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Building Schools for the Future – Bristol Schools

Case Study 13

Building Schools for the Future (BSF) is a national programme aimed at lifting educational attainment through a transformation of England’s secondary schools. Over 15 years the project will see new schools built and existing ones upgraded to meet the needs of communities in the 21st century.

Aspects of Sustainability

This project highlights the following:

Social Aspects

Human Resources
 Corporate Community Involvement
 Business Ethics
 Health and Safety

Environmental Aspects

Energy and Climate
 Materials
 Ecosystems
 Local Impacts

Economic Aspects

Project Selection
 Supply Chain
 Value Added



Skanska UK is delivering the BSF programme in Bristol in partnership with BSF.

Project Introduction

The BSF programme will not only transform England’s secondary schools with innovative sustainable development tools and a boost to educational achievement, but it will also champion long-term partnerships between the public and private sectors. Working together over the 25 years of a typical contract, these partnerships will create world-class 21st century learning environments that will inspire students of all ages and provide exceptional assets for the whole community.

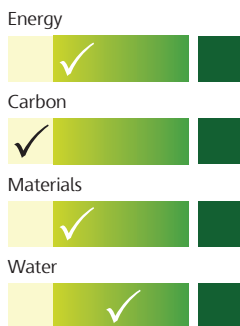
Far more than a simple building project, the programme will also use Information and

Communications Technology (ICT), to support new approaches to teaching and learning, enabling students to learn outside the normal school routine. Through extended opening hours, the facilities will also be available for use by the entire community.

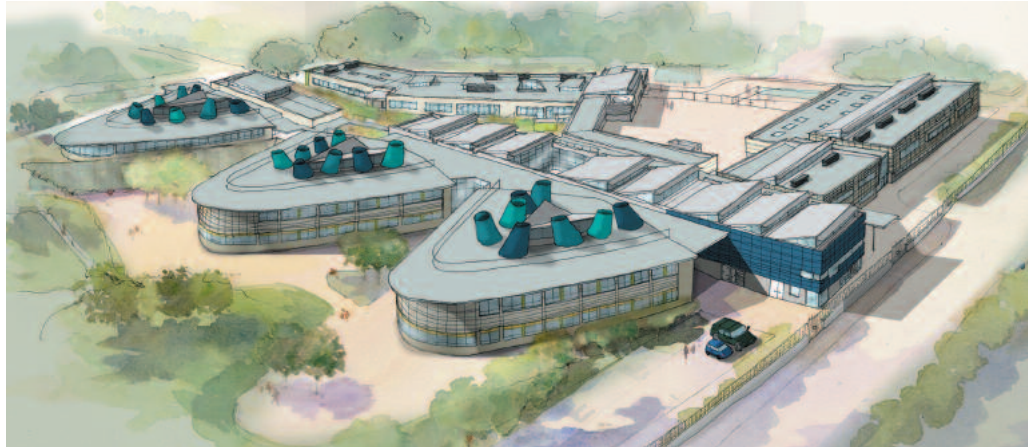
The BSF programme in Bristol is being delivered in partnership with Skanska UK. Highlights include the following:

- A 10-year partnership to develop the city’s schools
- Four new schools opened 2007/2008
- A managed service for ICT
- A 25-year operating contract
- A unique focus on sustainability
- Job creation
- Strong links with the local community

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The Schools

The Bristol project initially involves the transformation of four schools, each of which includes innovative features that meet the aspirations of both the schools and Bristol City Council as well as delivering the objectives of the BSF programme.

The schools involved are as follows:

- Bristol Brunel Academy (completed for the Autumn 2007 term). Formerly Speedwell Technology College this is a 1080 place secondary school including eight forms of entry for 11-16 year old students, a 100 place post-16 centre as an integral part of the east-Bristol post-16 campus strategy and a dual use leisure centre with a fitness suite, dance studio and changing rooms.
- Brislington Enterprise College (completed for the Autumn 2008 term) is a 1485 place secondary school, with 11 forms of entry for 11-16 year olds, a 250 place post-16 centre and includes a 20 place unit for physically disabled children who will be relocated here from the Florence Brown unit of Courtlands Special School.
- Whitefield Fishponds Community School (completed for the Summer 2008 term) has 1080 places for 11-16 year olds in a new building. The new school which will specialise in languages links to the existing Severe Learning Disability Department.
- At Hartcliffe Education Campus, Skanska will deliver a 945-place secondary school, a 420 place primary school, a 200 place vocational centre, a 45 place nursery, a 33 place student support centre for 14-16 year-olds at risk of exclusion and severe learning disability provision for 50 pupils. A recently completed regional gymnastics centre will be operated by Skanska as a dual use leisure facility.

Contributing Towards Sustainable Development

Sustainability is one of the four key pillars to successful delivery in BSF. Overall schools are thought to contribute to around 15% of public sector carbon emissions, so it is critical that in the future their environmental impact is reduced.

In the Bristol BSF programme Skanska demonstrates excellence in the field of sustainable development, driven by a series of commitments to the city's people that were a vital part of the company's winning bid.

Any new buildings and refurbishments are constructed from sustainable materials which contain at least 12% of recycled product. The schools are the first to be built to the government's Waste and Resources Action Programme (WRAP) target.

