



partnerships for schools
building schools for the future

This case study looks at the dialogue between students, staff and local residents with designers in order to create a flexible new learning environment which can adapt to the future needs of the school.

It examines the consultation process, design concept, and focuses on sustainability.

Key project information

School: Bristol Metropolitan College
Delivered by: Bristol LEP - Bristol City Council, Skanska, with Wilkinson Eyre Architects, Arup, Buro Happold Grant Associates, and ICT providers Northgate
School type: New build
Specialism: Languages
Opened: September 2008

Flexibility and adaptability for the future: Bristol Metropolitan College

Project description

Bristol Metropolitan College is one of four schools in the first wave of the Bristol BSF scheme. The very strong working relationship between the school team, architects and construction team was distinguished by genuine dialogue that was highly productive and has produced a building that is more than fit for purpose. The process involved not just the school staff but also students, parents and the wider community, and has resulted in a building that offers a sense of space, light, airiness and is, above all, welcoming.

The design reflects and responds to the vibrancy and dynamism of the school's varied yet unified community, while offering flexibility for accommodating future models of learning. It also facilitates varied learning styles and also promotes flexibility of approaches to teaching and learning.

Key design aspects

Bristol Met is designed as three 'learning clusters' which can in future become separate small learning communities, should the school decide to apply that model.

From 2009, a competency-based curriculum and personalised learning will drive teaching and learning, supported by the design of the learning clusters. For example, the breakout areas, equipped with ICT, enable personalised learning, and the design incorporates seminar rooms for small group work.

Part of Bristol Met's vision is that the whole site can be used as a learning environment – for example, there is an amphitheatre for outdoor lessons and performances. The building has enabled the introduction of new working practices in administration that support the curriculum, for example by making data collection easier and more effective.

The configuration of the building can be readily altered to accommodate different educational models: internal walls can be quickly removed to alter the size of classrooms. Acoustic dividing screens between some rooms can be pulled back to create areas for general teaching of 60 students, lectures, staff training etc. Layouts in the science laboratories are flexible: the workbenches are moveable and services are confined to the walls, allowing learning by either small or large groups. The twin dance studios enable two groups of

Flexibility and adaptability for the future

students to use them separately, or the divider screen can be pulled back for large group work, visiting workshops and artists' residences.

The students' dedicated single entrance and student reception encourage a strong sense of ownership and belonging. The entrance also enables members of the leadership team to welcome the students each morning.

Of additional importance, the entrances for students and visitors combine transparency with security and have a high visual impact. Passive supervision of internal spaces helps students feel safe: there are clear sight lines from fully-glazed staff work spaces that overlook the entrance to each learning cluster and are located on both floors of the clusters.

Toilets are open plan and unisex, reducing potential for bullying. Locating the student reception desk and student support services (outreach, counselling and First Aid) by the entrance reinforces the students' identification of the building as theirs.

Consultation

Selected students were 'design ambassadors', acting as a sounding board for the design team and as representatives for fellow students. Prior to handover, student year group representatives toured the new building taking photos and fed back their impressions to each year group in presentations. Public art was a key feature of the design, and a team of students worked with two staff members and Creative Partnerships in developing public art for the school.

A 'Futures Group' of staff and governors met regularly during the design and construction to evaluate every aspect of the design and to consider new ways of working that would be enabled. Representatives of Wilkinson Eyre Architects attended community meetings to present ideas and gain feedback as the design progressed. Members of the community and parents toured the building as it neared completion.

Sustainability

BMC is built to a BREEAM "Very Good" standard – it's designed to emit less than 3kg/m² carbon dioxide, 40% below the required standard. Also, the building is constructed from between 17-24% recycled material, which outperforms the Waste and Resources Action Programme's (WRAP) target of 10%.

Highly efficient lighting and control systems reduce electricity use. Energy use is continually monitored via an ongoing series of post-occupancy evaluation meetings, where the building's performance is evaluated, opportunities for improvements identified and user feedback given.

Passive ventilation has been engineered into the structure via chimneys, which allow larger areas of glazing while maintaining exceptional summertime conditions with high ventilation rates when required. The building uses the structure's thermal mass to stabilise temperatures, reducing energy requirements.

High levels of daylight are provided through the façade and roof-lights, and highly efficient lighting and sensor control systems are used to further reduce energy use.

Heating and hot water are supplied by a biomass boiler burning wood chip from a nearby forest. Rainwater is recycled to flush all toilets. In addition, extensive use of solenoid valves control and monitor water flow in toilet areas.

Sustainable urban drainage systems (SUDs) have been incorporated within the schools' grounds, as well as porous surfacing in parking bays and all-weather pitches, all to reduce run-off into local watercourses.

Planting reflects the many varied countries of origin of Bristol Met's students and helps acknowledge identity. Additionally, the ecological value of the land has been enhanced with native plants and species-rich grasslands that will encourage local biodiversity.

Key contact

Jean Randen, LEP Administrator
Email: jean.randen@skanska.se

Further information

For the latest news about BSF in Bristol and the activities of Bristol's Local Education Partnership (LEP) see: www.bristollep.co.uk/