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Beyond Buildings: Procuring BSF Sustainably

A report from the Westminster Sustainable Business Forum
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a policy connect activity

The Westminster Sustainable Business Forum (WSBF) is a high-level coalition of key UK businesses, government agencies and parliamentarians, which seeks to promote effective sustainability policy in the UK.

The WSBF brings together leading UK businesses who share a belief in the need to operate in an environmentally, socially and economically sustainable way, and who understand that these concerns need to be incorporated into core business practices in order for companies to prosper in the long-term.

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CONTENTS

Forewords

Executive Summary

Recommendations

Methodology

1. Environmental Sustainability

1.1.1. BSF Carbon Targets

1.1.2. Additional BSF environmental sustainability requirements

1.1.3. The Carbon Hierarchy

1.2. Obstacles to achieving the zero carbon target

1.2.1. Planning

1.2.2. Operational Outcomes

1.2.3. Technological Solutions

1.2.4. Managing Buildings Efficiently

1.2.5. Behavioural Challenges

1.3. Delivering Low Carbon Schools

1.3.1. The Zero Carbon Target

1.3.2. Soft Landings

1.3.3. Private Finance Initiatives

1.4. Sustainable Procurement

2. Educational Transformation

2.1. Preparing for Change

2.2. Securing Transformation

2.3. Climate Change

3. Community Regeneration

3.1. Extended Schools

3.2. The Schools and its Environment

3.3. The School as a Community Resource

3.4. Local Collaboration

3.5. Accountabilities

4. Procurement

4.1. Client Capability

4.1.1. Retaining Skills

4.2. Local Education Partnerships

4.2.1. Governance

4.2.2. Partnering

4.2.3. Staffing the LEP

4.2.4. The Composition of the LEP

4.2.5. Value for Money

4.3. Standardisation

4.4. The Economic Downturn

5. Information and Communication Technology

5.1. Managed Services

5.2. The Supply Market

5.3.1. Procuring Innovation

5.3.2. Delivering Innovation

5.4 ICT and the Carbon Agenda

6. Furniture, Fixtures and Equipment

6.1. Furniture Standards

6.2. Buying Quality

6.3. Flexible Learning Environments

7. Post Occupancy Evaluations

7.1. Learning from Academies

7.2. The Nature of POEs

7.3. The Purpose of POEs

7.4. Continued Contractor Engagement

FOREWORD

BARRY SHEERMAN MP

Building Schools for the Future will have a very significant impact on the shape of our children's education far into the 21st Century and beyond. It is a programme based on a vision that we can transform our communities, the nature of teaching and learning, and the quality of the physical environment in which children learn.

Five years into the programme, we undertook this inquiry to provide a health check on the sustainability of BSF, and assess its delivery against its ambitions. Through this eight month inquiry, we have highlighted examples of good practice and identified barriers to success. The results of our inquiry were broadly encouraging. After a slow start the delivery of the programme has improved significantly under the leadership of Partnerships for Schools.

The evidence suggests that our commitment to improvement must prevail. Our inquiry identified worrying signs that the pledge to deliver transformational learning is not being uniformly delivered. We all know that for BSF to be a success it cannot simply provide new buildings. It must seize the opportunity to radically reassess the way we teach and learn in the 21st Century and deliver schools tailored to the needs of the community in which they sit.

Our inquiry was also concerned to find that BSF has not sufficiently addressed environmental sustainability. While we welcome the Government's commitment to deliver zero carbon schools, we are concerned that at the current trajectory, this target is unachievable. BSF offers an unprecedented opportunity to create a new generation of environmentally sustainable schools. Doing so will not only dramatically reduce the carbon footprint of the schools estate, it could also provide a generation of children with a practical example of sustainability. Government should seize this opportunity wholeheartedly.

I would like to thank the galaxy of headteachers, civil servants, businesses and other stakeholders who have contributed to this report. The proposals that we make are well intentioned and we urge Government to act on them.

FOREWORD

NICK RAYNSFORD MP

In 2004 the Government launched the Building Schools for the Future programme, with the remarkably ambitious target of transforming educational opportunites and outcomes, as well as the condition of the country's secondary schools. Our report provides an assessment of the programme's progress.

Overall our inquiry identified a programme in good health - in need of fine tuning but not overhaul. The delivery of the programme is improving in efficiency and its benefits are beginning to become evident. Moreover, measures such as the introduction of a Minimum Design Standard and a Pre-Engagement Strategy should pay dividends. However, there is no room for complacency.

If BSF is to achieve its aims, the programme cannot end with the delivery of new buildings. Our inquiry noted that if BSF is to deliver on its educational commitments, it must promote effective local strategies for change which support teachers' adaptation to new schools and to allow them to realise their potential. Moreover, for environmental targets to be achieved it is essential that BSF addresses the operation of the building, both by tackling the behaviour of the end user and by securing the continued engagement of the contractor.

