

Worsbrough Common Primary School - Energy statement

Natural Ventilation

Classrooms & Offices

Natural ventilation is the preferred method of ventilating the proposed extension, comprising a multi-purpose hall; 8No Classrooms; office space and educational break out spaces.

The building is designed to be predominantly naturally ventilated using cross ventilation as the room depths exceed good practice for single sided ventilation. Where rooms require mechanical ventilation such as toilets, a mechanical ventilation system is provided to achieve the required internal design condition.

The natural ventilation solutions are designed to work in conjunction with the user and building fabric to provide sufficient fresh air to satisfy the occupancy levels maintaining the CO2 levels below the threshold identified in the BB guidance. This will primarily be provided by manually operated high level and mid-level windows. CO2 and temperature sensors will be provided to each space to give warning to the occupants to allow control of the windows. A local Green light/red light indicator will notify the user of CO2 levels, allowing the user instant control of the natural ventilation to their requirements.

Multi-purpose Hall

The hall will be a naturally ventilated space through wind catcher type natural ventilation units. The vents shall be controlled automatically to ensure minimum ventilation to the space throughout winter months and sufficient ventilation to limit temperatures during summer months and performances. A manual override will be provided for user control.

Toilet Extract & Specialist Ventilation

All toilet areas shall be provided with mechanical extract ventilation at a minimum rate of six air changes per hour. | The ventilation shall be via duty/standby extract fans located within ceiling voids and ducted to either a wall mounted louvre or a roof cowl. The make- up air to balance the mechanical extract from the toilets will be drawn from the surrounding areas by transfer grilles or by undercutting doors where permissible. Extract ventilation shall be provided to wet cleaners rooms. The extract shall be via a dedicated extract fan ducted to outside operating on a PIR.

Natural Daylight

The classrooms will make use of natural day lighting, at a level without compromising the internal room temperatures during the warmer summer months from solar gain.

Heating

Heating is provided to the teaching spaces and communal areas via under floor heating. The under floor heating allows the rooms to be flexible for desk positions and avoids interference with furniture.

Control Strategies for Heating & Lighting

Under floor heating will be controlled by in room thermostats on weather compensated variable temperature circuits.

Light fittings will incorporate user adjustable PIR sensors complete with day light linking controllers to work in conjunction with the natural day lighting contribution to the space.

Electricity

All distribution boards in the new building will be split between lighting circuits and small power circuits.

The main incoming supply will also be metered. This approach will fully comply with the requirements of Part L.

Gas

The main incoming supply will be metered.