Energy efficiency materials, heating systems and lighting are all engineered into the building, and the designs maximise natural daylight and provide passive air circulation (engineering the building to naturally ventilate where possible).

Additionally a grey water recycling system uses roof run off to flush toilets and biomass boilers, which use wood chips from sustainable local (within 30 miles) forests and recycled products. These minimise energy requirements and cost over the life of the building and provide an invaluable learning resource for the students. Flat screen monitors will be installed, displaying the energy and water use within building. Visibility panels will be engineered into the plant room walls and the grey water recycling facilities. This enables the building to become a learning resource for the students, allowing teachers to incorporate sustainability into the curriculum.



Information and Communications Technology

The ICT element of the programme is supplied by Northgate, a company committed to sustainable growth which promotes social, economic and environmental improvement. Northgate focuses on the value of designing sustainable development into education and the opportunity for technology to support the full engagement of schools and those living and working around them in delivering the vision for a sustainable curriculum, campus and community.

Social Aspects

Involving students and teachers

Students and teachers are able to increase their awareness through workshops focusing on the re-development, instilling a sense of ownership in the projects, and improving personal confidence and self esteem. This is particularly important as these schools are currently perceived as failing, with poor exam results, high truancy and low career prospects for students.

Since Skanska started, over 4680 students have attended workshops and briefings, allowing input into the design of the buildings.

The construction projects will also form the basis for GCSE citizen coursework, which contributes to 40% of their final mark. Photography, website design, building design, and art groups are all benefiting from the close relationship between Skanska and the schools.

Another of Skanska's planning requirements is to provide public art within the schools. In order to achieve this, the company has formed a Public Art Commissioning Body within each school, involving the students, teachers, community, artists and architects. This allows everyone to have a say in how they want their school to look and be perceived by the wider community.

A summary of local work with the community:

- 4680 Students & teachers attended Environment, Health & Safety & Sustainable Building briefings.
- 38 Public Art Meetings and Events.
- 1580 Students attended Professional Training Workshops.
- 12 students have completed their GCSE exam construction course, run by Skanska.
- 2 National Construction Week Events, each involving 250 students.
- 18 Handover Ceremonies & Events.
- 26 Community Meetings, Open Days & Parents Events
- 17 professional training workshops with students

Community

Skanska has made great efforts to build links with local communities to reassure those concerned about the new buildings. From the outset of construction every local resident is visited personally and given a Skanska contact.

Holding regular community meetings and allowing input into the design, ensures Skanska acquires the commitment of local residents.

Running open days to showcase the new attributes of the schools encourages greater awareness and student uptake. Recent community events have demonstrated the lack of awareness around the aims and objectives of BSF – showing that these days are vital to increase interest from prospective parents.

Extended schools

BSF is providing schools and their wider communities with valuable resources for use outside school hours. This allows the BSF schools and the local authorities involved to meet the Government's agenda for all schools to become 'extended schools' by 2010.

Extended schools provide services and activities that reach beyond the normal school day. This helps meet the needs of families and working parents in the wider community.

These services may include:

- 8am-6pm childcare including school holidays.
- Study support.
- Parenting support, including family learning.
- Access to specialist support services.
- Access to learning and recreational facilities for the wider community.

Economic Aspects

Skanska Infrastructure Development (Skanska ID) is a world leader in Public Private Partnerships (PPP). The ID team invests in, develops and operates roads, hospitals, schools, power plants and other social infrastructure in partnership with the public sector, with the objective of improving the lives of users. These investments boost local economies by improving education and health standards, making the areas more desirable for potential residents.

Skanska also employs 70% local labour and the company is required to employ apprentices, provide vocational training and offer work experience.

Environmental Aspects

The project provides long-term benefits to the environment. Each of the BSF schools is built to a BREEAM (Building Research Establishment Environmental Assessment Method) 'very good' standard. This exceeds the current statutory minimum of the Building Regulations and DfES Building Bulletins.

Good practices between Bristol City Council and Skanska are already emerging and these include several key performance indicators relating to sustainability. These include construction waste reduction targets; use of recycled materials in construction; monitoring of CO₂ emitted during construction; impact on bio-diversity, use of local labour and resources, and the promotion of students' awareness of environmental sustainability.

Renewable energy

Although no school site is the same, meaning different energy solutions are suitable depending on the area and circumstances, renewable sources will be used where possible for all the BSF schools.

Getting the basics right is important: outlined below are the foundations that these principles can be built on:

- Natural ventilation
- Good insulation
- Night cooling
- Thermal mass/passive solar
- Good light controls
- Water conservation
- Rainwater collection
- Sustainable urban drainage

Learning From Good Practice

At the current stage of the project, Skanska has learnt a number of practices that help to promote the programme positively and will help with future schools and stages.

These include:

- Informing and involving the community from the beginning.
- Not promising too much, too soon.
- Ensuring that people are informed in everyday terms about what is happening (not using technical jargon).
- Providing a clear single point of contact for queries.
- Talking face-to-face with people in the community and within the schools, not using emails or phone calls as the personal approach is always more effective.

