

£18.7m Sandwell Academy

This two storey 10,000m² school was completed during September 2006, opening initially to 180 year 7 students and a lower 6th of 150 students. The school will mature to accommodate 1200 children and is situated in Halfords Lane, opposite West Bromwich Albion Football Club.



BH&M Architects

Sandwell Academy was designed by Barnsley Hewett & Mallinson, who have also worked on a number of master plans for the DFES and the Architect responsible for completing the first new City Academy, The Walsall Academy.

Sandwell Academy has a determination to deliver a genuinely personalised curriculum for all and the support of West Bromwich Albion football club, not only through its location but through involvement as sponsors and governors, reinforces the specialism and its impact upon student motivation and achievement. Physical education and Sport Students receive a broad physical education experience with year 7 typically receiving over 4 hrs curriculum time per week. Business Enterprise concepts are studied from year 7 and initially integrated into the Design and Technology curriculum. A range of business and ICT courses are offered in the 6th form providing students with opportunity to develop enterprise skills; local industry is involved with the delivery and design of the curriculum. Former Prime Minister Tony Blair visited the Academy during 2nd February 2007.

Acoustic design arose as an early implementation of the acoustic control requirements called for by Building Bulletin 93. The Academy is sited close-by to an industrial estate and the M6 motorway beyond; with noise from these sources approaching 60 dBA, environmental noise exposure was a material consideration for the acoustic performance of the external building

fabric. Despite this challenge, AAD was able to preserve the design team's goal to implement a naturally ventilated solution, which used attenuated wind catching terminals.



BH&M Architects

With the building envelope acoustic and ventilation specifications resolved, the team turned its attention to teaching spaces. Here, a particular challenge awaited them, which contrasted BB93's strong caution against the use of "open plan" teaching spaces with the Academy's Project Manager, Sir Kevin Satchwell's philosophy*... "this will inevitably include a combination of open plan teaching and independent learning areas".

* Sir Kevin's requirements and considerations are re-published below.

This user requirement included a number of "open plan" teaching areas, some of which were even "duplex" or double height spaces, accommodating activities as diverse as art and technology. For these spaces, there is a real risk that speech intelligibility (i.e. the ability to interpret speech correctly) will be compromised and - if permitted - would be detrimental to the learning process. To address BB93's stringent speech intelligibility requirements, applicable if such spaces are required, a 3D speech propagation "talking head" model was used to support the assessment of speech intelligibility (which is also affected by the background noise level in each space) room shape refinement and surface finish areas for absorption and diffusion. The final result was a combination of a managed teaching approach balanced by closely considered and specified room acoustic design.

Other tricky design assessments included the positioning of the learning resource centre (or library to those still coming to terms with modern language) over a workshop and a galleried sports hall. Both these features necessitated particularly close scrutiny to building fabric and

finishes. Although blockwork walls were used to provide the necessary acoustic separation for most rooms, dry-wall solutions were used in some areas at top floor level.

Client: Sandwell City Academy Trust
Sponsor The Mercer Company
Architect BH&M
Main Contractor Bowmer & Kirkland

Links

Outline proposal for the provision of the Academy
www.dcsf.gov.uk/foischeme/_documents/DfES_FoI_433.pdf

Sandwell Academy Trust Ltd
www.thebiggive.org.uk/charity.php?charity_id=2470

Sandwell Academy

Noise Level in Open Plan Spaces

It is critical to the delivery of the Curriculum that the design for the Sandwell Academy embraces the methodological approach of Thomas Telford School. This will inevitably include a combination of open plan teaching and independent learning areas. Working in an open plan area requires a high level of co-ordinated teaching and planning to ensure that learners and teachers can function effectively. This becomes increasingly more important when the design and use of space is compact.

In the Sandwell design there are several open plan teaching and learning spaces. These include Design Technology, Art and Design and Learning Bases for Mathematics, English, Humanities and Business Studies and doubling up of Science Laboratories.

In relation to Art and Design, because of the physical size of the open plan studio, the location of the electronic whiteboard (focal point to teaching independently) and the relatively quiet nature of most Art activities i.e. painting and drawing, the noise level is not considered to be an issue provided that the normal design considerations are made.

In Design Technology, which contains machines, the physical teaching and learning areas become more compact. However, the emphasis of Sandwell Academy will be on 'clean' technology i.e. CAD CAM which should reduce the noise levels considerably. Again, electronic whiteboards will be strategically placed so that they are the furthest point from each other. Open spaces in front of whiteboards allow pupils to pick up their stool and relocate in front of the whiteboards for demonstrations.

In the Learning Bases, the design of the layout enables teachers to work collaboratively and independently. Where teachers wish to deliver different topics, a physical space in front of each whiteboard will be designed so that students can bring their chairs to the front and listen to a presentation and gain a good view of the content on the whiteboard. This approach can be used in Science where flexible arrangements are required in Science Laboratories. We have decided to design two adjoining laboratories to serve two teaching groups. This arrangement allows effective deployment of teachers, ancillary support and lab technicians.

The maximum class size at the Sandwell Academy will be 26. Seating plans will vary according to the type of learning that youngsters are engaged in i.e. independent learning, use of PCs, class teaching in front of a whiteboard, group-work etc. As all lessons start at the same time, the optimum amount of presentations being made in a learning area would be three. The number of students engaged in discussion would depend on the effectiveness of the teacher. A good teacher allows productive noise levels to continue and will intervene to establish productive noise levels where appropriate.

Working as a team in open plan learning areas in a co-ordinated manner has immense benefits for new entrants to the profession, trainee teachers and teaching assistants. Walking through open plan areas will be controlled. Well organised schools do not have children walking round school during lessons and only at change of lessons will children be walking through corridors alongside learning areas.

*Sir Kevin Satchwell
Project Manager
Sandwell Academy*