

Being involved in school design

a guide for school communities, local authorities, funders and design and construction teams



cabe

Foreword

Robin Nicholson CBE CBE Commissioner

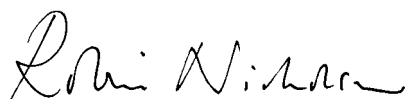
It is now widely agreed by those commissioning, designing, building and using schools that school communities should be involved in the design process for their buildings. The aim of this guide is to demonstrate the importance of carefully planned collaboration between funders, local authorities, school communities and design teams in order to achieve the best buildings and grounds possible.

The guide is a joint publication from CBE Enabling and the CBE Education Foundation. CBE has appointed Enablers, experienced built environment professionals, to give advice to many schools projects, and is often asked to suggest ways to programme in meaningful involvement. The CBE Education Foundation works with teachers and educators to inspire young people to engage with the built environment and believes that involvement in their own school building project is enjoyable and beneficial for both the school and the pupils.

The guide provides some background information on the school building process, but at its core is a guide to being involved, a chart and ten case studies. These case studies provide examples of effective involvement across a range of existing procurement routes. The checklist and chart place these, and other, different types of involvement within the context of a typical school building project. They are not intended as blueprints for involvement, but we hope they provide useful ideas.

In particular, the guide aims to be relevant to the rapidly expanding Department for Education and Skills (DfES) capital investment programme. Government investment in school buildings will reach £5.1 billion in 2005-06. This includes £2.2 billion for the Building Schools for the Future (BSF) programme, which aims to renew and rebuild every secondary school in England within 15 years. It aims to transform educational standards by creating innovative learning environments and valuable facilities for local communities. Speaking at the Excellence in Cities Conference, Birmingham, 2004, David Miliband, Minister of State for School Standards, said "Every child, whatever their background, has the right to achieve their full potential." The recent Green Paper, 'Every Child Matters', and the forthcoming Children's Bill place schools at the heart of this commitment. At CBE we are convinced of the positive contribution that schools can make to the regeneration of their communities and of the real benefits of a collaborative approach to design and construction.

"School buildings should inspire learning. They should nurture every pupil and member of staff. They should be a source of pride and a practical resource for the community." (Building Schools for the Future consultation document, Feb 2003)



Robin Nicholson

September 2004

CBE, the Commission for Architecture and the Built Environment, inspires people to demand more from buildings and spaces. We believe that well designed homes, streets, parks, work places, schools and hospitals are the fundamental right of everyone. We use our skills and resources to work for a higher quality of life for people and communities across England, with particular concern for those living in deprived areas. We do this by making the case for change, gathering hard evidence, providing education opportunities and through direct help on individual programmes and projects.

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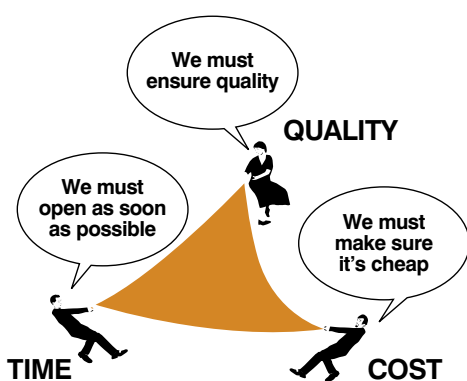
Introduction

“The current campaign to rebuild and refurbish most of our school buildings offers an extraordinary opportunity to improve the education of future generations. Producing the best possible buildings should be a national priority.”

Richard Feilden, CABI Enabler

Being involved in the design of a school is at the heart of this publication.

Designing school buildings and grounds can be a complex and involved process, but everyone, whether they are a pupil, teacher, parent, governor, funder, local authority officer, architect or building contractor, has a unique and important part to play. If all these different people come together and work as a team, schools can be created that have a real sense of purpose, place and function. Without collaboration, projects run the risk of being mediocre, uninspiring and dull. Build collaboration in and the benefits will not only be reflected in the final building, but along the way. The process of getting involved is worthwhile in terms of the educational benefit to the pupils and the positive experiences and ownership gained by the wider school community.



But how can so many diverse groups, with different perspectives and skills be brought together to contribute to a building project and in a way that promotes design innovation from the outset? This guide contains ten case studies taken from schools across England which describe different ways of being involved in school design. The guide and chart place these, and other, different types of involvement within the context of a typical school building project. The emphasis is upon clarity in the process of briefing and design development. There is no single approach that guarantees success, but steps can be taken to generate innovative and effective designs. Some of the existing expertise in this area is acknowledged through Useful Information on page 52.

The context

The world of education is undergoing rapid change. More money than ever before is being put into the rebuilding and refurbishment of Britain's schools through a number of new financial arrangements, notably the Building Schools for the Future programme.¹ New technologies and education approaches are reshaping how learning and study take place. Alternative ways of running schools are being promoted. The way we use schools is changing. The challenge now is to move forward from both the successes and failures of the past² and create school buildings and grounds to serve the needs of pupils now and in the future.³

The Department for Education and Skills (DfES) Building Schools for the Future programme, initiated in 2003, provides a once-in-a-generation opportunity to create better secondary schools, that take into account changing educational demands in a radical and innovative way. Exemplar Designs⁴, published by DfES in 2004, demonstrate that design innovation can be achieved. This guide is one step to meeting the challenges presented above. The combination of the dynamic changes in education, the scale of investment and the pace of the building programme demand that we find new ways of enabling genuine collaboration between designers, building contractors, funders, local authorities and the school community.

¹ 'Building Schools for the Future: A new approach to capital investment (2004)' Department for Education and Skills (DfES)

² 'PFI In Schools' (2003) The Audit Commission

³ '21st Century Schools: Learning Environments of the Future' (2004) Building Futures, CABI & RIBA

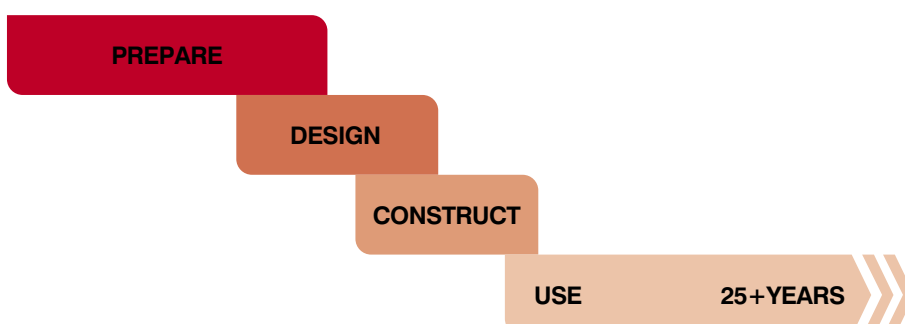
⁴ 'Schools for the Future: Exemplar Designs Concepts and Ideas' (2004) Department for Education and Skills (DfES)

The design and construction process

Understanding the design and construction process is the first step to getting involved. One source of information is 'Creating Excellent Buildings: A Guide for Clients', CABI 2003. There are four key phases in any project:

- > Preparation
- > Design
- > Construction
- > Use

It is in the preparation and design phases, that the potential for developing innovative solutions is greatest. Getting involved throughout the construction process and beyond can also be rewarding.



During the important initial phases of preparation and design the strategic need, educational vision and financial basis of a building project are established. The educational goals and areas for innovation are clarified and written up in an outline brief. This feeds into the creation of a detailed brief, with input from users and the design team. The detailed brief evolves over the life of the project and is the basis for design development.

The ways in which decisions are taken will differ from project to project, often depending on the sources of funding or the way in which the contractors are chosen and the building and services are tendered and purchased (the procurement method).

There will be widely different local needs and each site will have its own constraints and opportunities. Each participating school will have its own particular aims. All these issues will be thrashed out during the process of briefing and designing.



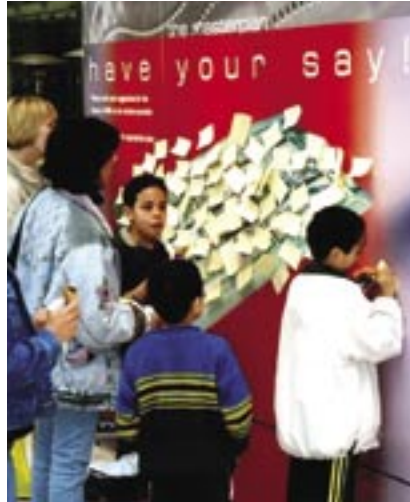
Examples of issues to be addressed in the early stages of a school building project

- > What are the future number, needs and age range of pupils?
- > How will pupils learn in 10, 20, 30 years time?
- > How will education be provided in 10, 20, 30 years time?
- > Who will be involved in using and running the school?
- > Is the school on a single site or spread across different sites?
- > What is the relationship of the school to the community it serves?
- > What is the relationship of the school site to its surroundings?
- > What should the internal environment look and feel like in the light of the school's vision for learning?

Who to involve

The creative process of deciding what is needed and what to build takes time, resources and people. These will include someone or some people who:

- > LEARN in the school
- > TEACH in the school
- > USE the school facilities
- > VISIT the school
- > WORK in the school
- > MANAGE the school
- > GOVERN the school
- > MAINTAIN the school
- > DESIGN the school
- > BUILD the school
- > FUND the school



There are also other voices which should be heard. Schools have ever stronger links with external bodies. These might include:

- > agencies responsible for health, library and leisure services and early years education
- > other education providers like those engaged in further education through the 14 – 19 agenda
- > local businesses and community groups

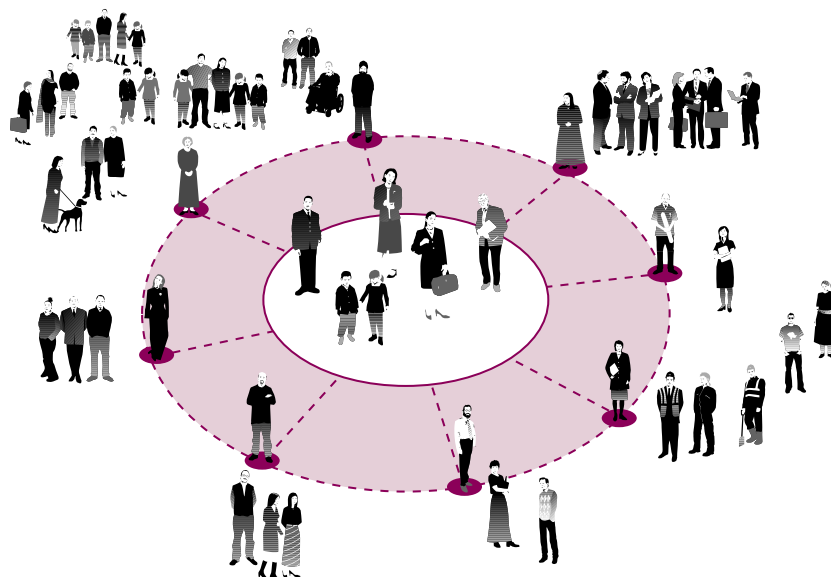
Every school will have a different list of interested parties. From the very beginning it will be necessary to put together a project team led by a project leader who co-ordinates the whole process and the communication between all the groups. It should include a team member with education experience and an architect.



At different stages the team will need advocates for different issues, for example cost in use, energy consumption, sustainability, ecology, environmental impact, traffic management and health and safety. Although they may not be involved for the length of the whole project, these people are vital participants. The project will also benefit from the appointment of a design champion. A design champion, ideally a senior council officer or elected member, will provide leadership and commitment to achieving an inspiring building.

Many different people can be involved in a school building project:

- a design champion;
- local authority officers; head teachers;
- governors; parents; carers; pupils;
- teaching and non-teaching staff;
- representatives from the community; funders;
- other education service providers;
- representatives from federated schools;
- faith and community groups;
- architects; landscape architects;
- engineers; cost consultants;
- facilities managers; building contractors



Where to get information and advice

Local Education Authorities (LEAs) have experience of involving school communities in the design process and of providing expert support. Even in a large grouped school building project LEA officers will usually ensure there are regular meetings and a clear format for schools to contribute to the project.

There are well-documented examples of involvement in the design process which can act as a springboard for people starting on new projects. The following is a short list of organisations, other than LEAs, which provide useful information.

- > The Commission for Architecture and the Built Environment (CABE) has a panel of Enablers, mainly architects, who it allocates to projects to provide advice to client organisations. The advice focuses on ways to achieve high quality design, including how best to programme genuine collaboration into the design process. CABE Enablers are working with a small number of LEAs going through PFI. Some of these schools are included in the case studies.
- > CABE Education produces curriculum resources and provides information on projects and resources that tie the built environment and the design and construction process to the National Curriculum. This information is disseminated to a national network of educators through a tri-annual magazine, 360°, and a website.

- > The Construction Industry Council has developed the Design Quality Indicator (DQI). It defines design quality under three headings: impact, build quality and functionality. It is a common sense tool which helps participants agree what good design is for their building project and to check that this is being achieved throughout the design, construction and post occupancy phases. Case studies 7, 9 and 10 involve the use of the DQI.
- > CITB-ConstructionSkills, in collaboration with CABE Education, is producing a pupil-friendly version of the DQI called Creative Spaces: improving school design.
- > The DfES has produced Exemplar Designs. These have been commented on by potential users and published in an accessible format.⁷ They can be used to help generate ideas and they provide a bench mark for quality and cost.
- > Local Architecture Centres (see Useful Information for details). Some of these are directly involved in school building projects. All will be able to provide useful information.
- > School Works produces material to help set up participatory design projects in schools. Useful publications include Learning Buildings and the Toolkit.

Other organisations are listed in Useful Information at the back of this guide.

The value of involvement

Setting aside time for early discussions yields huge rewards. There are valuable and often missed opportunities to reflect on what schools are really for. Radical and demanding aspirations are likely to emerge which should be met with imaginative and informed design approaches. The project team's first task will be to create its own model for involving the people who use and manage schools. This might include not only Head teachers, staff, pupils, parents, governors and the people who use the school facilities but also representatives of the building contractors, funders, sponsors, business and universities who will become the school's partners in the future. If building contractors are involved in these early stages, they can understand the school's aspirations and benefit from greater continuity in their work.

Among the first questions these groups need to discuss are:

- > What is the ethos of our school? How might this be expressed in and supported by the design?
- > How can our school contribute to the surrounding area?
- > How do we want to use our school in the future? What activities do we want to take part in and what kind of spaces will they require?
- > How long will the school day be? How will this affect the new building and surrounding grounds?
- > How will the learning needs of every pupil be catered for?
- > How will the day be organised? How many people will be moving around the site and when?

The Design Quality Indicator

Each topic under the three main indicator sections is separately rated against a group of about 10 questions

1 Impact

- > character and innovation
- > form and materials
- > internal environment
- > urban and social integration

These relate to the building's ability to create a sense of place and to have a positive effect on the local community and environment. They also cover the wider effect the design may have on the arts of building and architecture.

2 Build quality

- > performance
- > engineering systems
- > construction

These relate to the engineering performance of a building, which includes structural stability and the integration, safety and robustness of the systems, finishes and fittings.

3 Functionality

- > use
- > access
- > space

These are concerned with the arrangement, quality and interrelationship of spaces and how the building is designed to be useful to all.

