



Dakota, Manchester Airport

Kitchen, Bar and Restaurant Ventilation Statement

On Behalf of
Evans Dakota Hotels Ltd

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1. Introduction

1.1 General

The ventilation statement has been prepared on behalf of Evans Dakota Hotels Ltd and is in support of the proposed erection of a 7 storey 154 bedroom hotel, with associated car parking, feature vehicular drop-off area and canopy, service yard, landscaping and highways works to existing access at Bailey Lane, Manchester Airport.

This statement details the proposals for the kitchen, bar and restaurant ventilation systems.

The statement seeks to address Condition 17 of the Planning Permission:

“17)a) 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.

Mixed use schemes shall ensure provision for the internal ducting in risers that terminate at roof level. Schemes that are outside the scope of such developments shall ensure that flues terminate at least 1m above the eave level and/or any openable e windows/ventilation intakes of nearby properties.

b) Prior to commencement of the use hereby approved confirmation shall be submitted for the approval of the City Council as local planning authority that the approved scheme has been implemented.

Reason – In the interest of the amenities of occupiers of nearby properties pursuant to policy DM1 of the Core Strategy and saved Unitary Development Plan policy DC26.”

2. Ventilation Strategy

2.1 Regulations

The building will be provided with ventilation systems to comply with Approved Document F: Means of Ventilation and CIBSE Guidelines. Adequate means of ventilation will be provided for people in the building.

Mechanical ventilation systems will provide the following ventilation rates:

- Kitchen: Ventilation in accordance with HVAC Specification for Kitchen Ventilation Systems DW/172.

2.2 Bar and Restaurant

The front of house bar and restaurant dining areas shall be provided with supply and extract ventilation from the centralised mechanical ventilation system serving the ground floor level.

Supply and extract ventilation shall be provided at a rate of 10 l/s per person based on occupancy rates of:

- Bar - 135 covers.
- Restaurant - 100 covers.

Food will be served in the restaurant and a dining capacity of 100 covers is provided. The typical hours of operation will typically be 5am until 11pm.

An air handling unit shall be installed in the external plant compound on the roof. The AHU shall operate on a full fresh air constant volume basis according to an occupancy schedule.

A system of air distribution ductwork and ventilation system components shall be installed from the ground floor to the roof level via the main riser.

2.3 Kitchen Ventilation

2.3.1 General

Mechanical supply and extract ventilation will be provided to the kitchen.

The kitchen shall be ventilated by a separate bespoke supply air AHU and separate kitchen extract fan located in the external plant compound at roof level.

The supply and extract fans shall operate in tandem to remove products of combustion, heat, cooking pollutants and water vapour from the kitchen and wash-up areas. The systems shall also provide general ventilation to the kitchen.

A system of air distribution ductwork and ventilation system components shall be installed with tempered fresh air introduced to the kitchen via supply air diffusers and air extracted via the cookline canopy.

Supply air rate shall be kept to a maximum of 85% of the extract air rate to establish a slight depressurisation within the kitchen.

The kitchen ventilation system is shown on the A.F. Connell drawings provided in the Appendices.

Based on the food offerings of other hotels in the group the restaurant would serve breakfast and a variety of lunch and evening meals with a strong bias towards steak.

Menus of the group hotels can be seen on their webpages (for example <https://dakotahotels.co.uk/manchester/drink-and-dine/menus>).

2.3.2 Kitchen Layout

The kitchen layout has been developed by Monarch Catering Equipment. The cookline is based on predominately electrical equipment and induction cooking. The kitchen layout is provided in the Appendices.

The central cookline will be provided with an island ventilation canopy.

Canopy ventilation rates are calculated following the thermal convection method in DW172 and the calculations are provided in the Appendices.

The dishwash shall have a non-mechanical condensation canopy.

General areas shall be provided with supply and extract ventilation via ceiling mounted supply diffusers and extract grilles.

General kitchen area ventilation rates shall be as follows:

- Kitchen 40AC/hr.
- Dry Store 10 AC/hr.
- Glass Wash, Dish Wash and Pan Wash 30 AC/hr.
- Prep area 20AC/hr.

2.3.3 Filtration

The cookline canopy shall be fitted with removable stainless steel baffle filters.

A regular maintenance and cleaning regime shall be undertaken by the operating team to ensure continued effectiveness of the system.

2.3.4 Discharge

A fire rated kitchen extract duct shall be routed from the extraction terminals in the kitchen to the external plant compound at the roof level.

Extract ductwork shall connect to the kitchen exhaust fan unit.

Exhaust ductwork shall run a short distance from the fan, turn up to vertical and constrict to provide a high velocity discharge to atmosphere in accordance with a discharge velocity of 12-15m/s.

The point of discharge shall be 3,720mm above the roof level.

Discharge shall be arranged so that the exhaust is expelled for good dispersal to atmosphere.

There are no nearby buildings to the point of exhaust. A site location plan is included in the Appendices.

2.3.5 Ductwork Access

A riser within the building provides a vertical route from ground floor to the external plant compound and the riser is fitted with doors and walkways at every floor level.

Access hatches shall be provided into ductwork at 3m intervals and at changes of direction to facilitate ductwork inspection and cleaning.

Regular inspection and cleaning of the kitchen ventilation systems will be managed by the hotel facilities team.

2.3.6 Maintenance

A regular maintenance and cleaning regime shall be undertaken by the operating team to ensure continued effectiveness of the system.

Appendix A: Site Plan

Appendix B: AF Connell Kitchen Ground Floor Ventilation Design

Appendix C: Monarch Catering Equipment layout and Canopy Calculations