

Technical Note P6004/1

Project Name: Blossom Street - Manchester

Design Phase: Construction



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Title: Commercial Unit Extract

Project Ref: P6004

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Introduction

Blossom Street is a multi-storey residential apartment block which is currently being built in Manchester, which will also hold a mixture of different commercial premise at ground floor level.

This technical note is written to address planning issues with regards to commercial unit 1 situated in block B. The proposed unit will incorporate catering equipment for its end use and Futureserv have been asked to prepare an indicative ventilation design to mitigate the risk of noise and air pollution for future tenants of the apartments directly above the commercial unit.

Ventilation Design Measures

Futureserv have highlighted a number of ventilation components which can be incorporated to negate the risk of noise and odours affecting future tenants above the proposed commercial unit 1 at Blossom Street.

- Ventilation Attenuation
- Atomising Odour Neutraliser
- Activated carbon filters
- UV Ozone Odour Neutraliser

Firstly, ventilation attenuation will be installed on both supply and extract ductwork. This will absorb any excess noise from kitchen equipment or ventilation fans and remove risk of nuisance noise being transferred outside of the commercial unit.

The Atomising Odour Neutraliser is designed to assist other odour reduction control methods in Kitchen Extract Systems, at those periods when the cooking loads exceed the design point, e.g. at peak loads by the injection of an odour control agent in to the extract air stream. The Neutraliser is separate component installed within the kitchen that has a sensor for automatic control which activates the injection of an odour control agent when the Kitchen Extract system is turned on. The neutraliser meets the DEFRA guidance on the control of odour and nuisance from catering establishments.



Activated carbon filters are installed in the airstream as a further odour reduction measure. The construction of each Carbon Discarb Cell gives a strong unit capable of removing odours from large air volumes at the required contact times for systems, the advantage of Activated Carbon Filter Cell is that the carbon panels are sealed in, meaning there is no possibility of air leakage, resulting in odour leakage.



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The UV Ozone Odour Neutraliser are designed to be mounted outside of the ductwork, or on the side of the kitchen canopy, and inject the Ozone into the airstream capable of removing odours created in the commercial kitchen environment - utilising Ultra Violet technology, ozone is produced from a bank of low pressure UV lamps designed to operate at a specific wavelength of 184nm. Ozone is then mixed in the duct to oxidise the odorous organic compounds present, breaking them down into Carbon Dioxide and water, along with some residual ozone, thus rendering them odourless.