The DfES is developing a school specific DQI, with an added emphasis on inclusion, accessibility and sustainability. It will be available in mid 2005.

www.dqi.org.uk

“At the very beginning we wrote down what we wanted the school to be. Beautiful, safe, open, exciting – these were the words we kept in mind when working on the project.”

a secondary school Head teacher

- > Do we want to let other community groups use our premises during, or out of, school hours? What implications will this have on design, access, security and revenue?
- > How will the proposed increased use of classroom assistants affect the way teachers spend their time? Will this affect the buildings and spaces we need?
- > Does all teaching take place in the standard classroom?
- > What facilities do teachers need to prepare work and to relax?
- > Which information technologies will be used in the future?
- > What legislation and best practice guidance needs to be taken into account? Some developments such as Workforce Reform will affect the needs of teachers. The staff will have increasingly strong views on the design of spaces for storage, preparation, rest and socialising.



“There is a real danger of discovering too late that another solution would have been better, or that the design doesn’t quite match up to what people want.”

an LEA officer

Alongside these questions, school communities need to think about the pastoral care of their pupils. Sometimes pupils will want spaces in which to be quiet and private; sometimes they will want spaces in which to be noisy and get together. Secondary schools might want to consider the needs of the younger pupils who will be making the adjustment from the more intimate atmosphere of the primary school. Issues of safety and vandalism can also be explored with the aim for them to be resolved with good quality design solutions.

Involving people in decisions helps create a stronger sense of belonging. The more input and involvement people feel that they have in the decision-making process, the greater ownership they will feel for the project and the greater care they will take, and creative use they will make, of the finished buildings and spaces.

The importance of early involvement

By exploring strategic education and design issues together at an early stage it should be possible to improve the value for money that the whole community will derive from investment in education facilities. It allows for innovation as links are made between schools’ educational aspirations, which may be radical and demanding, and the imaginative design approaches that are needed to meet them.

The financial implications of different design solutions and maintenance options can be tested. By getting it right from the

“Millions of pounds are being spent on new schools. We should be investing up-front to determine exactly what is needed.”

a schools PFI consortium leader

start, the costs of making corrections during the construction phase or even after the school is in use, are avoided.

The investment of time will strengthen alliances between participants, create relationships with funders and building contractors and help generate support for new sources of funding. These alliances form the foundation for the stages of work that follow. They promote shared understanding. They also help participants plan for the time and energy needed to move from understanding their needs and aspirations for the project to creating the design and constructing the school.

What a school could be

The physical fabric of a school affects its activities and how it functions. Its architecture shapes the way a school looks and feels to the people inside and the wider community. It determines how the spaces can be used over the lifetime of the building and the degree to which it can adapt to new needs in the future. It therefore justifies investing time at the early stages in getting the design of our new schools right; without this involvement there is a risk that we will have lost the opportunity presented.

The history of school design is one of variety and reinvention. Society's idea of what a school could be will continue to evolve and change. Educational theories and trends, as well as developing technologies, will have an impact on educational provision. School populations are subject to constant fluctuation and change. The role of the school within the community, as a centre for educational activity for all ages, will continue to develop.

The case studies in this guide show how the knowledge and insights offered by participants who attend, work in, manage, design and build schools play a vital role in creating successful, vibrant and welcoming places. We can learn from good practice but we cannot rely upon established design solutions that often neglect unique educational aspirations or locations. The task is to develop radical and imaginative proposals that are tailored to the future needs and potential of each school through a process of creative collaboration.

Attributes of good design:

- > suitable for its intended use
- > built to last
- > adaptable
- > safe to construct and occupy
- > sustainable to construct and use
- > contributes to its context
- > looks good

'Creating Excellent Buildings:
A Guide for Clients', 2003, CABE

"It could be exciting times. We have just got to learn from past mistakes and really find the time and money to explore ideas that will work."

a schools facilitator



A guide to being involved in school design



Every school is different and its circumstances unique. However, the process for developing a new school design follows a fairly consistent pattern and there are always opportunities for funders, LEAs, school communities and design teams to collaborate. The types of involvement will depend on factors such as the scale of the project, the role of the funder, when a contractor is appointed and the time scale. Some of these factors may be critical, for example whether there is a Head teacher in place.

There are a number of important steps in the process after which it is difficult, very expensive or even impossible to make changes. This section describes the various stages in the process and outlines the issues that need to be tackled. It is a guide that can be referred to throughout the project development. Industry terms used can be found in the glossary. Margin notes in green refer the reader to Useful Information on page 52. Case study links are shown in the margin in orange.

A chart is folded into the back cover, giving an overview of all the stages and highlighting some of the points in the checklist. The chart and guide should be read together.

The themes that recur at most stages are given below. Each of these themes is given a separate row in the chart.

involvement	Who are the key participants? When will everyone be able to contribute their ideas and experience?
meeting education needs	How can the educational needs and aspirations of participating schools be best fulfilled? How will inclusion and accessibility be addressed?
project team and programme	Who are the people that are needed to work on the project? When is the timescale, or programme, for the project established?
innovation	What innovative thinking is taking place in the fields of education and school architecture nationally and internationally?
keeping everyone involved	What ideas and decisions need to be communicated, to whom and how?
design issues	How can these ideas be translated into design? What other matters affecting the design might need to be resolved at this stage? How will sustainability be addressed?
funding for the project	Where are the funds for the project coming from? What are the financial implications of different design proposals?
agreements / approval	What needs to be agreed between the participants before the project moves forward?

The chart also identifies some of the constraints on projects, such as the budget limit. It is worth seeking an explanation of how the budget has been established and checking whether it is adequate. Once it has been agreed between the main stakeholders it should be accepted as a limit, unless there are significant and unexpected changes in circumstances.

Another constraint is the programme. There are a number of points after which changes to previously agreed decisions can be very disruptive. For example, changing aspects of the detailed design after a certain point will cause delays. Everyone involved in the project needs to be aware of when the critical moments occur.

What is the procurement route?

At the bottom of the chart, the RIBA project stages are included. This is a construction industry standard description of the stages in a building project, giving details of the work expected from the architect. Below this are the common types of procurement route used for school projects. Procurement is the whole process by which the building and related services are developed and purchased. CABE's 'Creating Excellent Buildings: A Guide for Clients' gives more detail. The checklist and chart are mainly based on the Private Finance Initiative (PFI) route because this is the most complex method of procurement. A PFI project requires expert project management to ensure opportunities for involvement are timely, worthwhile and genuinely contribute to a high quality building. A version of existing PFI will be used in the emerging Building Schools for the Future (BSF) programme. See page 40 for a fuller description.

Useful information links

[‘The Architect’s Plan of Work’ \(2000\) RIBA Publications](#)

Who is the client?

The client arrangements vary in different types of schools project. There are likely to be a whole series of stakeholders who should be regarded as ‘clients’, such as the pupils, the parents, the staff, the Head teacher, the governors and the LEA. All these parties have a right to be involved in the project, but there will be one lead client organisation which has the funding and is responsible for progressing the project. This lead client could be:

- > the LEA
- > the Diocese
- > the private sector sponsor for Academies
- > the school governors for smaller projects funded from their own resources

For brevity, the lead client is referred to as the LEA throughout the checklist and chart as the LEA is the most common body in this role.

Stage 1: Initiation

Identify the need for a building project

Agree a vision

Identify the need for a building project

There will be a strategic assessment of local educational requirements and aspirations. This could range from the decision to extend a particular school to a complete reorganisation by a LEA of school locations or catchment areas, changes in ages of transfer, the outsourcing of services or collaboration with other agencies. Alternatively, this school may have been identified as a high priority in the LEA's Asset Management Plan (AMP) because of the poor condition and suitability of the school buildings.

Where the project is a new school or an amalgamation, the reasoning behind the proposal will normally be indicated in the School Organisation Plan (SOP). This is usually published on the LEA's website. The LEA must get the approval of the School Organisation Committee (SOC) before it can proceed with such a proposal. The LEA will normally organise consultation on the proposed project, ranging from publishing statutory notices to meetings with parents, staff and the local community.

Where a secondary school is to be rebuilt or refurbished, it may be included in a group of schools in one geographical area in the DfES Building Schools for the Future programme (BSF). The emphasis of this programme is on transforming educational attainment and standards through innovative school buildings.

Useful information links

For DfES guidance on Extended Schools see DfES Every Child Matters

Case Study links

- 1 Questionnaire was used to assess the existing school and explore wishes for the new site.
- 5 One-week intensive consultation enabled aspirations to be shared.
- 10 Visits to other schools in England and abroad

Useful information links

School Works Tool Kit
Designs for Learning
Schools for the Future: Exemplar Designs
21st Century Schools
The School I'd Like
Sustainable Development Action Plan for Education and Skills

Agree a vision

The LEA will generally initiate the project. The project should be discussed between all the key stakeholders – the Head teacher, the governors and other bodies that might be involved in an extended school such as health agencies, leisure services, libraries, or youth services. The LEA officers will programme presentations, discussion and feedback sessions.

It is important that the school develops a vision. What is unique about the school and what can the building help to achieve? This initial vision is the foundation on which the brief for the building develops, with input from others.

Many of the most interesting and successful recent school buildings have emerged from innovations in education. The focus should be on a vision for the school not just the building. This is an opportunity for school communities to look at innovative education practice in this country and abroad.

It is important that all the critical site issues are identified, to ensure that there is nothing to prevent the project going ahead. For example, the LEA or their advisors should check the ownership of the site, covenants, the views of the Local Planning Authority (town planners) and the Highways Authority (responsible for roads).

The LEA will determine the most likely funding route for the project. These change according to the latest DfES priorities, but they fall into several categories:

- > LEA or council's own funds.
- > DfES allocations over which the LEA has discretion.
- > DfES allocations directly to schools.
- > The Academy Programme. Secondary school projects funded by central government and a private sponsor, independent of the LEA.
- > DfES Basic Need funding. Allocated to deal with population growth where all nearby schools are full.
- > The DfES Building Schools for the Future (BSF) programme. Secondary school projects funded through a mix of PFI and conventional funding with substantial private sector involvement. The mechanism for this is the creation of a joint venture partnership between the LEA, Partnerships for Schools (PfS) and a private sector partner, known as a local education partnership (LEP).

When a school project is part of a larger or mixed use development there may be difficulties due to different sources of funding and different lead clients. Aim for clarity in brief, budget and programme and a spirit of joint working from the outset. An architect or urban designer should be commissioned to provide urban design options from which a coherent, holistic view of the site can be agreed. This will be a useful framework within which to develop the detailed designs.

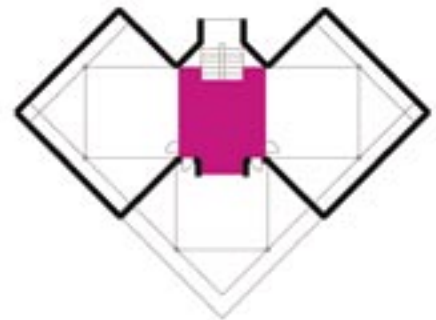
Useful information links

[DfES](#)

[TeacherNet](#)

[Building Schools for the Future](#)

[Partnerships for Schools](#)



Think about the relationship between rooms and the spaces in between





Stage 2: Preparation

Set up a project team – appoint a design advisor and education expert

Appoint a design champion

Ensure the building project supports the school's ethos and vision

Set up a project steering group; carry out initial design work

Set up a project team – appoint a design advisor and education expert

The project team should include key representatives from all the groups involved. The team will be led by a project leader, who may be one of the local authority officers, or an external project manager. The project leader must have the time, authority and resources to see the project through, and will be the point of contact for all other groups and stakeholders both inside and outside the school. The project team should include an education expert and an architect, to act as a design advisor for the project. For more information see pages 7 and 8.

Useful information links

Creating Excellent Buildings:
A Guide for Clients
CABE

Case Study links

10 School visits.

3 Three-month participatory process including focused workshops involving pupils, staff, designers, education psychologists and performance artists.

7 Study visits to new schools and interviews with pupils to establish needs and educational goals.

Useful information links

CABE Library
Schools for the Future:
Exemplar Designs
Designs for Learning
21st Century Schools
Ultralab

Appoint a design champion

A design champion, ideally a senior officer or elected council member, should be appointed to the project. A design champion is not a full time member of the project team but provides leadership and commitment to achieving an inspiring building. This person is particularly useful in safeguarding quality at critical decision making moments.

Ensure the building project supports the school's ethos and vision

The project team will start to define the project in sufficient detail to obtain funding approval. Decisions will be taken on issues such as the size of the school, the proportion of new build to refurbishment and the location of buildings on the site. It is important that the educational and building agendas develop in parallel.

This is an opportunity for the school community to think about the ethos of their school and to plan for the future. Where does the school want to be in five, ten and twenty years? Issues such as curriculum delivery, the challenges of ICT, inclusion of pupils with special educational needs, pastoral organisation and length of the school day will impact on the physical organisation of the buildings and grounds. Set up events and discussion opportunities for the project team. For example, visit innovative practice (educational and architectural) and look at images of inspiring schools. See pages 6, 9 and 10 for further ideas.

There are excellent opportunities for discussing the building project in the classroom and linking it to the National Curriculum. Case studies 1 and 2 provide some suggestions.

If the LEA has to apply for funding it is important that the educational case for the project is developed jointly with the school. This will bring together the school's vision and the LEA's educational strategy, often contained in the Education Development Plan (EDP). To receive funding the project must have the support of all stakeholders.

The siting of new school buildings can cause controversy in local communities. It is worth holding a public meeting for local residents and the school community so that an explanation of the proposal can be given, discussion offered and answers provided.

Set up a project steering group

A project steering group, with representatives from all key stakeholder groups, acts as an effective channel for communication. Representatives might be parents, governors, teaching and non-teaching staff, pupils from the School Council, elected local authority council members and local residents. They do not necessarily need to get involved in the level of detail considered by the project team but they must be given the opportunities to contribute.

Carry out initial design work

Design implications need to start to be considered. Initial design work produces drawings which are excellent tools for getting everyone involved in the project. An option appraisal looks at the relative merits of new build and refurbishment. The DfES has prepared guidance on option appraisals. Feasibility studies should be carried out, by the design advisor, to establish a robust estimate of the costs. Detailed information should be prepared about the proposed site. This will include a site analysis showing constraints and opportunities and surveys of ground conditions. Survey types include archaeological, ecological, traffic impact, pedestrian routes and rights of way. Outline planning permission should be secured.

If the project is part of the PFI programme more detailed design work, sometimes called a reference scheme, could be considered. This will help the project team to further test the viability of the project and develop the educational brief. It will also provide more detailed graphic images to stimulate discussion.

Where existing buildings are being modified the design work will test the construction phasing and programme and also determine whether the recommended minimum sizes of school playing fields and grounds will be maintained.

Funding methods have an impact on the school, since there are often specific rules applying to costs and building standards. For example, affordability rules are being developed for BSF projects, which may generate cost limits for individual schools; area standards have been established in DfES Building Bulletins.

For building projects as learning opportunities:

[Joinedupdesignforschools](#)

[Creative Partnerships](#)

[Architecture Centres](#)

[School Works](#)

[Building Education](#)

[360° magazine](#)

[CABE Education](#)

[Creative Spaces: improving school design](#)

Case Study links

3 Implementation group established to oversee and manage recommendations.

4 Client team with representatives from all parts of the school community.

8 Representatives from each of the primary schools formed a federation.

Useful information links

[Teachernet](#)

Case Study links

10 Reference design evaluated using the DQI tool to help schools finalise their priorities and to inform the brief.

Useful information links

[Building Bulletin 98 for Secondary Schools](#)

[Building Bulletin 99 for Primary Schools](#)

Stage 3: Bid/Approvals

Prepare Outline Business Case with robust design work and costs; reflect schools' genuine collaboration to date

Many of the funding routes available require competitive bids. Not only does a clear educational vision need to be articulated, but there should also be a very clear delivery plan. The DfES will want to be convinced that if they allocate funding, it will be used efficiently to raise educational standards and produce a quality project.

