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HCA Meets Design Challenges at School

High Care Air (HCA) has supplied bespoke Textile Diffusers (Fabric Ducts) for the Canteen and Sports Hall at Whitmore School in North London, a new build construction next to the original school building.

Working with NG Bailey; HCA was involved in the design of the diffusers and air patterns to achieve optimum conditions within each area.

"Both areas presented challenges," explains Paul Russon of HCA. "The Sports Hall is very high and required for badminton games, creating a long throw but low velocity design – difficult with multiple air densities at different supply conditions. The canteen ventilation system needed to heat a large space, delivering air over a wide area without draughts."

In the Sports Hall (right), HCA specified a non-permeable wipe clean material to deliver the air. One central diffuser entrained and moved air towards the walls where the two



diffusers, one along either wall, delivered supply air to low level whilst inducing large volumes of ambient air into the overall air pattern. The result was high volumes of air movement and circulation but low velocity within the court areas.

In the Canteen (below), HCA used its specially manufactured polyester material to create four halfround diffusers suspended between Lay in Grid ceiling rows. Colours were chosen to match the overall scheme. These diffusers delivered air through a mixture of large laser cut perforations laid in blocks upon the duct circumference to create inductive air patterns. Predictive software used by HCA generates air flows and velocity predictions that allow them to map and modify the air patterns as

dictated by project requirements.



HCA materials are unique in offering Flame Retardant protection alongside, Anti Microbial treatment and Non Shedding Clean Room quality material as standard.

Unlike other manufacturers, HCA does not charge a premium for different colour options. All nine of its colour choices are no additional cost.

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