Our inquiry also noted the huge potential for the introduction of Post-Occupancy Evaluations (POEs) to improve delivery of the programme. POEs will create a body of knowledge to better inform future schools and public sector procurement more broadly. They can also provide schools with information with which to tackle problems and secure the intended benefits of their design. As such our inquiry was encouraged to note that Partnerships for Schools has contracted the Building Research Establishment and the British Council for School Environments to carry out independent POEs on all BSF schools.

Our inquiry also identified the scope for improving the contribution of Information and Communication Technology as a valuable educational tool. However, to address transformational learning, it is vital BSF captures innovation in its procurement ICT. While ICT must be reliable, it is important that schools do not disincentivise innovation by applying overly rigid service levels to the whole ICT component.

While it is vital that the programme is delivered efficiently, it must not be rushed. Both Government and Partnerships for Schools must be uncompromising in their insistence on preparation and readiness to deliver from local authorities. Government must also seek to aid local authorities in their procurement of BSF wherever possible. This can be done by supporting strategies that allow local authorities to share resources and recycle skilled staff.

I would like to thank Interserve, Polypipe and Thorpe Kilworth for sponsoring this inquiry and to all the people who generously gave their time and expertise during its course.

Executive Summary

Building Schools for the Future (BSF) represents the most significant investment in schools in England for more than a generation. Its ambition has not been restricted to delivering new school buildings but also includes embedding Information and Communication Technology (ICT) in schools and transforming education. In addition there has been a more recent commitment to build sustainability into the schools estate.

The inquiry recognised and applauded BSF's level of ambition. The central point established by the inquiry was that BSF must not relinquish this ambition and become just a building programme. This means there must be a constant emphasis that new schools are tools to deliver educational and broader outcomes, rather than ends in themselves. The importance of the early visioning process before construction, and ensuring this vision and operational outcomes are delivered once the building is completed, are therefore vital to the success of the programme.

The inquiry found that securing the educational and broader goals around BSF cannot be sacrificed for the timeliness of delivery. As such the inquiry believes that Partnerships for Schools (PfS) must be uncompromising in its insistence on preparation and addressing transformation before local authorities enter the programme. The inquiry noted PfS's success in improving the delivery of the programme and supports the addition of the primary capital programme to its responsibilities.

Environmental Sustainability

When BSF was launched in 2004, environmental sustainability was not high on the agenda. Since then the programme has introduced a range of initiatives to address this including the imposition of targets and the allocation of additional funding. The inquiry was encouraged by the aspiration shown but noted it is not expected to be matched by delivery in terms of low energy buildings, having found no indication that BSF schools have yet found a way of addressing excessive electricity consumption that has been common in recent schools.

The inquiry found that it is not possible to "solve" sustainability and reduce energy consumption at the design and build stages of a school, and that to successfully address these issues, greater focus must be placed on operational outcomes. The inquiry established that more must be done to engage students and teachers in understanding and reducing energy usage in the school. The inquiry also noted the importance of ensuring the continued engagement of the contractor once the school is open to ensure its operation is harmonised with its design. The inquiry noted the potential for the Soft Landings Methodology of ascribing contractors with a set of augmented duties once the school is opened to address this issue.

Educational Transformation

The inquiry applauds the Government's ambition to utilise BSF to deliver educational transformation. However, the inquiry was concerned that transformational learning is not being uniformly delivered in BSF, due in part to the lack of a common language. The Department for Children, Schools and Families (DCSF) has published the 21st Century Schools White Paper to address this issue. It is still too early to judge its success but there are concerns that the document will not sufficiently address confusion surrounding Transformational Learning.

The Department must ensure that local authorities have the resources necessary to develop a locally driven vision for the future of education in the area that responds to the particular needs of the community. Furthermore, the Department must provide ring-fenced funding for Continuing Professional Development (CPD) to ensure these goals are realised once a school is opened. The inquiry also noted that PfS must be uncompromising in its insistence that local authorities properly address educational transformation before they enter the programme. The inquiry echoed the findings of the 2007 Education and Skills Select Committee report that the timeliness of delivery cannot be allowed to take precedence over the achievement of educational aims.

Community Regeneration

The inquiry found that ultimately community regeneration must be locally led but recognised Government initiatives such as the Co-Location Fund and the extended schools agenda as key steps in providing a facilitative environment to support community regeneration. The inquiry also recognised the progress made in the manner in which the local education partner (LEP) is procured as increasing the scope for aligning BSF with community regeneration.

The inquiry did identify a number of areas in which Government could create an environment more conducive to community regeneration. Most notably by encouraging schools in a community to collaborate, and by developing accountabilities that recognise a schools attempts to engage with its community. Again, the inquiry noted that Governments role must be to create a facilitative environment and that an attempt to mandate regeneration would run the risk of being overly prescriptive.

