

Planning- Condition 20 – Retail Unit 3b, Deansgate Square, Manchester – Rev 02

Fumes, vapours and odours shall be extracted and discharged from the premises in accordance with a scheme to be submitted to and approved in writing by the City Council as local planning authority before the use commences; any works approved shall be implemented before the use commences.

This statement has been produced to detail the supply and extract ventilation strategy for the proposed fit out.

The ventilation design shall comply with the following building regulation approved documents and standards:

Design Standards

The ventilation systems will be designed in accordance with recognised UK and industry best practice.

Design will be based on standards and guidelines, including:

- British and European Standards (BSI).
- Chartered Institution of Building Services Engineers (CIBSE).
- Building Services Research and Information Association (BSRIA).
- Building Research Establishment (BRE).
- Heating & Ventilating Contractors Association (HVCA).
- Control of Odour and Noise from Commercial Kitchen Exhaust Systems (EMAQ)

Statutory Requirements

Ventilation systems design will also be based on the following Statutory Requirements:

- The Building Regulations.
- Clean Air Act 1993.
- The Control of Pollution Act 1974 and Amendment Acts.
- The Construction (Design and Management) Regulations 2015.
- British Standards and Codes of Practice.
- Manchester City Council Planning Conditions & Requirements.

System Descriptions

All equipment shall be installed so as not to create any nuisance by way of noise, vibration, heat or fumes to neighbouring tenants, residential apartments or the public (including recirculation).

Café prep extract system

The cafe extract system has been designed to provide 60 l/s as per Building Regulations Part F for a kitchenette area. This system comprises 1 x ceiling mounted extract fan, with fore and aft silencers, and exhaust air is to be extracted from unit venue from a louvre above the entrance door.

The fan is complete with an adjustable run-on timer linked to the lighting PIR to ensure the system only activates during use.

Risk assessment as detailed in Appendix 3 of the EMAQ Guide

Not applicable - No cooking present, coffee shop and bar only.

Heat Recovery Fresh Air Ventilation

As the unit is has a very low fixed occupancy, general ventilation is provided by infiltration through the fabric of the unit and via the doors to external and the adjacent concierge area.

As the extract ventilation from the café prep area keeps the area under negative pressure this ensures that fresh air from external is pulled into the space to provide the legal minimum of 10 litres/sec/person.

Heating and cooling fan coil units within the space also ensure that the air is mixed within the unit.

Appendix 1 – Risk Assessment for Odour (extract from EMAQ – Control of Odour and Noise from Commercial Kitchen Exhaust Systems)

Appendix 3: Risk Assessment for Odour

Odour control must be designed to prevent odour nuisance in a given situation. The following score methodology is suggested as a means of determining odour control requirements using a simple risk assessment approach. The odour control requirements considered here are consistent with the performance requirements listed in this report.

Impact Risk	Odour Control Requirement	Significance Score*
Low to Medium	Low level odour control	Less than 20
High	High level odour control	20 to 35
Very high	Very high level odour control	more than 35

* based on the sum of contributions from dispersion, proximity of receptors, size of kitchen and cooking type:

Criteria	Score	Score	Details
Dispersion	Very poor	20	Low level discharge, discharge into courtyard or restriction on stack.
	Poor	15	Not low level but below eaves, or discharge at below 10 m/s.
	Moderate	10	Discharging 1m above eaves at 10 -15 m/s.
	Good	5	Discharging 1m above ridge at 15 m/s.
Proximity of receptors	Close	10	Closest sensitive receptor less than 20m from kitchen discharge.
	Medium	5	Closest sensitive receptor between 20 and 100m from kitchen discharge.
	Far	1	Closest sensitive receptor more than 100m from kitchen discharge ¹ .
Size of kitchen	Large	5	More than 100 covers or large sized take away.
	Medium	3	Between 30 and 100 covers or medium sized take away.
	Small	1	Less than 30 covers or small take away ¹ .
Cooking type (odour and grease loading)	Very high	10	Pub (high level of fried food), fried chicken, burgers or fish & chips. <i>Turkish, Middle Eastern or any premises cooking with solid fuel</i>
	High	7	<i>Vietnamese, Thai, Indian, Japanese, Chinese, steakhouse</i>
	Medium	4	<i>Cantonese, Italian, French, Pizza (gas fired),</i>
	Low	1	<i>Most pubs (no fried food, mainly reheating and sandwiches etc), Tea rooms¹</i>

Note 1: A planner may take a pragmatic view when assessing whether certain low risk kitchens require any odour abatement to be fitted. In reaching this decision the Planner may consider the nature of the food being cooked and/or the size of kitchen and/or its location.

Appendix 2 – Odour Arrestment Plant Performance (extract from EMAQ – Control of Odour and Noise from Commercial Kitchen Exhaust Systems)

Odour arrestment plant performance

Low to medium level control may include:

1. Fine filtration or ESP followed by carbon filtration (carbon filters rated with a 0.1 second residence time).
2. Fine filtration followed by counteractant/neutralising system to achieve the same level of control as 1.

High level odour control may include:

1. Fine filtration or ESP followed by carbon filtration (carbon filters rated with a 0.2 - 0.4 second residence time).
2. Fine filtration or ESP followed by UV ozone system to achieve the same level of control as 1.

Very high level of odour control may include:

1. Fine filtration or ESP followed by carbon filtration (carbon filters rated with a 0.4 – 0.8 second residence time).
2. Fine filtration or ESP followed by carbon filtration and by counteractant/neutralising system to achieve the same level of control as 1.
3. Fine filtration or ESP followed by UV ozone system to achieve the same level of control as 1.

In some instances where very high levels of control are required combinations or sacrificial levels of filtration may be employed.

Maintenance must be carried out to ensure these performance levels are always achieved.

Appendix 3 – Ventilation Design Drawings