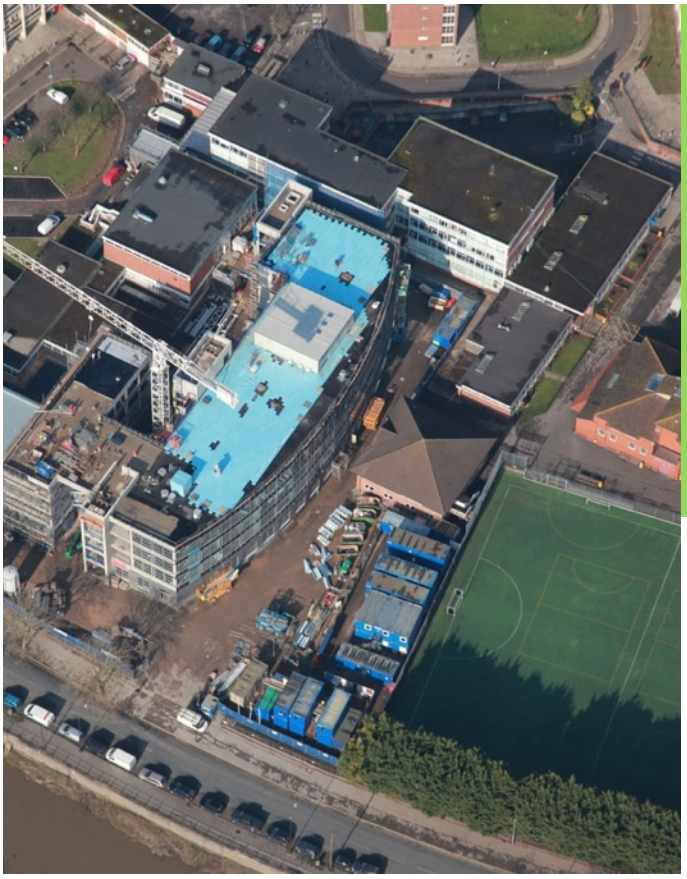

partnerships for schools

Rebuilding an inner city secondary school on a restricted site ringed by tower blocks has presented a host of challenges for Bristol LEP, its architects, construction partner Skanska and the school.

This case study looks at how good communications between all those involved have proved to be a cornerstone to success.

Key project information

School: St Mary Redcliffe and Temple School
Number of pupils: 1,080
Project cost: £23 million
Completion: Main teaching block due to open September 2010; project due for completion mid-2011
Partners: Bristol LEP (project development); Skanska (construction); cube_design (architects)

Working together to overcome challenges on a confined inner city site: Bristol's experience

Project description

Many BSF schools are on inner city sites, but few present challenges as demanding as those now being overcome at St Mary Redcliffe and Temple School (SMRT) by Bristol LEP and its partners. The design had to make good use of the highly constrained space while meeting SMRT's needs. The construction had to cause minimal disruption to students and staff as well as residents living cheek by jowl with the site.

The existing school site is hemmed in by blocks of flats and with a new building going up just two metres from the existing building, this was always going to be a demanding project. But by working hard at communicating with the school and residents, the LEP and Skanska have avoided pitfalls.

Meeting the challenge – an overview

SMRT is the only Church of England voluntary-aided secondary school in the Diocese of Bristol. It describes itself as "A Christian school at the heart of the city", reflecting not just its location but also its unique status in Bristol and the wider area.

Excluding the nearby sixth form centre, the overall site is less than two hectares – a space that has been described as suitable for a 420-place primary school, not a thriving high-performing secondary of almost 1,100 students. Dominating this cramped site is a main teaching block dating from the 1960s, which has concrete cancer and is to be demolished. SMRT also has a series of relatively new buildings spread over the constrained site, with many changes of level and little social and play space for the students.

The main aim of the redevelopment is to create a unified building and school, with the new teaching block wrapping around the existing structure to achieve a striking public face and new identity for SMRT. By giving the main block four levels, the building's footprint is reduced, thus freeing up space for student play and other amenities.

When the new building opens in September 2010, it will provide a new identity for the school and state-of-the-art facilities for art, design technology, music, drama, science and general teaching areas. A central covered street will link existing buildings with the new while providing an extensive area of sheltered semi-external space.

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Landscape enhancements due for completion by mid-2011 will compensate for a previous lack of play spaces and will allow the school to make greater educational use of its external spaces.

The issues and how they were tackled

Need for vision: Headteacher Elisabeth Gilpin knew what she wanted at the outset of the project: a design that opened up the heart of the school and minimised the new building's footprint. The head and her leadership team worked closely with Bristol LEP and architects cube_design to formulate a design that met their clear-cut objectives.