Some DfES funding programmes, for example the Targeted Capital Fund, may require submission of bids by a certain date. These inevitably have selection criteria and it is important that the bid is carefully structured to meet these criteria. The school can play an important part in making sure all relevant information is submitted. The school should work with the LEA to complete an imaginative application to ensure the project meets the criteria listed and that the learning environment benefits. It helps to demonstrate that there is wide support from a diverse group of stakeholders. It is important to note that the budget is effectively fixed by the size of the bid. It is therefore vital to be confident that the feasibility studies have produced a robust and reliable cost estimate for the project.

Case Study links

9 A public opinion survey, ten public meetings and a newspaper pole allowed the community to voice their opinions on the development of the schools.

Useful information links

Teachernet

The BSF programme is slightly different, prioritising all LEAs into a series of 'waves', indicating when funding will be available. The LEA will agree with the DfES which secondary schools have the highest priority for rebuilding or refurbishment, taking into account a variety of factors, most importantly educational priority.

Useful information links

Partnerships for Schools

The next stage for a BSF project is the submission of the Outline Business Case (OBC), which has to contain full details of all the school projects included in a particular phase. Guidance is published on the Partnerships for Schools (Pfs) website. The OBC fixes the level of funding for projects. It is important to have carried out detailed option appraisals and feasibility studies.

Once the bid has been submitted, there is likely to be a pause in the process, often for three or more months. This provides an excellent opportunity to carry out research into other people's experiences of school building projects. A lot can be learned from visiting schools, both good and not-so-good, and talking to the people who use the buildings. CABE Enabling holds information on many recently completed school projects and the CABE digital library contains a number of case studies that can be accessed free of charge from the website. The 4ps (part of the Local Government Association) website has information about PFI projects. The DfES TeacherNet website has information on school building and design. Many schools also have their own website. Visits carried out with representatives of all the stakeholder groups can be a good way of sharing experiences and discussing alternative ideas and priorities.

Useful information links

CABE

CABE Digital Library

4ps

DfES

TeacherNet

Case Study links

10 Visits to schools both in England and abroad.

The project team can also use this period to prepare for delivery of the project. Once funding is secured, it is essential that the LEA and the school have sufficient staff resources available to organise the project properly. In a secondary school the project will require a large time commitment over two to three years and it is therefore worth considering secondment of a member of staff either full or part time. If the LEA or sponsor does not have sufficient expertise or capacity, they may need to employ a project manager.

It is important to keep everyone involved in the project aware of progress. The absence of apparent activity can appear as a lack of commitment from the sponsors, hence the need for regular updates, for example through newsletters.



Stage 4: Development

Project leader, design advisor and education expert develop the brief

Select shortlist of high quality design and construction teams

Project leader, design advisor and education expert develop the brief

The LEA will normally produce an initial brief, consisting of an accommodation schedule, detailing the exact number of rooms, their minimum sizes and any special internal requirements. It should also address the urban design principles for the site and the buildings. They may also suggest an overall target area for the building to ensure that cost limits are not exceeded, and this will probably have come from the DfES Building Bulletins 98 and 99. This brief is then developed by the project leader, the design advisor and a key education expert. This is a sub group of the project team. Carefully choose a teacher with the right skills and interest to fulfil the role of education expert. This may be one of the deputy heads, someone who can work well to ensure the detailed brief really does set out what the school wants. It is helpful to provide cover to allow this teacher to fully participate in this time consuming process. Instead, the education expert may be a teacher seconded from elsewhere within the LEA. Alternatively a schools facilitator can be brought in. It is important to ensure that this person has the right skills and up-to-date knowledge and experience. The facilitator will prove more expensive but may be able to take a more holistic view of a group of schools and commit more time to the project.

To enable a design team to translate the brief into a well organised and inspiring school, as much information as possible should be included about how the school plans to operate. Information includes departmental adjacencies, pastoral organisation, the use of resource areas, community access and security. For example, social spaces which are well designed encourage good behaviour.

Useful information links

[Building Bulletin 98 for Secondary Schools](#)

[Building Bulletin 99 for Primary schools](#)

[Teachernet for the Curriculum Analysis tool](#)

[Building Bulletin 77 Designing for Pupils with Special Educational Needs and Special Schools 2005](#)

Case Study links

7 Schools Facilitator.

8 Deputy Head as staff representative.

10 Team work.

Useful information links

4ps

Design Quality Indicator

Case Study links

4 Dialogue with the community (through bring and buy sales, open days, design exhibitions and interactive drawings) throughout design stage ensured commitment to a project that had initially been controversial.

6 Design workshops with representatives of the community.

Case Study links

7 DQIs used to evaluate the existing accommodation.

9 DQI tailored to reflect the needs and aspirations of the school.

10 DQI used to evaluate the reference project and refine the brief.

Case Study links

10 Interrogation of brief.

For traditional contracts, including partnering, the brief develops into the specification and is prescriptive, saying exactly what details and materials are to be used. In PFI, there is more emphasis on producing an Output Specification, which identifies outcomes and is less prescriptive. It will give a performance specification, for example that rain water pipes are fit for purpose, robust and non-climbable but will leave the bidder to specify the material and make. However, most bidders find it useful to be given as much guidance as possible in the tender documentation called the Invitation to Negotiate (ITN). The Output Specification is one part of this. The bidders can start the design work more quickly if they have a clear idea of the needs of the school community at the outset. It is useful for the LEA to set up a data room or website to allow bidders to access information and to give a clear indication of the design quality required. For example a detailed specification of a non-PFI LEA project will communicate to bidders details and materials that schools find successful in other projects. If the DQI has been used to agree a brief (see below), the resulting information should be included in the data room to help bidders understand priorities. Schools need to be involved in the preparation of the ITN. There are typical Output Specifications on the 4ps website.

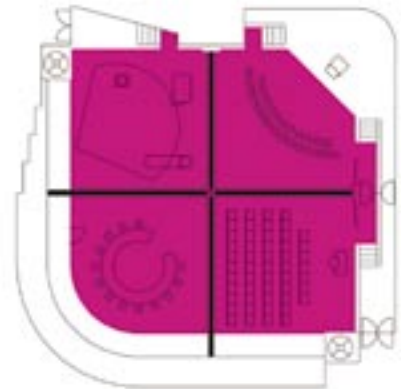
This will be an intense period of detailed work where channels of communication between the project leader, the education expert and the design advisor are essential. This sub group needs to report to the project team and the project steering group (in the form of meetings, presentations or newsletters), so that their work benefits from wider discussion and commitment. The project steering group will ensure the involvement of the wider school community.

Aspects of the brief could be explained by means of sketch solutions of aspects of the building, perhaps prepared by the design advisor or another architect. Design Quality Indicators (DQI), developed by the Construction Industry Council, are another valuable means of helping to agree design priorities. They can be used to convey the school's intentions to architects and bidding consortia, evaluate their subsequent proposals and measure the success of the building in use. For a more detailed description of the DQI see page 9. This is a chance for the project team to become familiar with architectural issues and discuss possible options.

It is important to cost check the brief and designs throughout the project development. If the project proceeds without regular cost checks there are likely to be disappointments if cost savings have to be made at a late stage.

Select shortlist of high quality design and construction teams

The shortlist of potential design and construction teams will now be selected. The quality of this shortlist has a crucial effect on the quality of the finished building. In partnering contracts, the builder works in partnership with the project team and the design team, helping to develop a design that meets everyone's shared aspirations within the budget. The builder's knowledge about building methods and cost can potentially help get better value for money. In PFI/BSF projects, the consortium includes the design team, the building contractor and the facilities management team who will look after the buildings. It is very important that everyone is confident that all the members of the consortium, and particularly the architects, are thought to be capable of producing a first class project. In PFI/BSF it is impossible to predict which consortium will eventually be successful, because so many factors are involved in the decision. All the architects firms in each shortlisted consortium must therefore have the ability to produce high quality designs. In order to select a strong shortlist the LEA should ask the design teams to submit practice profiles and Curriculum Vitae of individuals.



Think about designing spaces with multiple functions



Stage 5: Selection

Programme the ITN period carefully to maximise design time and opportunities for discussion

Select preferred bidder

Programme the ITN period carefully to maximise design time and opportunities for discussion

Useful information links

Creating Excellent Buildings:
A Guide for Clients

Case Study links

- 1 Workshops and round table discussions with the school community.
- 5 Presentations, public meetings and smaller discussion groups allowed frank discussion and management of expectations.
- 8 Monthly meetings attended by representatives from each school.

Case Study links

- 6 One of the three consortia organised events with the school. A website was created as a forum for community feedback. Half day workshops with staff, pupils and the governing body.
- 10 Visits to other schools.

Whatever the procurement route, architects work by developing a series of options and then testing them with the users to see which works best. They will also meet with other members of the design team to ensure that the landscape, structural and building services are properly integrated into the design and that the proposals are affordable within the budget. CABE's 'Creating Excellent Buildings: A Guide for Clients' describes the process.

In traditional procurement where there is one selected design team, meetings may be frequent and intensive. In competitive processes such as PFI/ BSF, there will be several competing design teams and therefore the burden of meetings on the school community can be great. The meetings should involve the LEA, the school, the bidding team organiser and their design team. It is common to have the meetings prearranged at regular intervals throughout the design period. Getting the design right at this stage is very important. The maximum possible number of these liaison meetings should be arranged at useful moments in the programme, to facilitate the dialogue. For a complex building such as a secondary school, six meetings would be a minimum. LEAs should look in detail at the ITN programme and maximise the time available for design and worthwhile user involvement. For a PFI secondary school four months is a reasonable minimum.

When design solutions are presented for comment, they should be rigorously tested against the educational needs and aspirations of the school. One way of doing this is to test out various 'day in the life' scenarios of different people in the school. For example, what happens to the pupil who suddenly feels ill during a lesson? What happens at lunchtime? What happens when a parent comes to visit the Head teacher?

The most productive meetings are likely to be in the form of workshops where there is a free exchange of opinions. By avoiding formal presentations until the end of the bid period the architects will have more time to work on their designs and respond to the project team's comments.

The design advisor in the project team can help explain the competing bidders' designs to schools. They must also check technical aspects of design proposals very carefully and point out potential problems. This is where their experience of previous projects will be invaluable. The project team will also benefit from the experience of architectural discussions at earlier stages. They might arrange additional visits to existing buildings to help clients understand the implications of the proposals.

In PFI, where there is a reference project, the bidding consortia should have access to the designs which will help them understand the schools' aspirations. However the project team should not expect them to be replicated; they are merely a starting point for further development.

Communication between all involved remains important at this stage. Whenever possible, potential users of the school should be given the opportunity to comment on design proposals before they are finalised. It is essential that Heads of Departments in secondary schools get an opportunity to comment and it is desirable that other staff, pupil representatives, governors, parents and neighbours are also involved. This ownership of designs is very important to ensure that everyone remains enthusiastic and committed to the project throughout its development. Involving pupils can also be a very valuable learning exercise as it gives them first hand experience of the construction industry, empowers them through the process of involvement and instils a sense of ownership in the finished building.

In PFI projects, the costs for the consortia and their design teams in developing the bid proposals are high. Each bidder must be treated fairly and given the same information. There is a need for strict confidentiality of all proposals presented as this is a competition. It is normal for the project leader to manage all communications. The school community will need to ensure the project leader has programmed meetings and feedback opportunities carefully with them in advance to ensure the project benefits.

Whatever the procurement route used, it is vital that the design be checked against the design criteria set by the school and the project team in the brief. This could be done by using the DQI. In PFI projects, the selection takes into account design, financial, legal and facilities management (FM) issues and it is not always possible to select the bidder with the best designs. The choice of bidder is important because their team will be working with the school and LEA for a period of 25 years. Ideally every design for every school should be capable of providing a first class solution to their needs.

Continual cost checking is crucial. It is pointless signing up to a scheme for further design development if it is unaffordable. The quantity surveyor will carry out a careful cost estimate on the scheme. In PFI, bidders must be reminded of the need to submit bids that fall within the cost constraints set by the project team, to ensure that all proposals are strictly comparable. PFI bids also contain a specification. Schools, helped by the design advisor, should check these specifications very carefully.

Select Preferred Bidder

At the end of the ITN period the Preferred Bidder (the successful consortium) is chosen. In Stage 6, Refinement, the project team discuss and negotiate the detailed design with the Preferred Bidder. It is not inevitable that the Preferred Bidder will be awarded the contract.

Case Study links

2 School assemblies and study visits. Models of proposed designs were created for pupils to manipulate. Plans were traced onto the grounds to help pupils visualise the design.

8 The design team that worked most closely with LEA and staff in developing the bid was awarded Preferred Bidder.

Case Study links

6 Pupils were involved in agreeing the criteria with which to judge design solutions.

9 DQIs allowed the designs to be quickly and accurately assessed and a consensus reached.



Stage 6: Refinement

Finalise and agree detailed design

This is the detailed design stage, in which every aspect of the building is finalised. These details are crucial to the everyday users of the building. This is why it is so important that the right representatives of the school community are in the project team and are involved from project initiation (Stage 1).

After contract signature (see Stage 7), construction work starts and it becomes very difficult to change any aspect of the design without incurring delays and possibly substantial increased costs. It is essential to get all the details agreed at this stage. Under the Construction Design and Management Regulations (CDM) the client (or in PFI, the Preferred Bidder) ensures a planning supervisor is appointed and is responsible for checking that the design, construction and occupation of the building complies with health and safety regulations.

In schools there are a range of important details. For example, in classrooms decisions include the quality and position of light fittings, power and data points, switches, radiator locations, fitted furniture and fixtures, window types, blinds, finishes, ironmongery and locks. Individual users (particularly teachers) need to be involved to ensure that they contribute and understand what to expect. This consultation needs to take place with affordability in mind. For consultation to be effective, people need to know what is already committed and where there is still scope to make changes.

The detailed design stage also provides teachers with real-life scenarios that can be used in the curriculum. Many of the issues will provide material for use in Design & Technology, Education for Sustainable Development, Maths and Science.

In PFI, design development will be going on alongside intensive negotiations between the project team and the Preferred Bidder on financial, legal and facilities management (FM) issues. These issues are crucial to the success of the project. For example, the FM specification may cover all catering arrangements, choice of food, prices, payment methods, and arrangements for numbers of sittings and eating times. It is crucial that schools are fully involved in the decision making. It is also essential to ensure that the design quality of the scheme is not eroded during the negotiations.

Cost checking is important. A final cost check should be carried out at the end of the design development stage to ensure the project remains within budget.

Case Study links

- 1 School engagement in the process was sustained through pupil visits to architects offices and presentations of the models to the school community.
- 6 Consortia plan to hold a workshop with staff and pupils to work together on the detailed designs.

Useful information links

- CABE Education website
- CITB-ConstructionSkills Award Scheme
- Joinedupdesignforschools
- Schools Renaissance Project



Think about the relationship between internal and external spaces

The application for detailed planning permission is likely to be made at the beginning of this stage, after approval of the design or selection of Preferred Bidder. It is important that the application is accompanied by consultation with the local community. This may be through exhibitions, public meetings, newsletters and local press coverage. A new school can be controversial. Residents may be worried about disturbance from pupils, traffic, evening uses and floodlit sports pitches. Careful publicity is vital. In PFI, the LEA submits a Final Business Case to the Government's Project Review Group (PRG) for approval.

Stage 7: Appointment

Sign the contract

In PFI confirm Preferred Bidder at Financial Close

Agree programme of works on site.

