks within the home.

INTEGRATED FIRE SAFETY SOLUTION

Flagship Housing adopted a standardised specification for all properties fitted with PIV or MVHR systems.

Each applicable property is equipped with:

Ei3024 Multi-Sensor Fire Alarm

Provides enhanced smoke and heat detection.

Ei428 RadioLINK Relay Module

Isolates the ventilation system upon alarm activation, helping limit smoke and fire spread.

Ei1000G The Gateway

Enables remote notification of alarm activations and provides live compliance data.

This integrated approach ensures protection for residents while giving Flagship Housing immediate visibility should an incident occur.





IMPLEMENTATION AND INSTALLATION

Installation is being completed by Karma Electrical & Fire Systems Ltd, an Aico Platinum Partner.

Platinum Partner is an Aico initiative that rewards installers who meet our Gold Standard Installer requirements, are registered with NICEIC and hold an ISO 9001 Quality Management system certification.

All installers involved are fully trained and competent, having completed Aico Expert Installer training, Introduction to Damp and Mould, and the City & Guilds Approved AA2426-01 qualification. Early installations were supported on site to ensure consistency and best practice from the outset.

“The Aico system is incredibly straightforward to install. From an installer’s perspective it’s well designed, logical, and easy to integrate with ventilation systems. More importantly, it gives the Registered Social Landlord far greater visibility of compliance and resident safety than traditional standalone alarms.”

Karl Sharman
Managing Director at Karma Electrical & Fire Systems Ltd

KEY OUTCOMES

The project, initially for the 150 homes where Flagship Housing has ventilation systems installed, now sees that any property that has been retrofitted or any new builds will have these systems installed.

The scheme has already delivered benefits, including:

Improved resident safety.

Reduces risk of smoke and fire spread within dwellings.

Improved assurance of compliance with BS 5839-6.

Immediate notification to Flagship Housing when alarms activate.

Residents benefit from safer homes, while Flagship Housing gains improved oversight and confidence in its fire-safety strategy.





PROGRAMME STATUS AND FUTURE SPECIFICATION

The rollout across existing properties is currently underway, with completion expected by the end of April 2026.

For all new PIV and MVHR installations, this specification will now form the minimum standard, embedding fire-safety considerations at the point of design rather than as a retrofit measure.

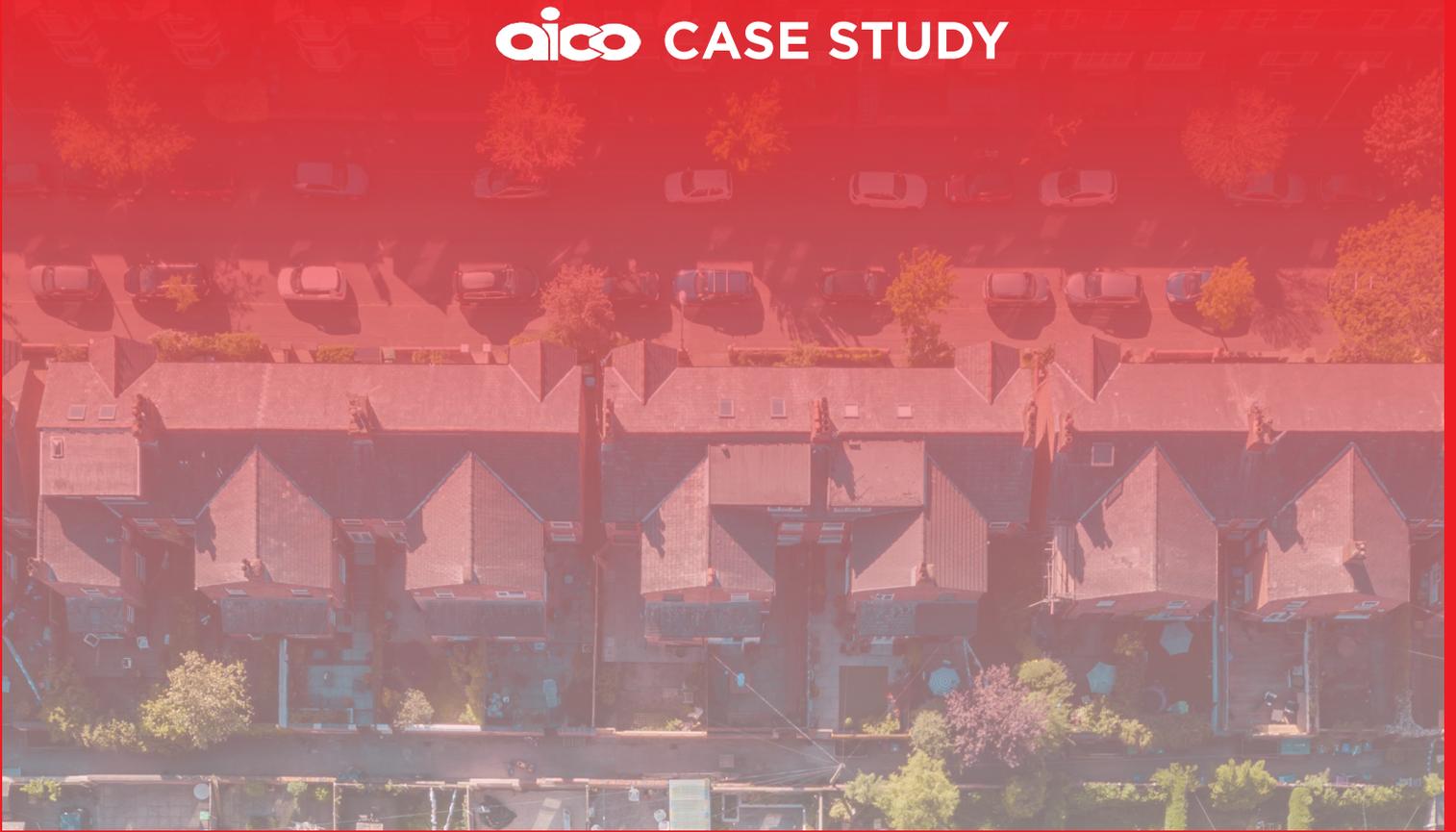
“I’m extremely proud to have been part of this collaborative approach with Flagship Housing. By strengthening fire detection in properties with MVHR and PIV systems, we’re not only enhancing compliance, but more importantly, helping to make homes safer for residents. It’s rewarding to support a forward-thinking organisation that places tenant safety at the heart of its decision-making.”

Trevor Sawyer
Relationship Manager at Aico



This project highlights the value of strong collaboration between housing providers, manufacturers, and competent contractors. By focusing on smoke containment, automatic ventilation isolation, and real-time data, Flagship Housing has implemented a proactive, resident-focused fire-safety solution that goes beyond basic compliance.

aico CASE STUDY



If you would like to learn more about fire detection systems, get in touch by emailing enquiries@aico.co.uk or visiting aico.co.uk

