



Jigsaw ME&E Solutions Limited
53 Bluebell Road | Kingsnorth | Ashford | Kent | TN23 3GJ

Tel: +44 (0) 7881 790268

Email: info@jigsawmees.co.uk | Web: www.jigsawmees.co.uk

Second City, Cotton Square, Manchester
Kitchen Extract Proposal
Kitchen Extract Planning Application Supporting Information

1. Location of proposed development:
Second City, Cotton Square, Manchester, M4 5AW
2. Description of proposed development:
Information for planning application relating to commercial kitchen ventilation system for new restaurant
3. Date of Preparation:
21/04/2021
4. Date of any amendments:
First Issue
5. Applicant:
Second City
6. Design Consultant:
Sam Wogens, Jigsaw Solutions Limited, 53 Bluebell Road, Kingsnorth, Ashford TN23 3GJ. E: sam@jigsawmees.co.uk

7. Application for Planning Consent Supporting Information:

The information below has been prepared in accordance with the document titled "Control of Odour and Noise from Commercial Kitchen Exhaust Systems" published by EMAQ+, which is the replacement for the withdrawn DEFRA guidance.

Information on Premises:-

Average No. meals served per day : 60

Method of preparation and cooking: Grilling, light frying and cold prep

Types of meal served: Mixed menu, burgers, hot sandwiches.

Proposed Hours of Operation (Kitchen Ventilation Plant): 11am to 9pm

Risk Assessment Score: 33 (See later section for detail)

Plans and Drawings:-

Refer to Jigsaw Solutions Ltd. Drawing 2242/M101 and 2242/M102 for proposed layout and elevations of the kitchen extract and supply systems.



System description:-

The risk assessment score of 33 demonstrates that a HIGH level of odour control is required. The newly installed system will therefore be designed to comply with a HIGH assessment result.

The kitchen extract system will be located almost entirely within the site demise, exiting the building from a purpose built riser constructed with the building base build. There will be a full commercial grade, bespoke supply and extract canopy located within the commercial kitchen, the canopy contains grease collection filters which treat the air as it enters the ductwork. The extract duct runs from the canopy, exiting the Second City demise at the purpose built riser and discharges against vertically via a high velocity cone above roof level. Internally the system will consist of the following items of plant:-

- 1) 2 No. Electrostatic filters (Double pass formation)
- 2) 1 No. Kitchen Extract Fan
- 3) 1 No. Bespoke commercial extract / supply canopy
- 4) 1 No. Ozone Dosing Unit

The items of plant will be located as shown on the issued drawings.

Refer to Purified Air specification for full details of the filtration to be installed. The system as designed incorporates ESP filtration to treat smoke particles and ozone dosing to treat odour.

The ESP filters and the Ozone dosing consist of no moving parts, therefore the only sources of potential vibration and structure borne sound are the kitchen ventilation fans which will be installed with noise mitigation measures as recommended in the acoustic assessment.

Please refer to the acoustic assessment for full details of noise / structure borne vibration control measures. They may include:-

- 1) The kitchen extract and supply fans connected to the system of ductwork using flexible ductwork connections. This will ensure that any vibration from the fan cannot be transmitted to the rest of the system.
- 2) The kitchen extract and supply fans be mounted on anti-vibration acoustic matting. The matting will isolate the fan from the plant platform to ensure vibration is not transmitted through the base of the fan.

With the fans acoustically isolated from the rest of the system the risk of structure borne sound and vibration being transmitted is minimised.



Risk Assessment Score:-

Dispersion – Moderate (10) – High level discharge to rear elevation of the building in brick built riser provided by the base build.

Proximity of Receptors – Close (10) – The site has residential in close proximity albeit at a lower level.

Size of Kitchen – Medium (3)

Cooking Type – Very High (10)

Total = 33 – Very High Level Odour Control

The HIGH level of smoke and odour control will be provided by the filtration equipment outlined above and on the attached drawings.

Maintenance:-

The system is to be maintained in accordance with manufacturer instructions. The maintenance engineers will attend the site 4 times per year and service the ESP's and ensure the correct operation of the ozone generation as required to keep it fully operational.

System Operation:-

The kitchen ventilation systems are to provide an extract airflow duty of 1.6m³/s, and a supply airflow of 1.4m³/s.

The kitchen extract fan is to be as manufactured by Helios UK, model GBD500/4/4 T120. This fan has been chosen for its low noise levels, ease of maintenance and airflow characteristics.

The kitchen supply fan is to be as manufactured by Woods, model 45jmv/16/4/6/35

Data sheets have been appended to this document.

Further Documentation:-

The following documents are issued in support of the above:-

- 1) Drawings M101 and M102
- 2) ESP / Ozone Manufacturers Specification
- 3) Kitchen Ventilation Fans data sheet