Sign the contract

Contract signature, also known as Financial Close in PFI, is the point where the project team becomes formally committed to building the school. Whatever the type of contract, it is important to appreciate that the contract is the final word on what will be provided. A simple rule is: if it is not in the contract it will not be built. The school must be absolutely clear about what has been included.

In traditional procurement the contractor is selected by tendering. In partnering contracts, the contractor has already been selected, but the formal contract confirms the details of the design and the price.

In PFI confirm Preferred Bidder at Financial Close

In PFI, Preferred Bidder was selected in Stage 5 (Selection), details negotiated in Stage 6 (Refinement) and at Stage 7 Preferred Bidder is confirmed as the successful consortium at Financial Close. Once the PRG have approved the Final Business Case the contract can be signed. The contract will be extremely complex, covering legal, financial, facilities management, design and construction details. Several weeks earlier the school governors will have signed an agreement with the LEA committing to pay part of the delegated school budget to the LEA. It is very important that the school and the governors fully understand the implications of the contract. They should get the council's lawyers to give a detailed explanation and they may also want some independent legal advice.

Agree programme of works on site

Building works can be very disruptive, however careful and considerate the contractor. Excavating sites inevitably creates mud. Building creates noise and dust however much care is taken. There will have to be lorry deliveries and there will be lots of building operatives coming to the site each day in vans or cars.

Useful information links Creating Excellent Buildings



Case Study links

1 Engineers and other consultants came into the school to talk to the pupils.

2 & 8 Site visits by staff and pupils.

Useful information links

Architecture Centres

Building Sights

Creative Partnerships

Groundwork UK

Learning through Landscapes

If building on an existing school site a good working relationship needs to be established between the school and the contractor from the outset. Many issues need to be discussed in advance. Who will be the main point of contact? How will the safety of pupils be maintained at arrival and departure times? Sometimes deliveries are banned for these hours. How will vehicles get onto the site? Where will the site cabins be located? What is the procedure for dealing with emergencies out of school hours?

In particular, the school and the contractor need to discuss the detailed programme. For example, how can building noise be avoided during the exam periods? Will services such as water or electricity need to be disrupted at any point? This is also a good chance to discuss opportunities for incorporating the construction work into the curriculum, for example through site visits or talks from the contractors.

The building work will also be disruptive for local residents. In order to maintain a good relationship with the local community, the school should consider arranging a joint public meeting with the contractor to explain what is going to happen and then ensure residents are kept informed of progress.

Stage 8: Construction

During construction, the project leader will normally hold regular site meetings with the contractor, to ensure that progress is satisfactory.

In a traditional contract the architect leads site meetings with other members of the design team, the project leader and the contractor. These meetings will also be used to resolve unexpected construction problems. Since these are often quite technical meetings, it might be more appropriate to have separate meetings with school representatives to discuss practical issues affecting the school. The project team may also employ an agent to monitor the quality of the work.

In PFI and design and build projects, the project leader has far less responsibility and control of the works on site. The design team are employed by the building contractor, and the project leader's primary concern is that the building is completed in accordance with the contract and on time. It is normal to have an employer's agent monitoring the works. This person is sometimes employed by the PFI contractor and sometimes by the client. Whichever applies, there should be regular reports on progress to the project leader and this should be passed on to the school to keep them informed.



Think about creating covered play spaces for wet weather

Case Study links

4 Consultation with the community continued into the construction phase. Changes to the designs were illustrated through exhibitions and models.

Construction sites are dangerous places, particularly for children. The contractor needs to take great care to ensure that the site is kept secure, particularly after working hours. Presentations by the contractor's health and safety officer to staff and pupils about what is happening on site, and the potential hazards, can be a way of addressing this issue. The Building Sights initiative encourages contractors to open up construction sites not only through site visits but also through viewing platforms, hoarding windows and web cams.

The construction phase can be a valuable learning tool for pupils. For example they can visit site at various stages, get involved in the design and construction of a landscape feature, gates, railings or a mosaic. There may also be opportunities to attend workshops with the architect, landscape architect or an artist.

After completion, it is worth reviewing the design to see how well it satisfies the brief. This is most usefully carried out after a minimum of one full year of occupation. This is because it takes time, a minimum of a full calendar year, for the users of a school to settle in and understand how the school buildings and services operate. Involving users early in the design process ensures that the first year of occupation can be a creative rather than a frustrating experience. There are a number of methods of performing the review, for example re-running the DQI process, involving all the key stakeholders, and comparing the results with the original DQI analysis performed at Stage 4, Development. DfES and School Works have developed a post occupancy evaluation tool for secondary schools. DfES are also developing a schools specific DQI with Construction Industry Council (CIC), available in 2005.

Case Study links

1 Building site hoardings & talks to the school by the construction professionals.

2 Study visits to factory where the classroom was constructed.

8 School visits to the site. Preferred bidder continued to explore ideas with the school throughout the construction phase.

9 & 10 Post occupancy evaluations are planned.

Useful information links

[Architecture Centres](#)

[Building Sights](#)

[Creative Partnerships](#)

[Groundwork UK](#)

[Learning through Landscapes](#)

[Design Quality Indicator](#)

[School Works](#)

[CIC](#)

[DfES](#)



Case studies

The following ten case studies describe different ways to be involved in the brief and design phases of a school building project. The first five case studies are on school building through traditional procurement routes. The last five are on school building through the Private Finance Initiative (PFI). On page 40 you will find a brief description of the PFI process to accompany these case studies.

School building through traditional procurement routes

- 1 Westborough Primary School, Westcliff-on-Sea, Essex**
Long-term design vision integrates school improvements with classroom curriculum **30**
- 2 Wrockwardine Wood Junior School, Telford**
Tying the design and construction process to the curriculum **32**
- 3 Kingsdale School, London Borough of Southwark**
School and design team develop options to meet educational vision **34**
- 4 Chingford Hall Community Primary School & Learning Support Centre, London Borough of Waltham Forest**
Design-focused consultation to agree a brief **36**
- 5 The Dukeries, Ollerton, Nottinghamshire**
Intensive five-day consultation event produces results **38**

1

Westborough Primary School, Westcliff-on-Sea, Essex

Long-term design vision integrates school improvements with classroom curriculum

What is the school like?

An Edwardian campus composed of four buildings, opened in 1912.

What was the nature of the project?

A feasibility study and development plan for the phased improvement of the school.

Is the school in an urban, suburban, or rural setting?

Very restricted urban site, with limited external space.

How many pupils have been involved in the project?

Approximately 200 since 1993.

What is the age range of the pupils?

3 – 11.

What was the cost of construction?

£1.5 million since 1993, including consultation.

How long has the project lasted, from start to occupation?

Phased development over 11 years, on-going.

What was the duration of the collaborative involvement?

11 years on-going.

Westborough is a large Edwardian primary school, with 700 pupils. Like many schools it has been improved in an ad hoc manner over the years, with alterations often imposed rather than prioritised by the school community. Legacies of this approach include uncoordinated development and poor use of funds.

In 1993 Westborough became grant maintained which allowed greater independence in the allocation of funds. To avoid the problems of the past, the school interviewed a number of architects to devise a plan for improvements. London architectural practice Cottrell and Vermeulen was selected. "To them it was obvious that consultation with everyone who uses the school would form the foundation of their plan," says Head teacher Jenny Davies.

The architects' first decision was to devise a questionnaire asking for comments about the school. This was sent to teaching staff, non-teaching staff, pupils, governors, and parents. Among the problems identified were the intimidating and smelly toilets, a dilapidated heating system, and threats to security caused by having eight points of access to the school. The development plan was based on the responses to the questionnaires, as well as a series of small group workshops and round table discussions. The process took about four months.

The next stage was to turn the plan into a model. Then the pupils could really understand what changes were going to be made, where and why. Once complete, groups of pupils, aged 9 – 10, went on study visits to the architects' office. "As well as showing them the model, the visit to an architect's office gave them a clearer idea of what architects do," says Brian Vermeulen.

Throughout the 11 year process Jenny Davies has ensured that the pupils have been involved wherever possible. "Whenever building work is underway, and an area is cordoned off, we have put up screens so that the children can see what's going on. And we also ensured that we had co-operative builders, who were prepared to answer the children's questions," says Jenny Davies.

In 1999 the architects began work on a cardboard after-school club, funded by a Department of Trade and Industry grant for testing new construction methods and materials. The pupils set about collecting waste paper, and sending it to a processing plant to turn it into cardboard. One class designed

a Westborough logo, which was stamped into every panel and tube. Throughout the four year design and construction process eight partner organisations, from local engineers, to Belgian cardboard consultants, were invited to talk to the pupils. “A recycling team came in to do an assembly. They were quite nervous, but it went really well. I felt that the children were taking part in real life education in action,” says Jenny Davies. When the building was complete in 2001, Tomorrow’s World produced a live edition of the show from Westborough. The experience of watching a television crew was an unexpected and exciting learning opportunity for the pupils.



There are three principle benefits to employing architects to devise a development plan for a school and retaining their services over a sustained period:

- > It ensures continuity of development and facilitates large scale improvements. One of the problems with constant changes to school funding programmes is that schools tend not to save up for larger projects. With a development plan the foundations can be laid for a new classroom, and it can be built as the funds become available. It also ensures a spatial awareness of the entire school grounds. The plan at Westborough led to the replacement of unpopular toilets, which had become a threat to security, with smaller groups of modern facilities.
- > It acts as a teaching resource. Every phase of development and all the individual construction projects were harnessed for their educational potential.
- > It empowers the pupils and instils a sense of ownership. Westborough Primary School is much less prone to vandalism than other schools in the area.

“If we tracked down the pupils who visited Cottrell and Vermeulen’s office in the mid-1990s, I’m sure there would be a high percentage working in construction industries”

Jenny Davies

2

Wrockwardine Wood Junior School, Telford

Tying the design and construction process to the curriculum

What is the school like?

The single storey SCOLA system built school dates from the early 1960s.

What was the nature of the project?

Prefabricated classroom.

Is the school in an urban, suburban, or rural setting?

Urban.

How many pupils have been involved in the project?

Approximately 60.

What is the age range of the pupils?

9 – 10.

What was the cost of construction?

£500,000 (approx).

How long did the project last, from consultation to occupation?

Two years.

In 2001 the Borough of Telford & Wrekin was awarded a DfES Classroom of the Future grant. The initiative encourages schools to develop new learning environments using low-impact, replicable construction techniques, in line with government policy on construction and procurement. The contract to develop the classrooms was won by INTEGER, an organisation committed to the design of intelligent and environmentally responsible buildings. The design team included architects, furniture designers, engineers and product manufacturers.

The first task was to visit all the schools in the area and find out which had the greatest need of a new classroom. Wrockwardine Wood Junior School, a 1960s school showing signs of age, and with limited space for growth, was selected. **“From the outset the school wanted to use the Classroom of the Future grant as an opportunity to get children involved in the design and construction process,”** says Jez Pellow of Enabling Concepts, part of the team. To introduce themselves and the project to the pupils Enabling Concepts addressed a school assembly. **“We told the children that they had a fantastic opportunity to help build a new classroom, and asked them if they wanted to get involved,”** says Pellow, **“They were really enthusiastic.”**

The next stage of the process involved Cole Thompson Architects designing a rough model of what the prefabricated classroom might look like. Walls and furniture could all be moved around. It gave the pupils a tactile experience and a sense of scale and spatial arrangements. Another technique was to draw a chalk outline of the classroom in the playground, to demonstrate its relationship with the existing buildings and open space.

During the two years that it took to complete, curriculum projects were developed to tie in with the evolution of the classroom. For instance, when the glass panels were put in, a group of pupils was asked to consider the benefits of glass as a construction material. One pupil said: **“We won’t need radiators because we will have solar panels inside.”**

Study visits were another technique to show where buildings come from. In the case of Wrockwardine’s Classroom of the Future, the answer was the Yorkon factory in York, which manufactures classroom modules. The pupils could see the various elements of their classroom being made in the factory, and then watch the parts being bolted together on site.

Following their visit to the Yorkon factory pupils aged 10 – 11 were asked to fill out questionnaires, design logos and invent slogans to describe what they had seen. The machines inside the factory made a particular impression on the pupils, “because some were massive and some small and they showed us how to punch holes and bend the metal.”

Another project involved the design of the classroom furniture, in collaboration with Marc Davies of the Counties Furniture Group. “It was a real lesson in why not to underestimate children. So many kids have so many preferences and it’s great to see these ideas reflected in the finished product,” says Iain McLeish, Head teacher at Wrockwardine.



“It was a wonderful opportunity to get involved in a new, unfamiliar project, to see a different world. And it was a world that the children could really get involved in.”

Iain McLeish



Among the many advantages of tying the design and construction process to the curriculum are:

- > Turning pupils into advocates. “The experience for the children and young people was not just about learning but also citizenship in action. The experience gave the pupils the confidence to talk to their families about the project with pride and understanding; as a consequence the schools did not need to constantly inform parents of progress by letters of meetings.” Jez Pellow, Enabling Concepts.



3

Kingsdale School, London Borough of Southwark School and design team develop design options to meet educational vision

What is the school like?

Kingsdale is a large, 1960s-era comprehensive.

What was the nature of the building work?

Radical refurbishment.

Is the school in an urban, suburban, or rural setting?

Urban.

How many members of the school community have been involved in the project?

Over 1,500 representatives of the school community since 1998.

What is the age range of the pupils?

11-16.

What was the cost of the project including consultation?

£11 million.

How long has the project lasted, from start to occupation?

Six years on-going.

What was the duration of the collaborative involvement?

Six years on-going.

Kingsdale School was in an advanced state of disrepair by the end of the 1990s. The buildings were handicapped by a lack of storage, narrow corridors, inadequate technological resources, and poor dining and staff facilities. Steve Morrison, the new Head teacher, wondered how he could improve the school, whose poor physical condition reinforced the low morale of the pupils and staff. “[In spring 1998] we re-wrote the school’s aims, focusing on the potential impact of environment improvements,” says Morrison.

In 1998 Kingsdale joined forces with School Works, a new national initiative formed out of a Makeover @ School project with the Architecture Foundation dedicated to using inspirational school buildings to raise educational achievement and support a culture of lifelong learning in local communities. In collaboration with the RIBA Competitions Office, School Works devised a new approach to selecting an architect to oversee a refurbishment of Kingsdale. Instead of seeking design concepts, architects were asked to demonstrate how they would encourage the school community to generate ideas and engage with the process of improvement.



Following the selection of an architectural practice, de Rijke Marsh Morgan (dRMM), School Works appointed a multi-disciplinary team to undertake a three-month participatory process. The team included an educational psychologist, an education researcher, an engineer, a construction manager and performance artists. The approach to pupil engagement was designed to uncover the problems with the school, and reach consensus on design and education recommendations.

Every one of the pupils (1,067), and staff (92) was consulted by the School Works team. The intention was to draw up solutions for the recurring complaints, such as the lack of

changing space for girls, and the poor quality of the toilets. It was also to consider ways of integrating the processes of engagement, and improving the built environment, into the school curriculum. Through focused workshops, pupils and staff were asked to consider potential changes to the traditional school timetable, which is based on a 19th Century model. They were also asked to imagine what a school reflecting contemporary lifestyles might look like. Another consideration was the potential for Kingsdale to play a more active role within the broader community. Poetry, art work and creative writing were all harnessed to generate ideas.

