

From: Konrad Kislowski

Sent: 26 March 2019 11:32

To: Philip Fifield

Cc: Mark Cook

Subject: RE: Full Planning & LB consent applications - 2019/0768/P & 2019/1604/L - Acland Burghley School, 93 Burghley Road

Hi Phil,

As requested, please find attached and below.

Extract from the Specification:

Classrooms

Each Classroom shall be provided with a dedicated mechanical ventilation system.

Each system shall consist of a mechanical ventilation unit with heat recovery (MVHR).

The unit shall be floor standing.

The unit shall include intake and exhaust fans, a counterflow heat exchanger, air filters, isolating and by-pass dampers, temperature sensors and a control system.

The noise emission shall be limited to 35dB(A) @ 1m at 100% capacity and 30dB(A) @ 1m at 80% capacity.

Air filters shall be provided on both the intake and extract air pathways. The filters shall conform to at least EN 779 Class M5. Indication shall be provided of filter maintenance being due.

Fan drive motors shall be of EC (electronic commutation) design and enable proportional control down to at least 30% of maximum throughput.

Heat recovery shall be by a counterflow heat exchanger. The exchanger thermal efficiency shall be not less than 82% as assessed under EN308: room air at 25°C / 28% RH; outdoor air at 5°C / 50% RH.

Each unit shall be provided with the internal electric heating coil.

Both the fresh air intake and exhaust air pathways shall be provided with isolating dampers, arranged to close when the unit is out of service.

Each unit shall have a Specific Fan Power (SFP) of not more than 1.0 W / l / sec.

The SFP value shall take account of both fans, electronic controls and all actuators.

Any condensate shall drop to a tray, from where it shall be evaporated off by the exhaust air passing over it. A float alarm shall be provided to warn of build-up. The alarm signal shall also be used to simultaneously reduce the flow of fresh air and increase exhaust flow, thereby further promoting the evaporation of condensate.

Easy access for maintenance shall be provided by a hinged door.

Each unit shall be controlled to start/stop and automatically adjust the air flow using signals from a wall mounted CO2 sensor.

Each unit shall be provided with a data logger containing 365 days of continuous rolling storage. The following information shall be logged:

- operational status*
- air flows*
- CO₂ levels*
- external intake air temperature*
- external exhaust air temperature*
- internal supply air temperature*
- internal extract air temperature*

Fresh air intake and exhaust from each unit shall be through the external wall via weather louvres complete with insect screens.

Local supply and extract ventilation system shall be provided to Food Technology Classroom.

The extract system shall include extract fan, attenuators, and extract grilles complete with plenum boxes and removable grease filters.

The supply system shall include supply fan, electric heater battery, attenuators, and supply grilles complete with plenum boxes.

The supply and extract fans shall be configured and arranged as detailed on the drawings and in accordance with the schedule of equipment and shall be bifurcated axial type fans with motor out of the airstream.

The supply and extract fans shall be manufactured from galvanised steel.

The units will be provided complete with matching flanges, flexible connections, anti-vibration mounts and all other necessary components to complete the installation and shall be in accordance with the manufacturer's specification.

The contractor shall allow for all necessary ductwork transformations to and from the fan unit and any associated components in accordance with the manufacturer's recommendations, DW 144 and general good practice.

Boiler Room

Mechanical extract ventilation system shall be provided. The system shall comprise local extract fan.

The fan shall be controlled by a thermo switch.

The fan and the controller shall be located within the space.

The extract duct shall terminate in vent cowl above the roof level.

Make up air shall be from adjacent space via door mounted, fire rated air transfer grille.

Attenuation

Noise attenuation shall be fitted in the ductwork on room and atmosphere side of the supply and extract fans.

Regards,

Konrad