

// CASE STUDY

LOCATION: THE TEA MERCHANT - LONDON CANARY WHARF

PRODUCTS: 1 BPS, 2 DAVES AND 1 ECOSMART CONTROL



OVERVIEW //

Nuaire initially received this enquiry as a design and build project for a Public Tea House that was being renovated in Canary Wharf. There was a requirement for various extract fans for back of house areas, kitchen supply/extract units, as well as heat recovery units to serve the main public area which was to be partitioned in to 3 spaces.



// LOCAL HEAT RECOVERY UNITS

The project was designed to have 3 heat recovery units, 1 for each partitioned area. This would allow the optimum efficiency for running costs due to the independent control of ventilation rates and heating to each of the 3 areas, via Ecosmart plug & play controls and sensors. The unit selections fitted in the ceiling voids but due to obstructions in the void the duct routes were convoluted and would have created large resistance figures. In turn this meant that larger HRUs were required to meet the fan efficiency (SFP) levels of current building regulations, which made the ceiling space more cramped and hindered the project budget.

// CENTRALISED AIR HANDLING UNIT

It was decided therefore that the 3 partitioned areas could be served by 1 BPS Air Handling Unit located in a back of house plant space. This freed up ceiling space so that duct runs could be simplified and the related resistance kept low.

The single BPS unit would treat the 3 spaces as one and boost ventilation rates based on the combined CO₂ or temperature levels. In order to independently modulate the heating power input to each space the heating coil was taken out of the unit and individual Fan Coil Units were put on each of the three duct branches.

A further benefit of using the remote centralised system was that the acoustic requirements were more relaxed compared to having local HRUs in the ceiling voids directly above the room spaces. So not only could the acoustic breakout from the unit be higher but also the in-duct noise was less restricted so less attenuation was required outside of the AHU.

The contractor onsite had mentioned how the AHU fitted snugly in the plant space available, using drop rods making use of the various integrated lifting points on the Nuaire base frame, therefore not adding to the unit height. Clashes of the hinged panels on site were avoided as the access panels on the unit have the ability to be unlocked and lifted directly off.