At the end of 2000 an Implementation Group, made up of the senior management team, the architects, a School Works representative, a DfES representative, and a project management team, was established to oversee and manage the recommendations for change. These included improvements to circulation and teaching areas, and the provision for lockers for all pupils. The physical alterations were designed to facilitate simultaneous changes to the school's organisational structure and day to day atmosphere. For instance, it was argued that social space and lockers for all pupils would promote a sense of ownership.

In February 2002, after a year of careful planning, the first phase of construction began – a new ICT suite. In 2003 a new enclosed atrium was built over the external central courtyard. This replaces the narrow corridors that hampered circulation throughout the school and also provides new dining, exhibition and assembly areas. 2004 sees the completion of refurbished classroom areas and the library and auditorium 'building within the building' that forms the heart of the school. "The School Works consultation process enabled the design team to create a new kind of learning space, a more flexible education environment that combines inclusivity with spectacular architecture," says Alex de Rijke, dRMM architects.

School Works has taken the process developed at Kingsdale and, with DfES support, has applied it successfully to a new PFI secondary school in Northamptonshire, four primary and two secondary schools being rebuilt under PFI in Newcastle, and three secondary schools within the Bradford Building Schools for the Future pathfinder.

Not many school improvement projects are as extensive as Kingsdale. With a budget of £11 million, principally through the DfES and LEA, it is certainly an exception to the rule. However, the Kingsdale experience does offer lessons for smaller projects, notably the benefit of careful planning to integrate 'hard' and 'soft' interventions, using programmes of physical improvement to influence management and organisational structures. "And you cannot design a successful school without clarity about how the educational vision will be achieved" says Sharon Wright, of School Works.



"The experience of detailed consultation was very time consuming and sometimes quite painful. But the benefits of such rigorous attention to detail are that there are very few surprises in the finished product and that relationships between all the stakeholders have been changed forever. Kingsdale has been re-established as part of the community."

Steve Morrison

4

Chingford Hall, Community Primary School and Learning Support Centre, London Borough of Waltham Forest

Design focused consultation to agree a brief

What is the school like?

A system-built primary school housed mainly in two single-story buildings either side of a huge tarmac playground and play centre.

What was the nature of the project?

Consolidation of a two-form entry primary school into a one-form entry school with a new Learning Support Centre including a Pupil Referral Unit, Excluded Pupils Class, a Nurture Unit and offices for a Behavioural Support Team.

Is the school in an urban, suburban, or rural setting?

Urban.

Who has been involved in the project from the school?

Parents, governors, staff and over 200 pupils from the Primary School.

What is the age range of the pupils?

3 – 11.

What was the cost of construction?

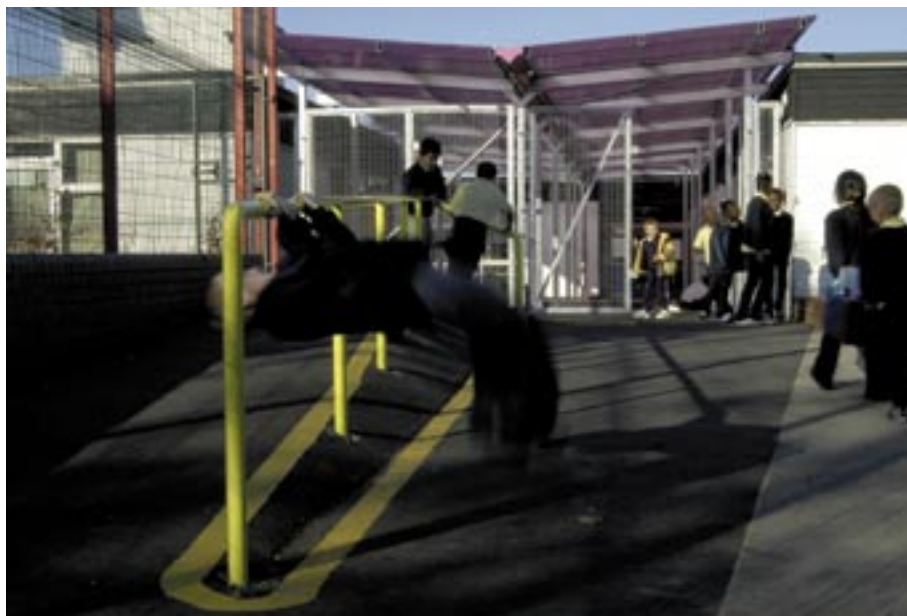
Learning Support Centre and landscape cost £850,000. The primary school cost £230,000. On top of this approximately £7,500 was spent on collaboration.

How long has the project lasted, from start to occupation?

Two years in total.

What was the duration of the collaborative involvement?

Participatory and consultation stages were spread over six months but most intensely in the first month.



The catalyst for change in Chingford was complex. A 1960s primary school running at under half capacity was earmarked by Waltham Forest as the site for a new Learning Support Centre.

A capital bid to the DfES to support this proposal suggested reducing the existing Primary School intake to make it a single-form entry school, thereby freeing up the infant block to be refurbished as the Learning Support Centre. The project illustrates tensions between key partners and the constraints imposed by funding and construction completion deadlines.

A year after the project was instigated, the design team of Cullinan and Buck Architects Ltd was brought on board by the LEA. The team at once identified the need for sensitive consultation and a careful balancing of the interests of the school and the incoming Learning Support Centre. The first task was to build a client team drawn from all parts of the school community, including the LEA and its private sector partner, teachers, governors, parents and pupils. The process of dismantling preconceptions and structuring a dialogue had to go hand in hand with preparing the basis for a design.

The architects and a core of active parents organised Open Days and Bring and Buy sales to encourage others to share in the design process and the logistics of the move. The developing designs were exhibited on huge display boards and by providing tracing paper and pencils pupils, parents and teachers had the chance to work on the designs themselves.

Initial resistance gradually gave way to interest in the proposals and the sharing of practical advice as to how they could be improved. Views were gathered on laptops by members of the design team. At these meetings the design team was able to build up a rapport with the pupils and learn how they felt about their school. Later these ideas were explored in class.

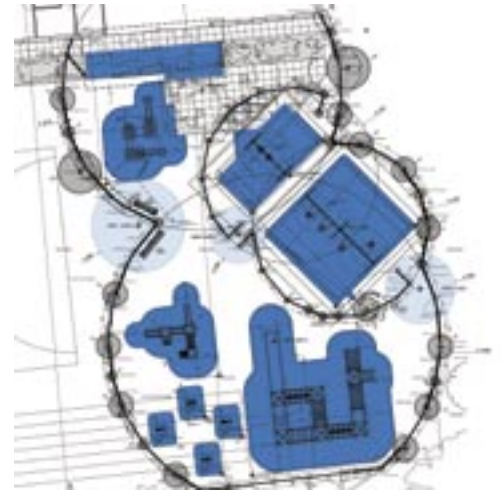
The evolutionary nature of the brief put together by the design team in continuous consultation with the Head teacher meant the design could progress and change even whilst building work was being carried out on the vacated part of the school. These changes were shown and discussed with parents, staff and pupils by making exhibition boards from the design drawings and models for display in the school throughout the project.

The consultation process for the Learning Support Centre, having no presence on the site and a less well-defined management structure, took a different form. The Centre's Head was encouraged to define detailed requirements for the future building, using the opportunities and limitations of an existing building as a starting point.

The Chingford case study demonstrates the advantages of setting up a clear process of participation, even at late a stage, in order to share the making of a common brief.

“The design team was crucial in bringing the LEA and the school together as a positive and creative force.”

Nitin Parshotam, project manager



5

The Dukeries, Ollerton, Nottinghamshire Intensive five-day consultation event produces results

What is the school like?

A large 1960s-era secondary school campus.

What was the nature of the project?

To find new uses for parts of an under-used school.

Is the school in an urban, suburban, or rural setting?

Urban.

How many pupils were involved in the project?

800 – 1,000.

What was the age range of the pupils?

11 – 16.

What was the cost of the consultation process?

£20,000 (approx at 2004 rates).

What was the cost of construction?

£4 million (approx at 2004 rates).

How long did the project last, from start to occupation?

18 – 24 months.

What was the duration of the collaborative involvement?

A five-day intensive consultation event was followed by a public presentation of findings approximately a month later.

The Dukeries, a secondary school built in the 1960s, is situated in the centre of Ollerton, Nottinghamshire. By the beginning of the 1980s the pupil population was only 800, half the number the school had been designed to accommodate.

In 1982 Nottingham LEA approached the DfES to ask if they would be willing to collaborate on reviewing the future use of the school. The LEA, taking the lead, was faced with three options: to close the school, demolish surplus buildings, or try to find new uses for the vacant space. It was decided to engage the local community to help resolve this dilemma. “An Open Week was suggested, five days of intensive consultation. It was based on an idea I’d seen in the United States,” explains one of the advisors on the project.

Once the decision to go ahead with the Open Week was made everyone acted very quickly. The LEA promoted the event in local newspapers, on the radio and television. Before the event, advisers had worked with the school council and staff to ensure that the pupils had an opportunity to study the issues and present their ideas. At the same time discussions were taking place with the school regarding demands for the revitalisation of school facilities.

At the start of the week six advisers – from the LEA and from the DfES – set up shop near the entrance to the school’s hall. On tables arranged like a café, they listened and wrote down people’s views. The day started slowly, with only a few visits in the first few hours. But the pace quickly gathered as more and more people came to express what they knew and felt about the school.

Each team member spent about 20 minutes with everyone who came along, whether individuals, small groups or representatives of local voluntary or arts organisations. Notes were collated for review by the team of advisers the following week. The main requests were: somewhere for older people to meet, a crèche, a place for teenagers, adult education courses to offer retraining opportunities in the transitional economy, facilities for music, and a ‘one-stop’ suite of town hall services. These requests sat alongside a demand for a revitalised school for local children and enhanced educational facilities. These findings were published in a report that was subsequently presented back to participants at a public meeting and in various smaller discussion meetings.

“We didn’t want to raise people’s expectations and then not deliver anything. The purpose of the meeting was not to make promises, but to ask whether we’d missed anything, and to let everyone at the meeting know that the LEA would be able to fund most of their requests,” says the advisor to the project.

Within two years the redundant space had been converted to accommodate a broad range of school and community functions. The school remains buoyant, the community programme is still very broad and ambitious, and the Dukeries still retains the management structure that evolved from the event in 1982.

An intensive week of consultation has several advantages.

- > An Open Week event is cheap to run and simple to organise. In almost every context, premises and skilled communicators will be available.
- > The event introduced new management structures at the Dukeries. Following the week, representatives of the local community were invited to take their place on the Dukeries steering group. Members of this group went on to help implement the proposals and continue to support an enhanced and vibrant community school today.

“The fast, focused process allowed us to maintain momentum and keep spirits up. In a short space of time we had helped clarify what action the school should take.”

an advisor to the project

PFI Case studies

In complicated school building projects involvement needs to be carefully programmed to genuinely feed into the project. The next five case studies all focus on school building projects procured under the Private Finance Initiative (PFI). PFI is a version of Public Private Partnerships (PPP).

The PFI process involves the competing private sector consortia submitting bids to win the commission to design, build, finance and operate support services for the school. The consortia, also known as bidders, are specially formed for each project and include architects and design teams as well as construction, legal, financial and facilities management (FM) expertise. During the competitive stage, Invitation To Negotiate (ITN), the architects develop their designs in response to the client's brief, while other members of their consortium develop the other aspects of the bid (finance, legal and facilities management offers). Unlike traditional forms of commissioning buildings, in PFI projects the design team who will be awarded the contract to design and build the school do not have the chance to work closely with their real client, the school community, during the brief development phase of the process.

PFI is no different from other procurement routes in that quality in design depends on the client issuing a clear brief and the private sector design teams and consortia responding to it in a creative and innovative way. Where PFI does differ is in its complexity. PFI projects bring together a wide range of issues that are generally separated in more traditional forms of procurement. The client therefore needs to be organised to manage the process, particularly to ensure well-designed buildings as the outcome.

A version of PFI will be used in the emerging Building Schools for the Future (BSF) programme. In BSF, an initial group of schools will be involved in a competitive process to select a private sector partner to design, build, finance and manage the school. This process will be similar to existing PFI. However for later groups of schools within each BSF project there will not be the same competitive selection process. The pre-selected private sector partner will work with these schools to develop their designs. At the time of writing in September 2004 a total of 16 BSF projects have been announced. These are four Pathfinder and ten Wave 1 projects, plus two reserves. Further waves are due to be announced in late 2004.

The PFI case studies that follow are relevant to all those involved in the design and construction of schools.

School Building through the Private Finance Initiative (PFI)

- 6 Whitecross High School, single school PFI, Hereford, Herefordshire**
Bidder's workshops with representatives of the school community clarify design issues 42
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A client side reference project ensures brief and design development 50

6

Whitecross High School, single school PFI, Hereford, Herefordshire

Bidder's workshops with representatives of the school community clarify design issues

How many schools are included in the PFI bid?

Only one, unusual among PFI bids.

What's the existing school like?

A dilapidated two-storey building on a difficult site with a public right of way and restricted access.

Is the school in an urban, suburban, or rural setting?

This project involves the school moving from a suburban setting to a new green field site on the edge of Hereford.

What is the age range of the pupils?

11 – 16.

What is the construction cost of the new building?

Approximately £12 million.

How long will the project last, from start to occupation?

From the LEA applying to the DfES for funding in late 2001 until the planned occupation in April 2006 this project will have lasted approximately 4.5 years. At the time of writing (April 2004) the project is at detailed design stage.

How many pupils have been involved in the workshops?

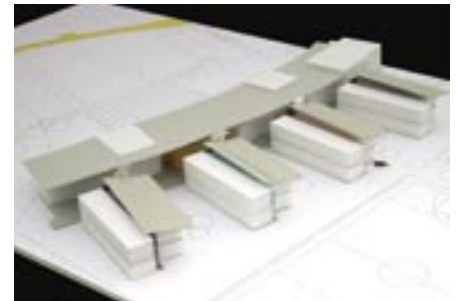
18 pupils from years 8 and 9 (aged 12 – 14).

What was the duration of the involvement?

Half-day design workshops at three critical stages of development.

Whitecross is a 900 pupil secondary school. The LEA and school have an ambitious sustainability brief for the new building on the new site. **"We appointed a Green Team of three leading experts in energy usage, materials usage and water usage in development of the ITN"** says Graham Parfitt, LEA PFI project leader. A CABE Enabler was also appointed. There was no architectural design advice on the PFI project team, so the CABE Enabler provided some of this support. This included running a design workshop for representatives of the school community to inform the brief.

During the bidding stage one of the three selected consortia secured permission from the LEA to organise a series of events to develop their design with involvement from the school community. A dedicated website was set up as a forum for community feedback. The local community were informed by post of the website and their views were sought. The consortium also ran half day workshops with a group of pupils at three critical points in the competitive stage (ITN). The findings were fed into their final design proposals.



The workshops were run in peer groups. Representatives from the staff and governing body attended workshops in their lunch breaks. The Head teacher chose 18 pupils from years 8 and 9 to participate in the workshops – pupils in these year groups will move into the new building. The pupils were split into three groups of six. Each group was led by an architect from Haverstock Associates, the architects within the consortium. Head teacher Denise Strutt commented that **"the school has a commitment to involving pupils in decision making. Pupils from years 8 and 9 have contributed to the project."**

The first workshop was two weeks into the design phase of the project. It involved a presentation about several design issues common to all schools, and was illustrated by slides from built examples. Issues included the size of the classrooms, how high the school should be, and the availability of lockers for all pupils. This stimulated discussion among the pupils about their own school.

