Stack Manchester, Temporary Retail & Leisure Development, Oxford Road
Planning Submission
Ventilation Strategy Statement

Introduction

This statement has been prepared by Link MEP to provide outline details of the ventilation proposals for Stack Manchester Retail & Leisure units in Oxford Road, Manchester.

The development consists of existing one and two storey structures housing food and beverage (street food) retail, non-food and beverage retail, and small individual concession units to support the development.

The existing ventilation strategy will be retained where practicable within the food units. Where this is unable to be adopted a new system of mechanical extraction will be adopted.

The design and installation of ventilation systems will be developed in line with the following:

- Current Building Regulations Approved Documents
- CIBSE Guidebooks
- Health and Safety at Work Act
- Manchester City Council planning conditions and requirements
- All relevant British Standards and Codes of Practices.

Street Food Units

The Street Food Units have been identified as having 'cook and serve' type kitchen facilities. The kitchen areas will be provided with extract only mechanical ventilation via louvres and fan units to remove odours and water vapour. Make up air will be provided via openings within the container.

The kitchen extract system will be designed to meet as far as practicable the relevant criteria in the Chartered Institute of Building Services Engineers, DW172 and DEFRA design guidance.

As the style of cooking will be street food type, there will be a requirement to follow DW 172 guidance based on the rating of the cooking equipment and canopy plan area.

The existing kitchen extract ventilation arrangement comprises of a stainless-steel grease proof baffle filter connected to a single-phase plate axial fan mounted to the rear of the retail unit. The fan is fixed to the rear wall of the containers terminates to atmosphere via a gravity louvre to the rear of each unit. The existing fans vary in size dependent on the size of the retail unit. Make up air is provided via the front façade of the container.
Should any of the existing extract systems not be satisfactory to satisfy the use of the food unit

or the unit require retrofitting, then a new system of mechanical extraction will be provided. Gas safety shut off arrangements will be checked to ensure safe operation of the food unit extraction system and replaced or installed depending on the condition of the existing installation.

The operation of any new extract fan will be under the dictates of a gas safety system, which will hold off the gas supply to each food unit in the event of the extract fan in the unit not operating or in the event of fire. The fans will be switched manually within each food unit as required through the gas safety system interface.

Melenex lined in line duct attenuation will be provided to each new food unit extract connection to reduce noise breakout from the extract systems in accordance with local environmental guidelines.

Where extract ductwork exits a food unit and distributes through other areas of the building, the ductwork installation will be provided in 1 hour fire rated ductwork.

Each new extract system will be provided with a dedicated Electrostatic Precipitator odour pollution system to eliminate odours from the cooking operations causing nuisance externally.

As the portable container units are shallow in depth, the existing natural ventilation strategy is proposed for the seating areas via openings within the building facade to provide the make-up air to the kitchen extract system.

The existing heating utilising low energy radiant heating to heat the people within these units.

Sanitary Facilities

Manchester Stack users will be provided with WC facilities which are currently adequately ventilated to prevent any build-up of smells, mould and mildew whilst controlling the humidity of the air.

The sanitary facilities are provided with extract ventilation at rates which exceed the minimum requirements of Part F whilst remaining energy efficient. Demand control systems will be used to control the extract fans..

The demand control systems will be based on occupancy within the WCs. These systems are linked to local fans such that only those that are required to be on will run.

Retail Units

The retail units will have transient occupation by the public and typically 1 to 4 staff

occupying them for trade.

With openings to the front of the concession units providing a pathway for natural ventilation, it is proposed that all retail units will be naturally ventilated.

Stage and Seating Area

The stage and seating areas will be outside spaces and therefore be completely naturally ventilated.

Office Unit

The office unit will have natural ventilation via opening windows.