



SPRINGFIELD CATERING DIRECT LTD
T/A THE SPRINGFIELD GROUP
UNIT C1 OYO BUSINESS PARK
CASTLE VALE
BIRMINGHAM
B35 6AN



15/05/2023

REF: SGMW23-024

RE: Pepe's Oxford Road, Reading Kitchen Ventilation Report and Proposal

To whom it may concern,

Following my visit to the above store on 3rd May 2023 please see my below findings and proposals to improve the grease/smoke, odour, and noise control on the current system.

SYSTEM IN SITU –

The current system incorporates 1x ESP4500 and an additional (unknown) electrostatic precipitator. It has 1x ozone unit and a HEPA filter unit. The canopy has baffle filters installed.

Grease and smoke control –

There is currently 1 x ESP4500 unit and an additional ESP unit installed in-line which is providing a double pass on grease extraction which in theory is working, unfortunately due to the dimension of both units it has left minimal room for the installation of sufficient odour control units.

HEPA type filters are currently installed which will help with removal of smoke from the extraction system but not odour.

Odour control –

There is 1x ozone unit which appears to be a plasma clean Xtract 2100 which provides odour abatement up to 1.5m3/s with the use of UV lamps. This is undersized for this application. With the use of UV lamps, it makes this equipment unreliable due to the instability of the lamps themselves.

Noise Control –

At present extract termination rises and turns back over roof which we understand has been rejected so, extract discharge must be at low level at rear of premises. There is what appears to be a 2-pole fan with a 1D silencer which will need to be replaced by an acoustic box centrifugal fan due to the static system resistance levels.

PROPOSAL –

Smoke and grease control -

Remove both ESP machines and replace with convolute canopy filters which will free up space to install carbon filtration and HEPA as per specification.

First stage of filtration will be Convolute coil filters which capture up to 90-95% of the larger grease particles through inertial separation.

All following filters are nominal 600mm wide and 600mm high.

Second stage of filtration (pre-filter) will be 6x 97mm deep G4 pleated panel filter providing filtration 95% effective against particles up to 10 micron. This is also to provide a low-cost barrier to elongate the life of the third stage HEPA / absolute filters.

Third stage filtration will be 6x 292mm deep H11 HEPA filters which are 95% effective at removing particles up to 0.3 micron which will combat against the remaining amount of smoke left in the system using the prior two filtration methods.

For odour control 6x 597mm deep carbon filter cells will be used as the most effective way of neutralizing odour.

All filters have been specified to go above the required duty to increase residence and contact time.

Due to velocity at discharge via a louvre grille above rear noise levels would be too great. We propose to install a splitter silencer after the fan reducing fan noise, leading to a full door height acoustic louvre thus reducing the velocity of air; in turn reducing velocity induced noise levels.

Yours Faithfully,

A handwritten signature in black ink, appearing to be 'R. Gatehouse', followed by a long horizontal line extending to the right.

Richard Gatehouse (Director)