

Maintenance of Extract Ducts – Design to Improve Access

The Problem / Challenge

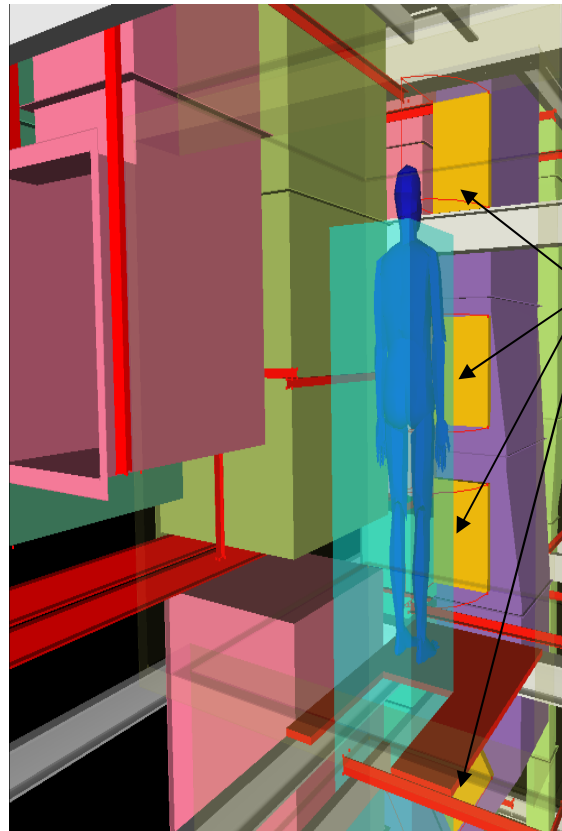
On a major project with several catering units, the designers were asked to consider the maintenance requirements for air extraction ducts. The ducts, providing air extraction for catering units, required regular maintenance and thorough cleaning. This was chiefly because grease build up could provide a significant fire risk.

The risks

There was a risk of poor safety critical maintenance if in practise it was difficult, costly, or time consuming to do. There were hazards associated with work at height and confined spaces as well as the potential for fire, slips and trips and musculo-skeletal injuries (MCDs).

The solution

The catering facilities were positioned, where possible, along external walls facilitating short, direct (mainly vertical) duct routes. Access gantries were provided for maintenance. Access panels were also installed at frequent intervals for internal inspection and cleaning (at a maximum of one arm span apart). Computer modelling was used to eliminate obstructions and service clashes.



Access panels made accessible for cleaning

The benefits

Usable access was provided for maintenance and visual inspection. Regular preventative maintenance was encouraged as it was both low cost and easy to achieve.

Key points

- Early communication was essential with the end user to determine their maintenance needs.
- Early coordination between the designer and developer improved the location of the catering units relative to feasible exhaust positions.
- The frequency of maintenance required influenced the final design.