

# City Academy, Aston



**Project name:**  
City Academy, Aston

**Location:**  
Aston, Birmingham

**Value:**  
£3m new build project

**Services:**  
Building Services (M&E)

## The Brief

The City Academy, an inner-city college in the Aston area of Birmingham, incorporates a sunspace façade, creating a prominent feature that demonstrates the benefit of seamless collaboration between engineer and architect.



# Project Overview

With take-up of further education being traditionally low for this inner-city college, the aim was to encourage more local students to enter the education system. Staff and the design team wanted to reflect the values of the college in the structure of the building – providing a space that was open and welcoming on a restricted city site.

Part of the solution was the construction of the sunspace – a dramatic glass structure that dominates the rear face of the college. However, a double-glazed wall of around 500 sqm would have a marked effect on the temperature of the adjacent spaces. The major challenge for One's building services team was to integrate the sunspace into the heating strategy, ensuring it worked like a conservatory, not a greenhouse – a task that needed the specialist skills of architects and engineers, working collectively.

The quantity and quality of the natural light that streams into the college helps to reduce the total energy costs of the building. The sunspace brings daylight and warmth directly to the heart of the building, transforming what could be bland circulation areas and stairwells into bright, uplifting sunlit spaces.



## The Benefits

- **Using the building's orientation and design to heat and cool the building**
  - The building acts as a thermal buffer between the inside and out. Its orientation on the building's eastern elevation allows the morning sun to pre-heat the space before anyone arrives. The potential greenhouse effect was countered by a natural ventilation strategy, as the opening lights at the top of the structure ensure the space never overheats.
- **Passive ventilation approach to lower energy costs** – Because the external glazed façade traps heat from the sun in winter and then radiates it throughout the rest of the building, the academy requires less energy to heat. In summer, it protects the building from overheating through careful ventilation placement, ensuring mechanical ventilation is at a minimum. Natural light is also maximised, reducing the need for artificial lighting and its associated energy costs.

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*High quality accommodation is vitally important for us. The perception of further education amongst potential students is changed for the better when we can offer them welcoming new buildings like City Academy, Aston. We try to make our buildings unique, and the success of the sunspace contributes to that.* ”

Phil Forrest, Director of Property,  
City College, Birmingham



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