



Noise and Odour Assessment
for:
Proposed Kitchen extraction
To
159a Bosworth Drive, Birmingham, B37 5BT
(To be read in conjunction with drawing no. DPM905/01)

Noise Assessment:

General

The system has been designed to provide both an efficient system and a system that complies to current HVCA and Gas Regulations. It has been designed to provide minimum impact and nuisance to the locality. The system has been designed around the following professional guidelines.

HVCA DW 172 Standard for Kitchen Ventilation Systems

DEFRA Guidance on the Odour Control

Local Authority Planning Constraints

The Physical Restraints for the Location of Plant

Air Volumes

Refer to Noise Attachment Report

The air volume is calculated on the extraction canopy area and the cooking appliances proposed.
(1.68m³/second)

Canopy / Ductwork

Wall canopy 3200mm x 1200mm deep x 700mm high.

Fully welded design, manufactured from

430 grade stainless steel, dull polished, one side.

LED lighting to underside of canopy

Grease collection tray to the rear centre.

Full length extract filter housing plenum

8 no stainless-steel baffle filters

Stainless steel wall cladding to the rear of the canopy and adjacent wall.

All associated ductwork, manufactured from industry used galvanised steel spiral ductwork.

Galvanised steel (painted to match roof tile colour) 450mm dia extract ducting taken 1000mm above first floor eaves level with weather cowl fitted to top.

This will hold the carbon block filters and the pre-filters.

4 no, carbon blocks 595mm x 595mm x 395mm installed to achieve a dwell time of 0.2m² per second through the carbon blocks.

1120mm long melinex lined (grease laden air compatible) silencer to reduce noise level down to minimum permissible levels.

Rubber fixing mounts to brackets to reduce vibration/noise.

Odour Assessment

The type of odour control is specific to the type of food to be cooked (e.g., fried chicken)

The kitchen extraction system has been designed to mitigate smells to the

- a) The first floor flat (extraction flue located on shop front elevation 2.7m away from first floor windows

The following criteria has been incorporated:

1. No flue or duct terminating within 1m to an opening window/door.
2. Flue terminating a minimum 1m above the eaves of the property.
3. Flue not to be capped to prevent defection of fumes/odours to ground level.
4. Extraction system to achieve exit velocity of minimum 15m/s.
5. To provide additional odour control measures, carbon filters and an odour neutraliser
To be installed (example shown on drawing)
6. Ducting and flue to be regularly maintained and cleaned to prevent accumulation of grease and dirt, causing odour nuisance. (Suggest every 1 month or sooner if smells occur)
7. Carbon filters and odour control systems must be regularly inspected and maintained.
(Max 12 months cycle)
8. Doors and windows closed to kitchen area during cooking operation hours.
9. Grease filters cleaned on a regular basis with de-greasing agents.
10. Yard area and Waste containers cleaned on weekly basis.

Table 1 Significance Score and Odour Control Requirement

Impact Risk	Odour Control Requirement	Significance Score
Low to Medium	Low level of odour control	<20

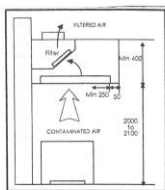
High	High level of odour control	20-35
Very High	Very High Level of odour control	>35

Table 2 Risk Ratings

Criteria	Rating	Score	Details
Dispersion	Good	10	Discharging 1m above eaves at 15m/s.
Proximity of receptors	Close	10	Closest sensitive receptor less than 20m from kitchen discharge
Size of kitchen	Small	1	Small takeaway
Cooking Type	Very high	10	Fried chicken

The Odour Risk assessment has identified the proposed takeaway would require a high level of odour control hence the introduction of an odour neutraliser and carbon filters previously mentioned and shown on drawing no DPM905/01 and also implementing the measures stated in the Introduction to keep cooking odour within recommended guidelines.

Typical section below of canopy hood with extraction rate of 1.75m³ /s (minimum 0.31-0.62m³/s)



Noise Assessment

General

The system has been designed to provide both an efficient system and a system that complies to current HVCA and Gas Regulations. It has been designed to provide minimum impact and nuisance to the locality. The system has been designed around the following professional guidelines.

HVCA DW 172 Standard for Kitchen Ventilation Systems

DEFRA Guidance on the Odour Control

Local Authority Planning Constraints

The Physical Restraints for the Location of Plant

Air Volumes

Refer to Noise Attachment Report

The air volume is calculated on the extraction canopy area and the cooking appliances proposed.
(1.4m³/second)

Canopy / Ductwork

Wall canopy 5500mm x 1200mm deep x 700mm high.

Fully welded design, manufactured from

430 grade stainless steel, dull polished, one side.

LED lighting to underside of canopy

Grease collection tray to the rear centre.

Full length extract filter housing plenum

4 no stainless-steel baffle filters

Stainless steel wall cladding to the rear of the canopy and adjacent wall.

All associated ductwork, manufactured from industry used galvanised steel spiral ductwork.

Galvanised steel (painted black) 450mm dia extract ducting taken 1000mm with weather cowl fitted to top.

This will hold the carbon block filters and the pre-filters.

4 no, carbon blocks 595mm x 595mm x 395mm installed to achieve a dwell time of 0.2m² per second through the carbon blocks.

1120mm long melinex lined (grease laden air compatible) silencer to reduce noise level down to minimum permissible levels.

Rubber fixing mounts to brackets to reduce vibration/noise.