

Case Study | No.1 Old Trafford

Mechanical smoke ventilation - a first for D+H in the UK



Project

No.1 Old Trafford provides 214,000 square feet of residential and amenity space, including 354 apartments over two blocks rising to 14 and 17 storeys tall respectively. The waterfront setting includes the newly created tram stop providing excellent links to central Manchester and Salford Quays.

System

D+H UK provided a sophisticated and complex system for the mechanical smoke ventilation across the two blocks.

Each block has a central Mechanical Smoke Extraction (MSE) control panel installed. Each of the levels across both blocks are similar and operate as single zones. There is a single central staircase that opens into a T shaped corridor. There are two extract shafts topped with fans on the roof, one at each end of the extended corridor. Certified smoke dampers were also fitted on each level. Fire protected cables connect all devices to the MSE panel.

The software within the MSE panel is written to ensure that when the fire alarm is activated, the shaft damper will open, the central window and head of stair NSHEV will open, the extract fans will start at low speed and are inverter driven to then reach full speed. Make-up air will be provided via automatic opening vents in the external wall. Vents activate automatically upon smoke detection within the common corridors.

Location:

Stretford, Manchester

Products:

CPS-M (MSE) control panels
Smoke extract fans
NSHEV roof louvres
Shaft dampers
NSHEV dome vents

Inverter control allows the commissioning engineer to adjust the extract speed to ensure the correct air volumes are extracted.

A central thermostat is used to allow the dampers and windows to open when the internal corridor temperature exceeds 23 degrees. This is a zero energy solution that allows cross flow ventilation.

The system was chosen as it meets all the design criteria and applicable EN standards. The simple wiring system meant the cables could be installed early in the construction program, allowing the builder to complete the internal finishes.

This project is significant as it is the first D+H MSE system to be installed in the UK.



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