With the assistance of the architects, the pupils agreed criteria against which they would judge design options. This session was followed by a presentation of 14 conceptual design models, the product of a design competition the architects had run at their office in answer to the school's written design brief. The competition had involved everyone at the architect's office and other members of their consortium, including an education advisor and Stepnell, the consortium contractor. The process exposed a number of design issues during the course of the day, leaving the architects with a clearer idea of what the school community wanted.

“We have held numerous meetings and attended all pupil meetings. It has been a consortium effort in trying to ascertain what is truly required.” Richard Wakeford, Stepnell

The second workshop involved the architects presenting designs based on feedback from the previous session. The following are some of the pupils' requests, supported by the school management: **“We want a single entrance all together, the teachers can use it too if they want to”**; **“We want to go outside between classes and breathe fresh air”**; **“We want the sports pitches to be high profile at the front of the school site.”**

The consortium that undertook this pupil engagement exercise won the contract to design and manage the new school. In the summer of 2004 it ran a third workshop. This was the final chance to involve the school in detailed design before the completion of the drawings and the start of construction.

Collaboration between the school community and design team before the selection of a consortium is beneficial for a number of reasons, including:

- > The school get the chance to find out if this is a consortium they want to have a long term relationship with (in PFI the consortium will maintain and provide support services for 25-30 years).
- > The discussions empower the pupils and staff, and instil a sense of ownership.
- > The design reflects the priorities of the school community.
- > The school community benefit from engaging with the issues of the wider world of the construction industry.



7

Lewisham grouped school PFI, London

Consulting schools about their aspirations in the early stages of a PFI bid ensures high quality design briefs

How many schools are included in the PFI bid?

A total of seven, including two secondary schools, four primary schools, and one special school for secondary age pupils with severe learning difficulties.

What are the schools like?

They range from the Victorian period to the 1960s with a huge number of alterations and additions added over the years. The sites range from very tight, to quite generous for an urban setting.

What was the nature of the work?

To oversee either new build or refurbishment in all seven schools.

Are the schools in an urban, suburban, or rural setting?

Urban.

How many pupils have been involved in the project?

A core of 120 (approx) School Council members, from all seven schools, acted as conduits for information between their peer groups.

What is the age range of the pupils?

3 – 18.

How long has the project lasted?

The PFI bid began in 2001 and is on-going in April 2004. Consultation has been undertaken at strategic stages throughout the process.

The London Borough of Lewisham began working on its PFI bid in 2001. From the outset the borough was determined to develop design briefs that reflected the independent aspirations of each school within the bid, thereby creating the conditions for contractors to deliver high quality school facilities. It was recognised that this could only be achieved by allocating time for comprehensive consultation with all participating schools in the schedule.

In 2002 discussion between Lewisham Council and a CABE Enabler led to the competitive selection of two architectural practices, Education Design Group and Haverstock Associates, to act as design advisors and to undertake client side initial design work and brief development. Three school facilitators, professional go-betweens with broad educational experience and an understanding of both the PFI process and techniques for consulting whole school communities, were also appointed.

Over 15 months the schools facilitators and design advisors consulted all the schools, using a range of techniques, from taking teaching staff on study visits to new schools, to one-on-one consultation with pupils. **“In general I’d recommend having a School Council meeting in the very early stages, to introduce the idea to the pupils. The early involvement of the pupils is critical. Spontaneity is very important,”** says Graham Parker, school facilitator.

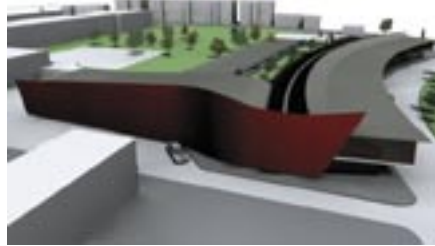
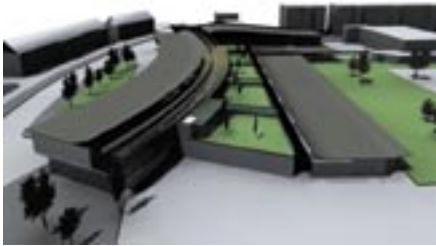
Considerable time and effort was focused on assisting the school communities to understand their educational goals, to help them develop the process, and make the staff and pupils better clients. **“We asked one girl to describe a typical school day. She described the route that she took from the playground to her classroom on the third floor of a Victorian building, then during the course of the day to the dining room, the library, and the playgrounds. It helped us realise just how inconvenient the school was for both pupils and adults alike,”** says Mark Dudek, Education Design Group.

The strategy for the development of design ideas involved splitting the schools into three types, primary, secondary and special needs. Initial design work was undertaken on one of the primary schools. **“The architects drew up indicative design lessons which could be applied in the remaining three primary schools,”** says John Waldron, the CABE Enabler.

“There’s limited guidance on special needs schools. Not enough is known about the requirements of the pupils. So we started by reviewing all the activities at the school,” says John Jenkins, Haverstock Associates. There was some scope for innovation, notably designing the lift to reveal the mechanics and thereby facilitate learning.

For the two secondary schools, ideas were based on a series of design evaluation criteria, based on the Design Quality Indicator (DQI). The design team sat with school representatives and presented proposed schemes with a number of options. These were then developed following intensive debate.

The combination of design ideas and evidence generated from the consultation process formed the basis of detailed briefs, which were prepared in the autumn of 2003. These briefs contributed to the Invitation to Negotiate (ITN) documentation, which is issued to consortia selected to bid for the project.



To schools with limited experience of the PFI process, it can be difficult to understand the merits of the various consortia’s bids. It is at this stage the school facilitator steps in again, to offer support and advice to the schools throughout the competitive selection process.

How to ensure high quality design within a large PFI bid:

- > The PFI process can allow time for consultation with participating schools, but this must be built into the timeframe at the outset.
- > If the LEA or school are new to the PFI process, it is vital to seek advice from experienced facilitators. A skilled facilitator will add value at every stage of the process and use their experience to equate needs with budgets.
- > Focus on the end product. A well-managed PFI bid stands a better chance of attracting good quality consortia bids.

8

Peacehaven grouped school PFI, East Sussex Investing time and resources in developing a brief provides clarity of purpose to both schools and contractors

How many schools were included in the PFI bid?

Five, one secondary school, three primary schools and Facilities Management for an existing primary school.

Are the schools in an urban, suburban, or rural setting?

Suburban.

How many pupils have been involved in the project?

Approximately 1,500, across all five schools.

What is the age range of the pupils?

4 – 16.

What was the cost of construction?

£18 million, including consultation.

How long did the project last, from start to occupation?

Three and half years. The LEA began preparing the bid in Spring 1998. The first school was occupied by Christmas 2000 and the last school was completed in September 2001.

What was the duration of the collaborative involvement?

Three and a half years.

The town of Peacehaven was developed ad hoc during the inter-war period. It is only in recent years that the local authority has made significant investment in the local infrastructure. In 1998 the LEA began preparing a collaborative PFI bid. This included a new secondary school for 750 pupils and three replacement primary schools on existing sites. A fourth primary school was also included in the scheme with the bidder assuming responsibility for facilities management only. Nursery units were added to three of the schools. Special needs units were included in the briefs for the secondary school and two of the primary schools.



Throughout the PFI process the LEA was concerned to engage with all stakeholders. During the bid stage this took the form of monthly group meetings attended by representatives from each school. The three primary schools had already formed a federation to share experience. **“This relationship proved very important in allowing them to set a common agenda for the school’s new buildings. We also recognised that Romy Tacon, Head teacher of Peacehaven Community Infants School, was highly regarded by her peers and that she provided an efficient point of communication.”** Ian Woodland, East Sussex County Council.

Peacehaven Community School was to be the first secondary school ever to be built in the town. As a result it had no Head teacher and the governing body was only recently appointed, so there was no single spokesperson for the school. The authority relied on the recent experience of its own education officers and architects. However, there was enthusiastic support from the local community who recognised the potential of a new secondary school as a community resource.

During the bidding stage the local authority gave the three short listed consortia access to the schools on four occasions. These meetings were attended by the project leader who ensured that the bidders were kept informed of decisions that might change the brief and that the schools' requests were consistent with the authority's own requirements.

One of the consortia's design team and their educational design adviser worked with the school staff and the local authority on developing the brief. The brief placed emphasis on developing life-long learning and using the schools to supplement the meagre recreational and community facilities of the town. The consortium's designs responded by placing the school libraries close to entrances with careful zoning to ensure that pupil security was not compromised. This consortium was subsequently awarded Preferred Bidder in late 1999.

During construction the schools arranged regular visits to the site – in the case of two of the schools, builders were working virtually outside the classroom window. The site managers and operatives welcomed the visits and were proud to show off their work.

“An open working relationship gave the Preferred Bidder's design and construction team the confidence to present their proposals informally, and to explore ideas with the schools throughout construction.” John Waldron, architectureplb. The unity of purpose among the client team also encouraged the consortium to explore an innovative form of construction that allowed similar spatial modules to be used at all the primary schools in a variety of permutations to suit their particular needs. This helped to minimise construction time and disruption to the existing schools.

This project demonstrates three principles that could be usefully adopted elsewhere:

- > Harness existing lines of communication between participating schools. In Peacehaven collaboration between the schools allowed them to articulate their visions effectively at the brief writing stage and give the bidding consortia clear guidance at the design stage.
- > It is vital to give the project leader a clear brief. On the Peacehaven PFI the project leader showed respect for the aspirations of all parties and created an atmosphere of trust and openness, but when necessary had the authority to make difficult decisions in the interest of high quality finished products.
- > Keep an open mind and encourage debate throughout the process. Even during competitive bidding stages, the positive atmosphere and good lines of communication encouraged the bidders to explore ideas with schools and the LEA, which made a real difference to the outcome.



9

St. James Secondary School, grouped school PFI, Exeter, Devon

Design Quality Indicators give a format to shared brief development and design evaluation

How many schools are included in the PFI bid?

Six, five secondary and one primary.

What is the school like?

Built in the 1960s, the existing building would be difficult to enlarge and has climate control problems. A new school will be built on the current playing fields and the old buildings will then be demolished to create new play areas.

Is the school in an urban, suburban, or rural setting?

Urban.

What is the age range of the pupils at the school?

The school currently has 627 pupils aged 12 – 16. This will increase to 950 11 – 16 year-olds in the new building, changing the status from a high school to a secondary.

What is the construction cost of the new building?

Approximately £15 million. The six school project was awarded £79 million PFI credits. Each school receives £25,000 a year from the central education budget to cover involvement in the design process.

How long will the project last, from start to occupation?

In March 2002 the scheme was awarded PFI credits. The school will be occupied in September 2005.

What was the duration of the involvement through the DQI?

The school's DQI group met in intense two day sessions three times during the project.

St. James Secondary School is part of a group of six schools being rebuilt by Devon County Council LEA through the Private Finance Initiative (PFI). This grouped school project is part of a thorough reorganisation of all Exeter schools from three tier to two tier. The project is to replace all five high schools, and combine a first and a middle school into a primary school.

Devon LEA, its strong in-house architect team and the appointed CABE Enabler were determined that their PFI would produce well-designed schools. The project began in earnest in March 2002, but significant work prior to this in developing the bid to DfES included a public opinion survey, 10 public meetings and a newspaper poll resulting in 4:1 in favour of changing the system.



When it came to developing the brief the LEA and the school community were keen to develop a collaborative approach to design. Devon LEA decided to use a tool which assists the definition and checking of the design quality of a building project – the Design Quality Indicator (DQI). Launched on-line by the Construction Industry Council in October 2003, the DQI is made up of 97 grouped questions the responses to which are given different weightings.

Devon LEA used the DQI in its development phase. The DQI questions were tailored to reflect the needs and aspirations of the schools. Each school went through the questions, picking the ones that they felt were most pertinent. These were weighted and the LEA devised a scoring system to reflect this. This meant that the bidders' designs could be quickly and accurately evaluated and assessed, a process which happened in Spring 2003.

Not unexpectedly, the assessment resulted in some schools preferring one bidder and other schools preferring another. However, the LEA scoring system aggregated the scores and produced data that gave a clear indication of the best overall consortium for design. In Summer 2003 Preferred Bidder was awarded. 'Preferred Bidder' is the PFI term for the consortium that wins the contract to design, build, finance and operate the school.



“The school design team has continued to meet regularly. There is no doubt that the DQI assessment process galvanised us into setting up this team, which has been very successful in generating ideas and in involving the local community.”

Flic Hart, Head teacher

The DQI continues to be of value as the project progresses. The second DQI assessment has been carried out on the detailed design, following 10 months working with Preferred Bidder. The results have shown strong evidence of improvements in design quality. The next DQI is scheduled on the built school for December 2005, three months after occupation.

Looking back over the last two years, Flic Hart, Head teacher of St James, is positive.

“The involvement given to the schools by the LEA has been very good. We were encouraged to make our own decisions – school by school – and were encouraged to work with the architects and the bidding teams. The LEA provided all the technical and legal support we needed, but it was obviously a learning curve for them as well. Overall, I have been very impressed with the energy, expertise and support from the LEA and I know my Chair of Governors feels the same. The LEA could have made their lives easier by not giving us so much choice and involvement.”

10

Jo Richardson Community School, grouped school PFI, London Borough of Barking and Dagenham

A reference project assists brief and design development

How many schools are included in the PFI bid?

Two. The Jo Richardson Community School (JRCS) is a new build project and the Eastbury Comprehensive School (ECS) is part new build, part refurbishment.

What is the Jo Richardson school like?

Jo Richardson is a brand new eight form entry community school which will be located in Castle Green, Dagenham.

Is the school in an urban, suburban, or rural setting?

Urban.

What is the age range of the pupils at the school?

The Community School takes pupils from 11 – 18; the pre-school facilities will take children from 3 months – 4 years; there is also an extensive adult education programme and numerous community facilities, meaning that the school will be used by people of all ages.

What is the construction cost of the new building?

£29 million approximately.

What was the cost of the involvement?

£300,000. This included the appointment of a client side design team to undertake initial design work to create a reference project, and a series of events and visits for members of the school community and LEA to feed into the reference project.

Jo Richardson Community School is a totally new institution. It will be a full service eight form entry community school, with a wide range of dedicated and shared facilities such as a crèche and day nursery, clinic, sports facilities, community library and learning village, adult education centre and a large school hall with dining and catering facilities for use out of school hours. It is the first new school to be built in Barking and Dagenham in over 40 years.



A CABE Enabler was appointed to give advice on the project. The advice was to appoint a client side design team to develop a full reference scheme. After a competitive process, Penoyre & Prasad Architects were appointed to work with the LEA and school community to develop a clear brief and a reference project to issue to PFI bidders.

The school had a very clear educational intention from the outset, largely based around new teaching approaches including a new pedagogy and a pre-vocational curriculum. The design was to provide for this. One aspect of this encouraged a horseshoe arrangement of desks, which led to an increase in the size of the classrooms (to 75msq). The LEA officers and the Head teacher completed a full curriculum analysis and established a schedule of accommodation for the new school.



In May and June 2002, Penoyre & Prasad organised a series of visits to other schools for a core project team of the Head teacher, two deputy heads and LEA officers. “The schools were chosen because they were organisationally different and were a mix of new build and refurbishment projects. The design and arrangement of these schools was analysed and critiqued by the visiting team, leading to the compilation of a list of desires and potential pitfalls for the new school. The visits also inspired discussions about the team’s own brief and a re-examination of the schedule of accommodation, the size and shape of teaching and communal spaces and the staff’s preconceptions about the adjacencies of departments,”

Sally Rendel, Penoyre & Prasad.

