

BRIGHT SOLUTIONS TO TRANSFORM A SCHOOL'S PROSPECTS



AWARDS

2008 RIBA AWARD
Winner

2008 PUBLIC PRIVATE FINANCE
Winner

2008 CONSTRUCTING EXCELLENCE
AWARD: THE LEGACY AWARD
Winner

2008 RIBA SORRELL FOUNDATION
AWARD
Shortlisted

2008 RIBA SUSTAINABILITY
AWARD
Shortlisted

BRISTOL BRUNEL ACADEMY BSF
BRISTOL, UK

Bristol Brunel Academy was the first secondary school in the UK to be completed as part of the Building Schools for the Future (BSF) programme and was procured via a PFI route and constructed in just 67 weeks.

The academy is a three storey block which houses 1,180 pupils and is subdivided to create two distinct banks of educational space arranged about a central atrium.

Sustainability was a key issue for the client, meaning that the environmental strategy has informed every part of the building's design. The building orientation is optimised and external shading on the south facade reduces summer solar gain while increasing usable daylight. This also minimises the use of blinds and the need for artificial lighting. Cross ventilation and thermal mass eliminate summertime overheating, while levels of daylight are twice those typically found in schools.

A biomass boiler – the first in a secondary school and specified before they became commonplace – provides around 80% of the heating, and over 90% of the WC water use is supplied by recycled rainwater.

We have been able to standardise our design innovations on this project in order that they can be applied, along with prefabricated services elements, to other schools in the programme, thereby improving construction time while minimising costs.

BuroHappold Engineering has also provided unique and innovative post-occupancy support to the school. Our sustainability experts established that, since the building has been in use, the rainwater collection system has negated the need for mains water to be used to flush toilets. This information has enabled the facilities managers and occupants to optimise the building performance and achieve a reduction in electricity consumption of over 40%, saving tens of thousands of pounds per annum.

Our sustainable design has enabled the contractor to meet Bristol City Council's requirements on sustainability, and the client to save money, both while enhancing the academy's green credentials.

CLIENT
Skanska Rashleigh Weatherfoil

ARCHITECT
Wilkinson Eyre Architects

PROJECT VALUE
£22m

DURATION
Completed August 2007

SERVICES PROVIDED BY
BUROHAPPOLD
Building services engineering, daylight and thermal analysis, sustainable technologies, fire engineering design and risk assessment.