She said: "You need a clear vision of what you are trying to achieve, and in my case it was to maximise use of the available space and create top quality specialist facilities that match the excellence of the teaching at the school."

Understanding the educational vision of the school was a key aspect of the design development. The design team spent time with the school to understand its educational requirements and how the layout of the building could maximise not only the high student performance but also support the positive standards of behaviour and sense of community at the core of the school values.

Impact on students and staff: SMRT's leaders were determined at the start to minimise the number of decants in order to reduce the build's impact on teaching and learning. "We decided that by having one big move rather than a succession of small ones, we could achieve maximum stability during the different phases of the build," said Mrs Gilpin.

With a confined site and no possibility of temporarily moving off site while work was in progress, the solution was a 'village' of temporary units to house students during the entire process.

Impact on external space: One issue for the school has been how the build has impacted on students' external circulation and restricted external play space. SMRT's solutions have included laying on internal clubs and activities to compensate for the reduced external space and introducing a one-way circulation system.

Need for good communications: Good communications at the right level have been crucial to the success of SMRT's redevelopment. One key to effective communications has been the school and the project team understanding each other's needs.

"As a school you need to be clear about what your operational needs are during the building programme so the project team can take account of these." said Mrs Gilpin. "It's about clear communications and the school explaining very clearly what it needs in terms of functioning."

At the same time, when the team explained the construction process, SMRT's leaders needed to understand what would be its impact on the school.

Dealing with noise: Construction sites by their very nature can be noisy places, and with SMRT's new building going up only two metres from the existing main block in places, noise was a potential problem. Skanska responded to the school's concerns by introducing noise restrictions – such as switching work during morning assemblies to the far end of the site – trying out Teflon-based hammers that produced less noise and doing noisy work during half-terms and holidays when possible.

Skanska's Project Manager Roger Elderfield said: "It's also about getting the guys here to buy in. Last autumn we had a barbecue for everybody on the site and explained to them the importance of keeping the noise down."

Responding to needs: Meeting the needs of students and staff was recognised as important:

- When acoustic netting was to be put up around the new build to reduce noise, teachers were able to select the colour and type of netting.
- When Skanska had to build a new boiler house where six staff parked their cars, it provided alternative parking spaces.
- When noise was identified as a potential problem for students sitting GCSEs, Skanska hired a nearby hotel conference room for them to sit their exams.

Regular updates: Every Tuesday Skanska's Construction Manager Simon Dawson goes through

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what Skanska will be doing during the week with: Anne Vickers, school BSF operational lead; Christina Cunningham, Deputy Headteacher; James Couchman, SMRT's Administration Director; and John Shackell, Premises Manager.

This meeting is then followed up with emailed updates halfway through the week. In addition there is a monthly long-term planning meeting which includes the Headteacher and Roger Elderfield.

"Our staff are better able to deal with construction noise if they know in advance what it is going to be like." said Mrs Gilpin. Students are kept informed of what is happening each week and have assemblies and lesson inputs from the Skanska team.

Minimising dust and dirt: Skanska decided to Tarmac the whole site at an early stage to keep down dirt and dust that could affect the school and nearby residents.

Keeping residents informed: With five high-rise blocks of flats encircling the site, regular communication with the residents about work on the site is important. Skanska produces circulars updating them and puts up notices alerting them to late working. "Our relations with the residents have been good – they know how to contact us if they need to, and one rang to compliment us on how tidy the site was." said Mr Elderfield.

Outcomes

Both teams involved in the project – school and site – have developed a good understanding of each other's needs, facilitated by regular communication through clearly defined channels.

When an issue arises, the teams are able to resolve it speedily and efficiently, reducing any potential impact on the operations of either the school or the construction site. This has enabled the build to continue to programme, benefiting students, staff and the construction team.

Top tips

- School leaders need to invest time in a design and construction project, as they have to manage its many aspects on top of their 'day job'.
- Schools must involve their premises manager and someone knowledgeable about student movement so that their core team has the right expertise when considering the build's impact on school operations.
- Having a positive relationship with the construction site team is very important: at SMRT they are involved fully in school life.
- Weekly site meetings provide a precise noise update so the school can plan around any noisy time: SMRT staff are better able to deal with construction noise because they know in advance what it is going to be like.
- Simple solutions can often be best: a turning point for SMRT staff with the noise issue came when Skanska brought in photos of the different types of plant and equipment and explained what they did and the noise they created. This meant teachers could appreciate what was being done on site and why and Skanksa was better able to understand which noise was most intrusive and better control the use of the particular item of equipment.

Key contact

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Further information

St Mary Redcliffe and Temple School www.smrt.bristol.sch.uk
Bristol LEP www.bristollep.co.uk
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