At the same time, in order for the design advisor to better understand the new teaching pedagogy and its implications for the fabric of the future school, the project team visited a local primary school where it was already in operation. The pedagogy was inspired partly by a Swiss educational model which was initially developed in primary schools within the borough and is now being developed in the secondary sector. The team also visited three schools in Holland to understand the physical implications of the pre-vocational curriculum options.

The Design Quality Indicator (DQI) was used on the near complete reference project to evaluate and prioritise the things that the project team had come to understand as important in their new school. The reference scheme was then issued to bidders as part of the ITN documentation. The DQI was used to evaluate the bidders’ proposals and it will be used to assess the detailed design of the chosen scheme and also the finished building.

Representatives from community groups and other interested parties, such as the Greater London Assembly, had been approached by the Head teacher at an early stage in the creation of the schedule of areas for the Community School. Penoyre & Prasad later met with representatives of each group to discuss with them their spatial requirements and their position in the emerging organisational model for the building.

How long will the project last, from start to occupation?

In 2001 the scheme was awarded PFI credits. The school will be occupied in September 2005.

What was the duration of the development of the reference project phase?

From April to October 2002.

“The appointment of a design advisor and design team and the development of a design with the Head teacher created a clear brief and a coherent reference project. This information was issued to the PFI bidders and was used as the benchmark for their schemes and for the Authority’s evaluation of the bids. The process also produced an ‘educated’ client, through participation in the development of this initial design work, and enabled the Head teacher and officers of the Council to be clear about their objectives when evaluating the competing design proposals.”

Alan Gillard,
PFI Manager, project leader

Useful Information

Included below are publications and organisations that CABE has had contact with in writing this guide. There are also further references in the case studies.

Architecture Centre Network (ACN)

Co-ordinates, supports and advances the work of architecture centres.

www.architecturecentre.net

> Architecture Centre, Bristol

Bristol

www.architecturecentre.co.uk

> Architecture Foundation

London

www.architecturecentre.org.uk

> Concourse Centre for Design

Leeds

www.riba.org.uk

> Creative Centre for Built Environment

Wakefield

www.public-arts.co.uk

> CUBE

Manchester

www.cube.org.uk

> CUE

Milton Keynes and the South Midlands

E: melvyn.jones@milton-keynes.gov.uk

> Humber Centre for Excellence in the Built Environment

Hull

E: Karen@hullbuiltenvironment.co.uk

> London Open House

London

www.londonopenhouse.org

> MADE

Birmingham

www.made.uk.net

> Northern Architecture

Newcastle

www.northernarchitecture.com

> OPUN

East Midlands

www.opun.org.uk

> PLACE Belfast

Northern Ireland

E: grainne.rsua@dnet.co.uk

> RIBA Trust

London

www.riba.org

> SHAPE Cambridge

Cambridge

www.shape-cambridge.org.uk

> Solent Architecture Centre

See The Architecture Centre, Kent

> South West Architecture Forum

Plymouth

E: ramfells@eurobell.co.uk

> The Architecture, Art and Design Centre, Croydon

Croydon

E: aadcentre@hotmail.com

> The Architecture Centre, Kent

Kent

www.architecturecentre.org

> The Building Exploratory

Hackney, London

www.buildingexploratory.org.uk

> The Lighthouse

Glasgow

www.thelighthouse.co.uk

> Urban Vision North Staffordshire

Stoke on Trent

E: micl.downs@stoke.gov.uk

The Architect's Plan of Work

RIBA Publications, 2000
www.architecture.com

The Audit Commission: PFI in Schools

Audit Commission, 2003
www.audit-commission.gov.uk/reports

Becta

The Becta site provides information on ICT in education for the schools and FE sectors.
www.becta.org.uk

Building Bulletin 77: Designing for Pupils with Special Educational Needs and Special Schools 2005

Department for Education and Skills
www.teachernet.gov.uk

Building Bulletin 98: Briefing Framework for Secondary School Projects

Department for Education and Skills
www.teachernet.gov.uk

Building Bulletin 99: Briefing Framework for Primary School Projects

Department for Education and Skills
www.teachernet.gov.uk

Building Connections

The Lighthouse, NGfL Scotland,
The Scottish Executive
Provides downloadable built environment resources for the Scottish curriculum with easily transferable ideas.
www.buildingconnections.co.uk

Building Education: The role of the physical environment in enhancing teaching and research

H Clark, Institute of Education, 2002
Explores the relationship between school buildings, attainment and behaviour, and investigates ways in which school buildings can support and encourage participatory learning to enhance the National Curriculum. £7.95
E: info@ioe.ac.uk

Building for Sure Start: Integrated provision for under-fives, Client Guide & Design Guide

Sure Start & CABE, 2004
www.cabe.org.uk/publications

Building Schools for the Future A new approach to capital investment

Department for Education & Skills, 2004
The Building Schools for the Future programme aims to transform educational standards by creating innovative environments and facilities for local communities.
www.teachernet.gov.uk/bsf

Building Sights

Arts Council England and CABE
Initiative to involve the public in building projects.
www.buildingsights.org.uk

CABE

Commission for Architecture and the Built Environment (CABE) is the nation's champion for better places: places which work better, feel better, are better.
www.cabe.org.uk

CABE Corporate Strategy 2003/4-2005/6,

CABE 2003
www.cabe.org.uk/publications

CABE Education website

Contains information on built environment education projects, resources, funding and events from other organisations including links to CABE Education resources.
www.cabe-education.org.uk

CABE Digital Library

Provides information and images on well designed buildings and public spaces in the UK.
www.cabe.org.uk/library

CITB-ConstructionSkills

Provides assistance in recruiting and training the construction workforce.
www.citb.org.uk

CITB-ConstructionSkills Awards Scheme

Units of work for Key Stages 1 to 3 which use the construction industry and the built environment as contexts for learning.
www.constructionawards.co.uk

Client Guide: Achieving well designed schools through PFI

CABE 2002
For main stakeholders, particularly the client, private sector partners and school communities.
www.cabe.org.uk/publications

Considerate Constructors Scheme

A voluntary code of practice that encourages firms to be sensitive to the environment in which they operate and places public health and safety as its top priority.

www.considerateconstructorsscheme.org.uk

Construction Industry Council (CIC)

The representative forum for the industry's professional bodies, research organisations and specialist trade associations.

www.cic.org.uk

Creating Better Cities with Children and Youth: A manual for participation

D Driskell, UNESCO 2002

£19.95

www.earthscan.co.uk or

<http://upo.unesco.org>

Creating Excellent Buildings: A Guide for Clients

CABE 2003

www.cabe.org.uk/publications

T: 020 7960 2400

Creating new schools

TEN and School Works, June 2003

Pamphlet £5

www.ten.info

Creating Successful Masterplans: A guide for Clients

CABE 2004

www.cabe.org.uk/publications

T: 020 7960 2400

Creative Partnerships

Initiative to develop school pupils potential, ambition, creativity and imagination through projects run in partnership with schools, cultural organisations and individuals.

www.creative-partnerships.com

Creative Spaces: Improving school design

CITB-Construction Skills and CABE Education

A pupil friendly version of the DQI which is currently under production.

www.cabe-education.org.uk/creativespaces

Department for Education and Skills

Information on government policy and key design guidance for school buildings.

www.dfes.gov.uk

www.teachernet.gov.uk

www.teachernet.gov.uk/schoolbuildings

www.teachernet.gov.uk/bsf

Department of Culture, Media and Sport

The Learning to Listen initiative focuses on exploring how to engage children & young people in decision-making about the services that affect them.

www.dcms.gov.uk

Design Council

The Learning Environments campaign is working with schools to develop and evaluate effective learning environments. It is also developing an online tool for schools to evaluate and improve their environments.

www.designcouncil.org.uk

Designing Scotland's Sustainable Schools of the Future

The Lighthouse, 2003

E: architecture@scotland.gov.uk

Designs for Learning: 55 exemplary education facilities

Organisation for Economic Co-operation and Development (OECD), 2001

www.oecd.org/publications/bookshop

Designs on Britain

RIBA, Arts Inform and the Learning and Skills Development Agency

Educational outreach project bringing together 14-19 year old pupils of technology, art and design with architectural practices working on real projects and putting forward ideas for future development.

www.artsinform.com

Design Quality Indicator (DQI)

Construction Industry Council

www.dqi.org.uk

Education Business Links

www.dfes.gov.uk/ebnet

English Heritage

Supports exploration and enjoyment of England's historic environment. Regional education officers and resources.

www.english-heritage.org.uk

Every Child Matters: The Next Steps

Department for Education and Skills, 2004

www.dfes.gov.uk/everychildmatters

Five-year Strategy for Children and Learners: Putting people at the heart of public services

Department for Education and Skills, 2004

www.dfes.gov.uk/5yearstrategy

Groundwork UK

Aims to build sustainable communities through joint environmental action. Groundwork Southwark focuses on the development of school grounds and provides curriculum support materials.

www.groundwork.org.uk

A Guide for School Governors: Developing School Buildings

RIBA School Client Forum, RIBA, 2000

www.architecture.com

Inclusive School Design: Building Bulletin 94

Department for Education and Skills,

The Stationery Office, 2002

Due for revision in 2004.

www.tso.co.uk/bookshop

Joinedupdesignforschools

Sorrell Foundation

Enables collaborations between school pupils and design specialists in a client/contractor relationship.

www.joinedupdesignforschools.com

Learning Buildings

School Works, 2002

This book challenges readers to think about the importance and potential of the built school environment and makes recommendations for policy change. £9.95

www.school-works.org

Learning through Landscapes (ltl)

Charity promoting effective use of school grounds. It produces School Grounds Toolkits and provides free advice to schools through the DfES funded School Grounds of the Future programme.

www.ltl.org.uk

The making place

Raises standards of teaching and learning in science and design technology, by extending the National Curriculum to high quality out-of-school learning environments.

www.themakingplace.co.uk

Movement for Innovation

Works from the clients' perspective on opportunities to improve the efficiency and quality of delivery of the UK construction industry.

www.m4i.org.uk

National Construction Week

Managed by CITB-Construction Skills, promotes the construction industry to young people and encourages them to consider it as a career.

www.ncw.org.uk

Participation-Spice it up!

Save the Children UK, 2002

E: sales@carrickbusiness.co.uk

Partnerships for Schools (PfS)

A Non-Departmental Public Body funded by DfES providing support to LEAs in the Building Schools for the Future (BSF) programme.

www.p4s.org.uk

PFI? A question of quality

RIBA, 2003

www.architecture.com

Primary Ideas: Environmental projects for primary schools 2004

Toolkit of ideas and projects of various shapes and costs that can improve existing school premises.

www.dfes.gov.uk/publications/

RIBA Client Services

A free service that provides long lists of architects (including those experienced as design advisors) for clients.

E: cs@inst.riba.org

Royal Institute of British Architects (RIBA)

www.architecture.com

A simple guide to building SP153

CIRIA

Specifically for the occasional client.

ISBN 0-86017-803-X

E: enquiries@ciria.org

The School I'd Like: Children and young people's reflections on an education for the 21st century

Catherine Burke and Ian Grosvenor,
RoutledgeFalmer, 2003

www.routledgefalmer.com

School Workforce

www.teachernet.gov.uk/remodelling

School Works

Looks at ways of using existing building resources more effectively to raise educational achievement and support lifelong learning in local communities. Work includes development of a post occupancy evaluation tool for secondary schools with DfES.

www.school-works.org

The School Works Toolkit

The toolkit explains the School Works approach and provides guidance on setting up participatory design projects within schools based on experience at Kingsdale in Southwark. £35 or free to schools.

www.school-works.org

Schools for the Future: Building Bulletin 95

Department for Education and Skills,
The Stationery Office, 2002

This document has a useful reference list.

www.tso.co.uk/bookshop

Schools for the Future: Exemplar Designs Concepts and Ideas

Department for Education and Skills, 2004

www.teachernet.gov.uk/exemplars

Schools Renaissance Project

Design Council

www.designcouncil.org.uk

SENJIT, at The Institute of Education, University of London

Together with Makeover @ School provides advice on school improvement, with a special focus on inclusion, to participating London boroughs.

T: 020 7612 6305

Sure Start

Sure Start is the Government's programme to deliver the best start in life for every child by bringing together: early education, childcare, health and family support.

www.surestart.gov.uk

Sustainable design and construction for schools and educational buildings

Somerset Trust for Sustainable Development
This guide presents the case for sustainable design and construction in educational buildings and provides examples of best practice. £20

www.sustainablehousing.org.uk

Sustainable Development Action Plan for Education and Skills

Department for Education and Skills, 2003

www.dfes.gov.uk/sd

TeacherNet

Department for Education and Skills
Information for teachers and other education professionals.

www.teachernet.gov.uk

The Education Network (TEN)

An independent policy, research and information organisation set up to support LEAs.

www.ten.info

Understanding Plans

Peter Murray and Michelle Ogundehin,
Wordsearch Communications, 1997

ISBN 0-9532158-0-6

Ultralab

Learning technology research centre based at Anglia Polytechnic University.

www.ultralab.net

The Value of Good Design: How buildings and spaces create economic and social value

CABE 2002

www.cabe.org.uk/publications

Working together: giving children and young people a say

Department for Education and Skills
Forthcoming proposals for helping Local Education Authorities, Governing Bodies and schools consider the views of children and young people and involve them when making decisions that affect them.

www.dfes.gov.uk/consultations

21st Century Schools: Learning Environments of the Future

Building Futures, CABI & RIBA

www.buildingfutures.org.uk

360°

CABI Education's tri-annual magazine explores built environment education across England. Including reviews of projects, resources, events, funding, the latest built environment education news and a pullout ready to use education resource.

www.cabi-education.org.uk

4ps: Draft Education Procurement Pack

Model documentation to local authorities embarking on PFI school projects. A summary is available on CD or from the website.

www.4ps.co.uk

4ps – Public Private Partnerships Programme

Support for local authorities undertaking PPP projects.

www.4ps.co.uk

Glossary

14-19 Agenda

Government policy on education and training for 14-19 year olds.

Two/three tier

Two tier is primary (age 3-11) and secondary (age 11-16/18). Three tier is first (age 3-9), middle (age 9-13) and high (age 13-16/18)

The Academy programme

Central government and private sponsor funded all-ability schools to provide secondary education for pupils aged 11-16/18. They cover the full National Curriculum and they also tap into the expertise of the sponsor.

Accommodation schedule

Outlines the exact number of rooms, their minimum sizes, and any special internal requirements.

Adjacencies

The relationship of rooms or departments to each other.

Age of transfer

The age at which pupils transfer to the next school in the education system, usually to secondary school

Architect

Architects design buildings and must be registered with the Architects Registration Board (ARB) in the UK.

Asset Management Plan (AMP)

The LEA's strategic assessment to identify schools in need of building work.

Best and Final Offer (BAFO)

In PFI, the final priced bid submitted by bidders.

Best Value

The value that is represented by considering quality and lifetime costs, rather than construction costs alone. Central and local government clients are charged with obtaining best value for their construction projects, as for all other aspects of government, rather than seeking lowest price.

Bill of quantities

A quantity surveyor writes this to describe the full architectural drawings and specification in order that the contractor can price this at the tender stage of a traditional contract.

Brief (outline or detailed)

The outline brief is an initial description of the client's goals and requirements. The detailed brief is a development of this with input from users and the design team.

Build quality

Relates to the performance of the engineering systems and construction, including structural stability, safety and robustness of the systems, finishes and fittings.

Buildability

The extent to which the design of a building facilitates the ease of construction.

