

Odour from Restaurant

Local residents and occupiers of prestigious offices complained to the local Council about odours from a restaurant located in a mixed residential, retail and commercial area. The Airshed was appointed by the restaurant operator to advise them on the best practicable means for abating nuisance.

The main cooking exhaust discharged from a vent within a quadrangle and terminated 3m above ground level. The local planning authority had previously restricted the erection of external ducting outside the building on grounds of visual amenity.

There were residential properties immediately adjacent, to the restaurant although none directly above the restaurant.

The Airshed reviewed the abatement at the site in terms of DEFRA Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems.

This non-statutory Guidance sets out procedures for assessing the best practice requirements for ventilation systems, including the minimum requirements for ventilation, ductwork and odour control. The level of odour abatement adopted at the site was best practice in terms of the DEFRA Guidance and the restaurant owner had good records of maintenance. Poor dispersion was considered to be the most likely cause of the complaints.

CFD modelling was used to assess the likely dispersion within the quadrangle. This indicated that odour was likely to remain a significant problem for adjacent occupiers unless the emissions were effectively dispersed. Increasing the efflux velocity or diluting gases would not solve the problem and could create a noise problem.

Best practice for odour abatement for this type of operation in this location was: fine filtration to remove grease, smoke and fume; and carbon filtration with a 0.1 second retention time.

The Airshed advised on the best location for the exhaust, which was carried up through the premises to roof level, with the flue terminating 1m above the roof ridge level with an efflux velocity of 15m/s. The restaurant has subsequently operated without provoking further complaint.

