Notes to Tendering Contractors

Design Responsibility

The Drawings indicate the design intent and it is the Contractors responsibility to adopt, modify and develop the design to provide a final working scheme, which shall be fully compliant with local and statuary regulations including the EMAQ technical guidance, Besa - DW172 specifications for kitchens, TR19 maintenance. The tendering contractors should visit site and familiarise themselves with the site constraints and structure. No claim for additional costs shall be accepted, resulting from lack of knowledge of site conditions.

The contractor shall establish the design requirements for the system however a typical system shall require extract airflow rates in the region of

4.5, or 6 Grillers – 2 deep fat fryers & chip scuttle – Electric appliances 1.9 m3/s 2.2 m3/s, 2.5 m3/s respectively

4.5, or 6 Grillers – 2 deep fat fryers & chip scuttle – Gas appliances 2.4 m3/s 2.9 m3/s, 3.3 m3/s respectively

VALUES BASED ON CANOPY THAT HAS BOTH ENDS AND BACK CLOSED, adjust calculation to changes in configuration

The design shall take account of the operating discharge air temperatures and shall ensure these limits do not exceed the operating values stated by the filtration and Exhaust fan equipment manufactures. Additionally, Kitchen extract ductwork shall be thermally insulated (and fire rated where necessary) to protect heat transmission to adjacent combustible materials. The contractor shall take measures within his design to cool the discharge temperatures passing through the duct if identified in the design.

Important Commissioning

The contractor shall measure and record the air extract and supply rates to the Canopy and check these meet the values at design. The values shall be measured and recorded and submitted to the P.M prior to Handover.

The contractor shall measure and record the in-duct discharge air temperatures - with all equipment running and record the measured temperatures, details shall be submitted to the P.M prior to handover.

Existing Services

At the point of tender the Contractor shall check and confirm the extent of any strip out and enabling works required, and shall make allowance within his tender.

Structural

The location and selection of plant shall be co-ordinated with other services, the Contractor shall check details and requirements of plant support systems with structural engineer before commencement of works. The structural engineer shall provide detail design of supports where required. In addition, required openings through floors and walls shall also be approved prior to installation.

Acoustics

The scheme should be submitted to the client's acoustic engineer to ensure compliance with any required constraints imposed by the planning authority or Landlords.

Fire rated ductwork & fire strategy

Kitchen exhaust ductwork shall be suitably fire rated. The specification shall be fully compliant, approved and agreed with building control. The installation shall be certificated on completion.

The kitchen supply and extract fans shall be interlocked with the Cookline operation and shall shut down the cookline operation in the event of fan failure.

The gas supply shall be provided with a gas solenoid valve and prove system (by others) which shall close off the gas supply in the event of emergency operation, fan failure, or low gas pressure.

The extract canopy shall be provided with a suitable, regulation compliant, fire suppression system, designed by a specialist supplier and approved by the building control. In the event of fire or activation of the system all equipment, shall shut down and the gas solenoid valve shall close.

A local CO2 sensor within the Kitchen shall be provided, upon all equipment, shall shut down and the gas solenoid valve close.

An emergency "Knock off Stop" shut down button shall be installed at the kitchen exist. Upon use the plant shall shut down and the Gas supply shall close. The Button shall be clearly Labelled "EMERGENCY SHUT DOWN"

The contractor shall confirm with the Project Manager the building fire strategy at design stage and shall check and amend the design accordingly, and shall also take note of any requirement to Fire rate and or thermally insulate and sections of the exhaust system.

A central control panel shall be provided to facilitate the above. The location of the panel shall be agreed with the P.M.

The contractor shall also check and Landlord or insurers requirements with the P.M at design stage.

Ductwork

All ductwork shall be constructed and installed in accordance with Besa specifications DW172 for Kitchen extract duct and DW144 for all other ductwork. Ductwork shall be complete with access panels for maintenance and cleaning, fire dampers, smoke dampers or volume control dampers as required to protect escape routes and compartments, where agreed with the Project Manager and building control. Note the kitchen extract duct should contain no fire dampers or smoke dampers. Volume control dampers shall be installed to facilitate balancing.

Thermal insulation

Fresh air inlet ductwork and supply ductwork shall be thermally insulated with "Ductwrap" or slab section, foil faced, and shall have joints taped, all secured with lace wiring. Id bands shall be applied upon completion. Insulation thickness to be as building regulations.