Building Schools for the Future (BSF)

A government programme set up to deliver new and refurbished secondary schools, normally in part of one LEA area, using a mixture of PFI and conventional funding with substantial private sector involvement. A new organisation called Partnerships for Schools (Pfs) will assist LEAs to deliver this programme.

CABE Education

A registered charity established to inspire young people to get more from their built environment. It produces curriculum resources and manages a national network for educators. The network is supported by a tri-annual magazine and a website which contains information on projects, resources and events organised by individuals across the country that engage young people in the built environment.

CABE Enabling

CABE's (Commission for Architecture and the Built Environment) Enabling programme provides advice for clients to help them get better value from their projects through better design. The Enabling Panel consists of built environment professionals who are allocated to individual projects.

CABE Enabler

The Enablers are a panel of experts, mostly architects, who are allocated by CABE (The Commission for Architecture and the Built Environment) to provide client side advice on certain public projects.

Consortium/consortia

In PPP/PFI the teams bidding for the contract are known as the consortia. The consortia normally consist of funders, facilities management and construction companies. The design teams are subcontractors to the construction companies.

Construction Design Management (CDM)

Regulations that require a client to appoint a planning supervisor who is responsible for checking that the design, construction and occupation of a building complies with health and safety regulations.

Contractor/ building contractor

The team (or person) that constructs the building.

Contract signature

The point where the project team becomes formerly committed to building. See Financial Close.

Covenants

Restrictive rules that apply to specific tracts of land or property.

Design advisor

An architect who works with the client and users to advise them on brief development, on the appointment of the design team and has an ongoing role advising the client on design quality.

Design and Build

Procurement route where the building contractor is partly or entirely responsible for design development and for construction.

Design champion

A person appointed to provide leadership, generate enthusiasm and commitment to design quality and safeguard design quality on behalf of the client. Ideally a senior officer or elected council member.

Design team

Responsible for designing the building. It is usually led by the architect and includes landscape architects, structural and service engineers and cost specialists.

Design Quality Indicators (DQI)

An online and paper based tool developed by the Construction Industry Council to evaluate design quality based on three aspects, impact, build quality and functionality (www.dqi.org.uk).

Detailed design

RIBA Plan of Work Stage E. The last stage in design development.

DfES

Department for Education and Skills

Education Development Plan (EDP)

The document outlining the LEA's development strategy for education, used in applications for DfES funding.

Employers agent/clerk of works/client's agent

Check work as it proceeds to ensure compliance with the specification and make regular reports to the client/architect.

Enabling

Preparation work before the main construction contract starts on site. For example site clearance, excavations and services diversion.

Exemplar Designs

The DfES BSF programme commissioned concepts and ideas for 5 primaries, 5 secondaries and 1 all-through school.

Facilitator

A specialist who helps an organisation articulate its needs and define internal channels of communication.

Facilities Management

Maintenance and running of the building following its completion.

Feasibility study

An initial study to determine the suitability of all of the various available options for a project

Final Business Case

The development of the Outline Business Case to be approved by the Government's project review group before contract signature.

Financial Close

Contract signature in PFI.

Fit for purpose

Meeting adequate standards for its use.

Foundation Schools

A state school that voluntarily withdraws itself from local authority support and is instead maintained directly by central government. Previously known as grant maintained.

Full or detailed planning permission

Sought from the local authority to get agreement on detailed design.

Functionality

How well a building functions. The design quality indicator (DQI) measures functionality by use, access and space.

Funder

A body that provides finance. Many publicly funded projects have more than one funder. Funders impose conditions and are important stakeholders.

Grant maintained

A state school that voluntarily withdrew itself from local authority support (an action called opting out) and was instead is maintained directly by central government. Grant maintained schools were phased out in 1999. Most are now Foundation schools.

Holistic

Looking at the whole project rather than just concentrating on individual components.

ICT

Information and Communication Technology

Impact

Refers to the building's ability to create a sense of place and have a positive effect on the local community and environment. The Design Quality Indicator (DQI) measures impact by character and innovation, form and materials, internal environment and urban and social integration.

Infant school

Key Stage 1, Years: Reception, 1 and 2, ages 5-7.

Invitation to Negotiate (ITN)

The competitive stage of the PFI procurement route.

Junior school

Key Stage 2, Years: 3 - 6, ages 8-11/12.

Local Education Authority (LEA)

The part of the Local Authority responsible for education.

Life long learning

Continuous development of skills, knowledge and understanding.

Local Education Partnership (LEP)

Formed, in BSF, when the successful Private Sector Partner (PSP) is appointed. It consists of representatives from the LEA, PFS and the PSP.

Masterplan

A spatial plan which sets out proposals for buildings, spaces, movement strategy and land use.

Non-sample designs in BSF

The school projects that are not part of the bidding process in the selection of a private sector partner (PSP); the subsequent projects after the sample designs.

OJ/OJEU

Official Journal of the European Union. Formerly known as OJEC. Publicly funded projects over a certain size must advertise here for professional teams and builders.

Option appraisal

A first stage of design to examine options. For example the relative merits of new build or refurbishment.

Outline Business Case (OBC)

This is a requirement of the second stage of approval for BSF funding and has to contain full details of all the school projects included in a particular phase of funding.

Outline planning permission

RIBA plan of work stage C. Submitted to the local authority to get agreement in principle on an initial design strategy. Ideally obtained by client and included in ITN documentation in PFI projects.

Output Specification

Part of the tender documentation for PFI projects. Identifies outcomes rather than prescribing detail.

Partnerships for Schools (PFS)

The new organisation set up by the DfES to assist LEAs in delivering the BSF programme.

Pastoral Organisation

The system used for caring for pupils at school.

Planning supervisor

Appointed by the client (or in PFI, Preferred Bidder) under the CDM regulations.

Preferred Bidder

The bidding consortium selected at the end of the ITN for final negotiation of the PFI contract.

Primary school

Key Stages 1 and 2, Years: Reception - 6, ages 5-11. May also include a nursery for ages 3-4.

Private Finance Initiative (PFI)

PFI is a version of Public Private Partnership. A procurement route in which a private sector supplier takes over the design, construction, finance and management of a building for use by the public sector. The typical operating period is 20-30 years. Outputs that the service is intended to provide must be clearly defined. At the end of the operating period, ownership of the building normally reverts to the public sector.

Procurement

Procurement is the whole process by which the building and related services are developed and purchased.

Project leader

Leads the client-side project team. May be a local authority officer or an external project manager with the time, authority and resources to see the project through, and will be the point of contact for all other groups and stakeholders.

Project manager

A specialist given day-to-day management of the building team, co-ordinating timetables and maintaining appropriate communication channels. The client's project manager safeguards the client's interest at all times, ensuring that the project is completed within budget, on time and to the right level of quality. The project delivery team will have its own project manager.

Project review group

Cross departmental government body which gives formal approval at distinct stages of a PFI project.

Project steering group

A representative group of all key stakeholders. Members might be parents, governors, teaching and non-teaching staff, pupils from the School Council, elected council members, and local residents.

Project team

For a school building project this should include key representatives from all groups involved, an education expert and an architect to act as a design advisor.

Public Private Partnership (PPP)

Procurement methods that involve working in partnership with private finance, including private finance initiative (PFI). They usually involve versions of Design and Build.

Reference design/scheme/project

Initial design work commissioned by the LEA. Useful to confirm costs, consult with stakeholders and issue to competing bidders.

Refurbishment

Upgrading, remodelling or extending an existing building.

RIBA

Royal Institute of British Architects. A professional organisation with around 30,000 members, which exists to advance architecture and promote excellence in the profession.

Risk transfer

The transfer of risk from the public to the private sector is a fundamental feature of PFI. Risks are of many kinds including political, operational and financial; not all are appropriate for transfer. Risks are allocated according to the principle that the risk should lie with the party best able to manage it.

Sample designs in BSF

In BSF, the school sites included in the competitive phase (ITN) to select the PSP (Private Sector Partner).

School development plan

A plan for the phased improvement of a school over a sustained period.

School Organisation Committee (SOC)

Independent of the LEA. The body that approves the school organisation plan, and any subsequent changes in school provision within an LEA.

School Organisation Plan (SOP)

Produced by the LEA to ensure adequate and efficient provision of school places within an LEA area.

SCOLA system

Second Consortium of Local Authorities (SCOLA) developed a system-built standard school design in the 1960s.

Secondary school

Key stages 3 and 4 (5 if it includes a sixth form),
Years: 7-11/13, ages 11-16/18.

Stakeholders

All parties who have a right to be involved in some aspects of the project and should be regarded as 'clients'. These vary for different types of schools project but may include the pupils, parents, carers, the Head teacher, teaching and non-teaching staff, the governors, the LEA and the Diocese.

Special Purpose Vehicle (SPV)

The company set up by a consortium to deliver an individual PPP/PFI project.

Sure Start

The Sure Start programme is focused on services for young children and their families until they start school and the provision of childcare to all children from 0 – 14 years (16 years if the child is disabled).

System built

A modular or standardised form of construction allowing mass production of building parts in factories.

Technical adviser

A professional adviser who offers advice to the local authority client on the technical aspects of the PFI process.

Tender

A proposal, with costs, to carry out a piece of work.

Tendering in traditional procurement

A quantity surveyor produces a Bill of Materials which describes the design team's drawing and specification. Building contractors submit prices and normally the lowest priced tender is selected.

Traditional contract

In traditional procurement, design and construction teams are procured separately, one after the other, and managed independently. The design is worked up first and used by the contractors to price their construction cost.

Transformation agenda

The DfES BSF programme is about more than just buildings. It is about transforming educational opportunities and attainment in secondary schools.

Value for Money

See Best Value.

Viability

Economically practical

Whole life costs/life-cycle

The full cost of a building over its life, usually taken as 25 years. This includes initial capital, running, replacement and repair costs.

Workforce Reform

Government strategy to improve the skills of adults working in the sector.

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PREPARE

Stage	1 Initiation	2 Preparation	3 Bid/Approvals	4 Development
	Identify the need for a building project; agree a vision	Set up a project team – appoint a design advisor and education expert; appoint a design champion; ensure the building project supports schools' ethos and vision; set up a project steering group; carry out initial design work	Prepare Outline Business Case with robust design work and costs; reflect schools' genuine collaboration to date	Project leader, design advisor and education expert develop the brief; select shortlist of high quality design and construction teams
Involvement	LEA initiates project. Other agencies introduced.	Set up project steering group.	Need to demonstrate strong stakeholder support for bids.	LEA prepare accommodation schedules in consultation with schools.
Meeting educational needs	Proposal generated from SOP, AMP or BSF transformation agenda.	School discusses its ethos and presents in document. Develop educational rationale for project.	Pause in programme allows schools to carry out further research – visits to schools.	Brief needs to articulate educational aspirations.
Project team and programme	Consider programme for project. Identify project leader.	Set up project team. Appoint design advisor and education expert. Appoint a design champion.	Finalise programme of involvement in project. Ensure sufficient capacity and expertise is available.	Project leader works with stakeholders to ensure accurate and comprehensive brief. Finalise programme.
Innovation in the project	Vision for school agreed.	School considers likely future developments in 10, 20, 30 years.		School needs to have very clear idea of requirements for future.
Keeping everyone involved	Publication of statutory notices if SOC approval needed.	Hold public meeting to discuss planning implications. Communication with all stakeholders through the project steering group.	Important to keep all stakeholders informed of progress of bids.	Detailed dialogue with stakeholders. Regular project team and stakeholder meetings to ensure clear communication.
Design issues	Site availability, planning, highways issues considered.	Prepare option appraisals/ feasibility studies/ reference designs. Prepare for outline planning permission.		Design priorities can be expressed with DQI. Consider development of reference scheme. Select bidders with strong design teams.
Funding the project	Funding route considered – BSF, Academy, DfES bid, LEA resources, school, other agencies.	Establish robust cost estimate including all fitting out. Need to calculate cost implications for PFI / BSF.	For BSF/ PFI projects, LEA submits OBC. For other projects, LEA bid against various DfES funding streams.	Brief / ITN should be tested against budget to ensure viability.
Agreements and approvals	SOC and governor approvals may be needed.	May need Council and/or Diocese approval for bid.	OBC submitted to Government's Project Review Group.	May need approval for shortlist of bidding teams.
Constraints on the project	Need to consider possible funding routes available. This may place constraints on the project.	Scope of project frozen. Establish cost constraints of potential funders.	Budget for project fixed. Standards may be constrained by funding route.	Requirements in ITN must remain viable within budget.
RIBA Stage		Stage A		Stage B
Traditional contract	Feasibility studies.		Submit funding bid to DfES. Appoint design team.	Sketch design proposals. Cost check against budget.
PFI/ BSF contract	Decision by DfES to include in PFI or BSF.	Prepare option appraisals. Establish budget requirement.	Submit OBC. OBC approval. Budget for project fixed. OJEU advert.	Select shortlist of bidders. Prepare ITN and issue to bidders.
Partnering contract		Advertise and select partnering contractor.	Develop scheme with client and contractor to determine budget.	Cost check against budget.

	DESIGN		CONSTRUCT
5 Selection	6 Refinement	7 Appointment	8 Construction
Programme the ITN period carefully to maximise design time and opportunities for discussion; select Preferred Bidder	Finalise and agree detailed design	Sign the contract; in PFI confirm Preferred Bidder at Financial Close; agree programme of works on site	Construction
Discussion with school during design stages. Participate in selection of Preferred Bidder.	Develop detail of designs before frozen at contract signature stage.	Contract signed: very complex for PFI/ BSF. Commit to detail of design.	Construction phase can be used as a learning experience for pupils.
Evaluate proposals against educational aspirations.	Essential that design detail reflects needs of school to deliver educational agenda.	Ensure contractor understands educational agendas of school.	
Big demands on school time. Close liaison needed with LEA throughout. Design advisor assists client side.	Intensive negotiations with project team over design, FM, finance and legal issues. School input continues to finalise details.	Agree programme of works on site.	Client's agent/ clerk of works monitors works on site.
Ensure bidders fully understand aspirations.			
Need for confidentiality with bidders. Project leader to ensure effective communication with all stakeholders.	Project leader needs to keep stakeholders informed of progress. Consultation with local community over planning application.	Publicise the start date of building works to wider community.	Regular site meetings with contractor. Client representative attends.
Project team to ensure each design is as good as possible whilst in competitive stage. Test designs against DQI.	Detailed design; all fixtures, fittings and furniture finalised.		Review of design after occupation. Use DQI to check if design aspirations met.
Need to ensure bids/ proposals within budget constraints.	Final check that project remains viable/ affordable.		Avoid changes during construction, since likely to cause delays/ increase costs.
May need approval for selection of Preferred Bidder.	LEA submits Final Business Case to Project Review Group for approval. Obtain detailed planning approval.		Contractor may need approval for temporary site works.
Additions to proposals unaffordable after selection of Preferred Bidder.	Basic scheme design frozen.		Changes to PFI building after completion negotiated with PFI contractor.
	Stages C to F	Stages G and H	Stages J to M
Prepare final detailed brief.	Detailed design and tender documentation produced.	Tendering process – contractor selected.	Construction monitored by design team.
Submission of bids. Sample designs only in BSF. Evaluation and selection of Preferred Bidder.	Negotiations with Preferred Bidder to finalise contract details. Non-sample designs prepared in BSF.	PFI contract signed. LEP established in BSF. Negotiations with contractor for future phases in BSF.	Construction of first phase. FM service delivery commences on completion.
	Final design developed jointly within budget constraints.	Contract signed. Maximum price fixed.	Contractor, design team and client continue to 'partner' to achieve budget/ programme.

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