

## **Basement Fit Out at Centric Close**

## **Natural Ventilation Assessment**

GPDE were commissioned to review the base build natural ventilation provision within the Basement demise at Centric Close and concluded as follows:

- The provision of high level opening vents at ground floor (serving the basement via a lightwell) were assessed using CIBSE AM10. The high level vents provide a single sided ventilation path and the basement layout did not provide a route for low level ventilation, necessary to make the calculation work.
- 2. The local environment at ground floor level is close to Oval Road; natural ventilation in this area at ground floor level would be exposed to pollutants and noise.

Consequently, GPDE recommended the installation of high efficiency Mitsubishi Lossnay heat recovery ventilation units, designed to operate at low speed to minimize noise and maximise heat recovery. Further, a route to the roof was established, reducing pollutant and noise exposure.

## **Thermal Calculations**

GPDE undertook thermal calculations with information provided by the base build contractor and gains to suit the internal fit out, which was in line with BCO Guidance (2019).

- Solar Gains were modelled using regional solar gain data from CIBSE Guide A, Table 2.13(g) for London. Peak global values were applied to each respective façade.
- Occupancy data was derived from BCO guidance, as this exceeded the proposed layout.
- Fresh air gains were determined using the flow rates from the Heat Recovery Unit, and delivered fresh air in line with BCO guidance.
- Internal equipment gains were determined using fit out specifications for all equipment.
- All fabric and glazing thermal properties, including air infiltration were derived from the SBEM used in the base build.

Thermal simulation modelling has not been undertaken for the fit out. The basebuild thermal simulation model by others to determine the necessity of mechanical cooling to the space at an earlier project stage.