PAS 2035 1-32 Brookes Court Retrofit, Camden

Ventilation Strategy

Supporting Information

June 2022

This supporting text seeks to summarise the philosophy behind the chosen ventilation strategy to the fabric first retrofit of 32Nr properties in the London Borough of Camden area on behalf of the client LB Camden.

Several of the properties has some existing degree of mechanical extract ventilation to wet rooms, some have manual wheel provision, several present moisture control and damp and mould issues.

In order to fulfil the requirements of the PAS 2035 standard, a robust ventilation strategy must be devised to function correctly following the introduction of fabric insulation and airtightness upgrades.

Adequate, properly designed ventilation is a founding requirement of property energy efficiency upgrades under the PAS 2035 standard, with measures required to be installed by PAS 2030 accredited installers.

Historically, building retrofits have suffered from an absence of correctly specified and functioning ventilation systems to deal with inevitable moisture and air retention following bringing the property to a high standard of thermal insulation and airtightness.

Not only does this affect the property's ability to handle moisture, and thus to avoid detrimental effects of condensation build-up both to surfaces and interstitially, the thermal performance of the building can be undermined, and thermal and living comfort including standard of air quality is often negatively affected for residents.

This summary proposes two main options for ventilation in the upgraded dwellings.

Reference should be had to other PAS compliance documents within this specification pack including Moisture Control strategy and Overheating Assessment.

Option 1:

MVHR Mechanical Ventilation and Heat Recovery

MVHR (Mechanical Ventilation with Heat Recovery) provides fresh filtered air into a building whilst retaining most of the energy that has already been used in heating the building. Heat Recovery Ventilation is the solution to the ventilation needs of energy efficient buildings, though it is quite disruptive in that ductwork requires to be run throughout the house with residents in occupation.

Option 2:

dcMEV Demand Controlled (Centralised) Mechanical Extract Ventilation

Control Mechanical Extract Ventilation (DCMEV) system. Each system is comprised of Aereco DCV extract units in wet rooms, continuous constant pressure extract fan/fans, suitable ducting and accessories, exhaust terminal, installation and maintenance manual and a commissioning certificate. Background ventilation, in the form of wall or window inlets, may also be required in habitable rooms. It is less intrusive that MVHR and shall be assessed to determine if key performance metrics such as space heating demand can be met through its use.

It is proposed to use dcMEV as a number of the units are very compact, requirements of PAS 2035 are satisfied by this system, and required output space heating demand of 90kWh/m2/yr is able to be met.