Odour Control Equipment

The equipment shall consist of Electrostatic Precipitator, with integral oil and grease collector. ESP shall work to 96% efficiency through a single pass This shall be drained directly to a grease interceptor. Typically a UV Filtration system or Activated Carbon Filters shall additionally be installed within the kitchen extract system, depending on the site requirements.

Air Conditioning equipment

Preferred equipment suppliers Daikin range or Mitsubishi Electric, units shall be inverter driven heat pumps suitable for the respective pipe runs and shall be ECA approved. Units shall be complete with individual controller for offices and single rooms, Dining area units shall be connected to a single controller. Units shall be interlocked with the fire alarm to shut down on activation, additionally interlocked with a last man out switch to disable when the building not occupied. The installers shall be part of the manufacturers partner schemes i.e. Daikin D1 installer or Mitsubishi Electric Business Partner.

All pipework shall be copper refrigerant grade pipe work and installed on cable tray or proprietary hangers indoors and cable tray outdoors. Any external tray shall be over trayed to protect from vandalism and UV rays.

External plant shall be mounted on big foot frames, cantilever wall brackets or plant support blocks, all with anti-vibration pads, as required on a site by site basis and as required by local Landlords.

Tendering Contractor shall provide an option costs for Cooling to the Kitchen, Office and Comms room, whether detailed on the drawing or not.

Extract fan

The extract fan shall be suitable sized for the required exhaust volume and shall be rated for high temperature use and grease laden atmosphere. The fan shall be provided with an EC motor and potentiometer for speed adjustment. The fan shall be supplied with acoustic jacket and matching attenuators and where located externally shall be fully weatherproof.

Air handling unit / Air handling equipment

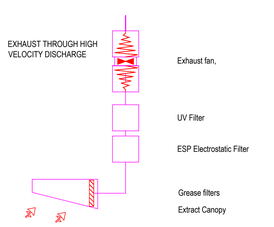
The air handling unit shall be supplied complete with motorised inlet damper, suitable filters, supply air fan with EC motor and heater battery. The air handling unit shall where possible be contained in a double skin panelled unit, with access doors positioned to suit the location arrangement. The fan shall be mounted on anti-vibration mounts. The unit shall be provided with a plug and play controller that shall be mounted on the control panel face or as agreed with the P.M.

Where located externally the assembly shall be fully weatherproof.

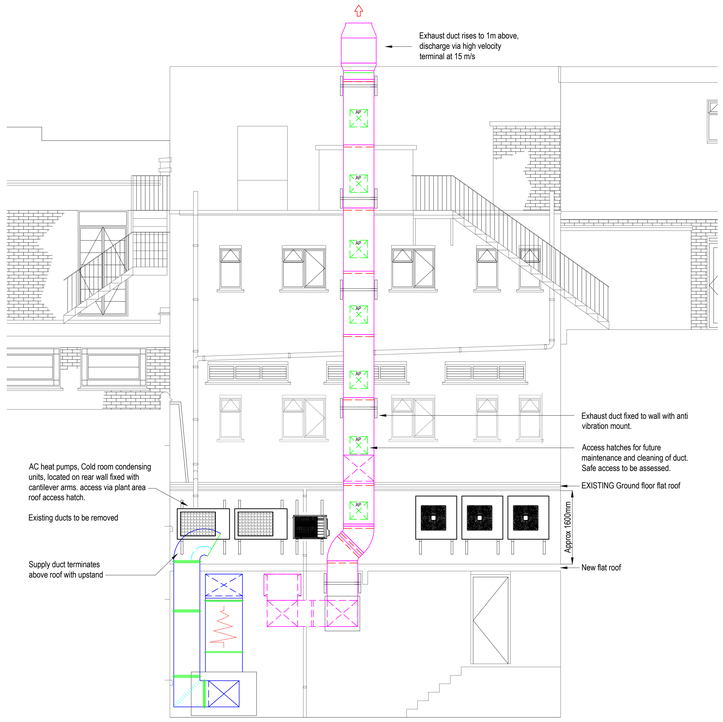
Controls

A central control panel shall be supplied to provide user operation of the supply and extract systems. The panel shall house all loose controls to include controllers, potentiometers, inverters and plug and play devices. The panel shall integrate the various safety devices and shall provide a central point of plant shut down in alarm.

