Press Release
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SE Controls enhances fire safety and comfort at flagship apartments

Berkeley Homes' flagship Woodberry Park apartment development in North London is using an advanced smoke and natural ventilation system from SE Controls to not only provide protection for residents in the event of a fire, but to also create a better environment by actively managing any excessive heat build up in corridors.

Located on Seven Sisters Road, Woodberry Park is part of the innovative Woodberry Down regeneration programme being undertaken by the London Borough of Hackney, Genesis Housing and Berkeley Homes, which will eventually create almost 4,700 homes, combining social and affordable housing with private residential apartments.

SE Controls was commissioned to design and install a SHEVTEC® mechanical extraction smoke ventilation systems in two separate low rise private residential blocks within Woodberry Park, which provide a total of 117 luxury apartments.

In addition to smoke ventilation, a key part of SE Controls' project specification and design brief was that the system should also incorporate an 'environmental ventilation' mode, enabling it to monitor heat build-up in communal corridors and lobbies while also managing the operation of automatic vents to reduce the temperature and introduce fresh, cooler air into the building.

SE Controls' Project Leader on Woodberry Park, David Sawyer, explained: "Heat build-up in corridors with multi-storey apartment buildings can become an issue as many developments use efficient distributed heating systems where pipework runs along the corridors to each apartment."

He added: "The cumulative thermal gain generated by the pipework can make corridors, lobbies and communal spaces uncomfortably hot, which is why we originally developed the environmental ventilation mode as an integral part of our smoke ventilation system capabilities, to help developers overcome this issue and provide a better environment for residents."

The comprehensive SHEVTEC smoke ventilation and environmental ventilation system installed in the two residential blocks, which have between four and seven floors, includes both an extract shaft and air inlet shaft in each the building's two cores, with smoke dampers fitted at each level.

In normal smoke ventilation mode, if a fire is detected by building's smoke sensors, the SHEVTEC roof mounted fan sets will start, while staircase vents and smoke vents located on the fire floor will open, enabling up to $5m^3$ per second of smoke to be drawn through the extraction shaft and provide a smoke free escape route for residents.

Tamper proof manual control points are installed throughout the buildings and separate fireman's control points are also incorporated as part of the system, enabling fire service personnel to manually control the operation of every damper and staircase vent as well as the smoke and heat exhaust fans.

In addition to the system's fire safety role, it is also designed to operate in a 'natural environmental ventilation' mode, which allows temperatures in corridors, lobbies and communal areas to be maintained at comfortable levels and avoid the heat build up caused by the under floor heating pipework feeding individual apartments.

Each lobby that is served by the smoke shafts is fitted with a ceiling mounted temperature sensor, which triggers the roof mounted environmental ventilation fan to run when the temperature exceeds the pre-determined set point to vent the warm air and replace it with cooler air from outside.

As with the smoke ventilation operation, only the dampers on the over-temperature floor will open and once the temperature has reduced sufficiently, they will close again and the ventilation fan will switch off. External temperature sensors are also installed within the system, which ensures that the environmental ventilation system will not operate if the outside temperature is higher than that within the corridors.

SE Controls specialises in the design, project management and installation of advanced smoke ventilation and natural ventilation solutions to meet the needs of architects, contractors, building services engineers and facilities managers worldwide. Further information on SE Controls' products, solutions and projects can be obtained by visiting www.secontrols.com or calling 01543 443060.

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