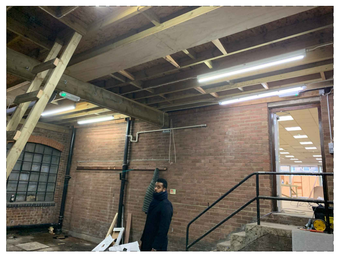
A timeclock facility shall be provided for remaining equipment and to turn off kitchen equipment, in the event its left on. Ac Controllers shall be mounted on the face of the panel.

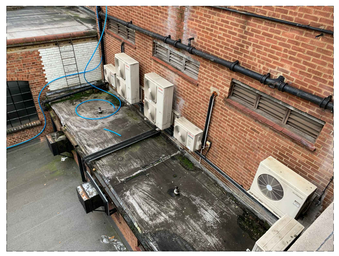


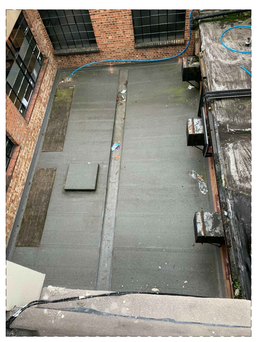
Typical Schematic

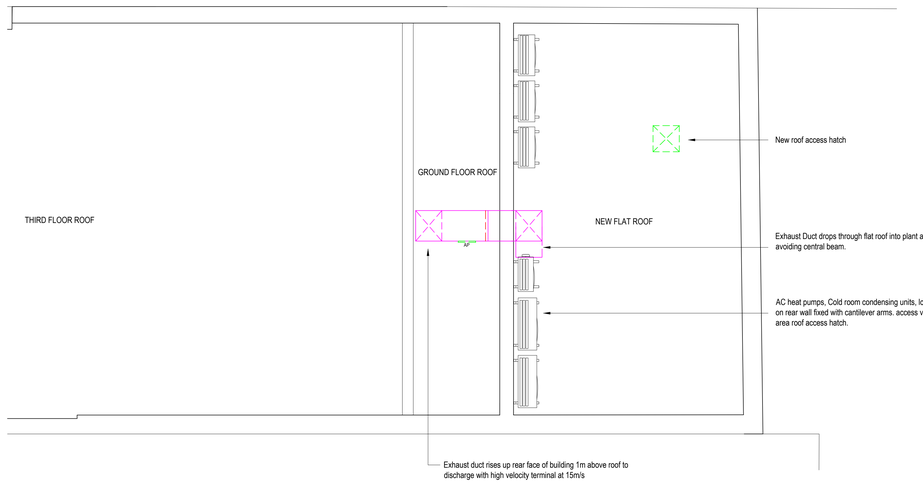


REAR ELEVATION

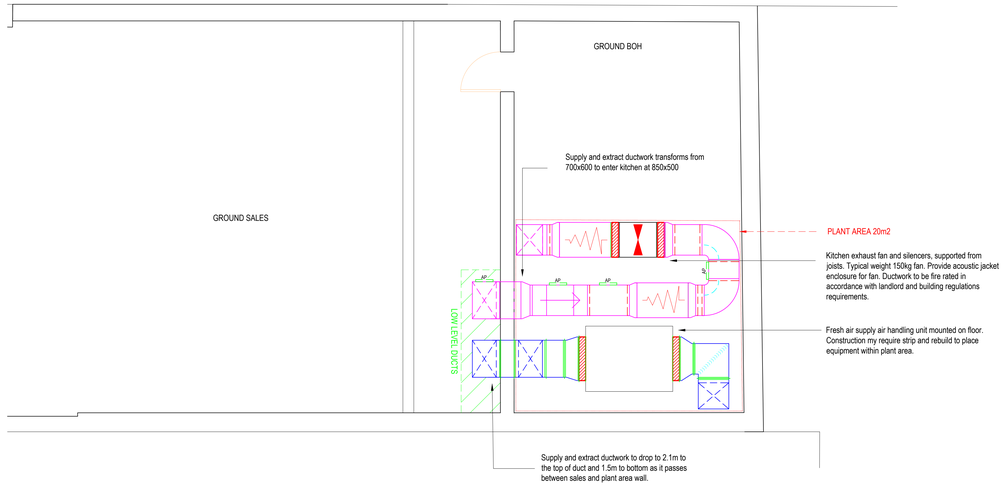








ROOF DETAIL



GROUND FLOOR

NOTES & REVISIONS

Rev.	Date.	Amendment

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