Procurement

The inquiry noted the importance of client capability in the efficient procurement of BSF. The inquiry also identified the retention of skills in the public sector as the key means of improving client capability. The inquiry found that it is too early to judge the success of Local Education Partnerships (LEPs), but recognised the stability they bring to such a long-term programme and applauded their intention to encourage investment in research and development in the public sector. The inquiry noted that securing good governance is crucial to the success of the LEP. The inquiry also found that LEPs, and BSF generally, appear to have weathered the economic downturn relatively well.

Information and Communication Technology

The inquiry was generally positive about the potential for ICT to act as a useful educational tool. However the inquiry was concerned that there has been an excessive capital focus in the delivery of ICT and established that it is vital that funding is ring-fenced for CPD to ensure new technologies are utilised and their potential realised.

The inquiry also noted that it is essential to secure innovation when procuring ICT if schools are to properly address transformational learning. To secure innovation in ICT the inquiry established that schools must engage with the procurement of ICT and do so across the school, rather than attempt to delegate the task to a consultant. The inquiry also noted that the procurement of ICT must not disincentivise a supplier's attempts at innovation and therefore schools should not apply overly rigid service levels to the innovative aspects of an ICT bid.

Furniture, Fixtures and Equipment

The inquiry was concerned that the significance of Furniture, Fixtures and Equipment (FFE), both in terms of its spending implications and its potential to affect education, are not reflected in BSF procurement. The inquiry heard that some schools continue to procure the cheapest school furniture available despite educational and health advice to the contrary. The inquiry noted that such an approach often results in unnecessary waste. The inquiry was concerned that a number of suppliers complained they were often involved too late in the process to be able to influence design and that this inhibited their ability to work with the school to develop flexible learning environments.

Post Occupancy Evaluations

The inquiry welcomed the decision to introduce post-occupancy evaluations for all schools in BSF. The inquiry's findings emphasised that in the event a school fails to deliver its predicted benefits, post-occupancy evaluations must establish the cause of this failure. The inquiry also noted that post-occupancy evaluations must be accompanied by an effective feedback loop and the resources necessary to allow schools to address any problems identified.

The inquiry identified post-occupancy evaluations as the most effective method of providing scrutiny as to the eventual success or failure of BSF. As such the inquiry noted the importance of regularly conducting and reporting transparent post-occupancy evaluations.

RECOMMENDATIONS

Environmental Sustainability

1: Government must ensure that planning authorities address location and other relevant issues in considering new school applications in order to meet low carbon targets.

2: Greater focus should be placed on using passive design features as a means of reducing energy consumption in schools, although not to the exclusion of complex technologies.

3: PfS must focus on addressing behaviour change in schools as the primary method of delivering low-carbon schools.

4: The Zero Carbon Task Force should assess the respective merits for cost-effective action to reduce the carbon footprint in existing schools as against the attempt to make new schools zero carbon.

5: PfS should immediately begin piloting Soft Landings in new BSF schools.

6: Government must ensure that, where possible, all new PFI projects place responsibility for energy consumption with the contractor. PfS should also explore methods of ensuring that contractors in non-PFI projects are held liable for delivering operational outcomes predicted at the design stage.

7: Greater weighting must be given to environmental sustainability in the evaluation of bids to deliver BSF schools. PfS should develop methodologies to evaluate the environmental sustainability aspects of bids to provide consistency and generate momentum.

8: Government should utilise the potential for BSF to act as an exemplar in relation to the UK's broader sustainability agenda.

Transformational Learning

9: Government must provide additional ring-fenced funding to resource the development of the Strategy for Change.

10: The DCSF must ensure there is clarity over educational transformation and provide local authorities with the guidance, support and encouragement to pursue it.

11: PfS must not permit ill-prepared local authorities to enter BSF and, correspondingly, Government must not prioritise the timeliness of delivery over quality.

12: Government must formalise CPD as part of BSF with ring-fenced funding to ensure that teachers are able to properly utilise new buildings and deliver educational transformation.

13: Government must create the space necessary to allow educational transformation by giving innovative schools some leeway under the current assessment framework in the short term and investigate how the assessment framework can be harmonised with the goal of educational transformation in the long term.

14: The Department must ensure that educational transformation addresses climate change, providing students with an understanding of its existence and causes, and the skills and knowledge to tackle it and adapt to its effects.

Community Regeneration

15: LAs should be encouraged to view BSF investment as an opportunity to attract further investment into the local area as a means of addressing community regeneration. This can take place both through the LEP or more generally in the area.

16: The Department should place an obligation on BSF schools to engage in meaningful and locally appropriate forms of collaboration with schools in their area.

17: The Department must investigate developing an accountability system which recognises a school's attempts to engage with the broader community.

Procurement

18: PfS should develop robust and transparent criteria for determining the client capability of local authorities. Based on their performance against this criteria, more capable authorities should be afforded flexibility within the standard procurement model, whilst less capable authorities should be provided with a tighter framework within which to work.

19: The public sector must retain and recycle skilled staff for the procurement and delivery of BSF. Government should also utilise the potential for the programme to act as an exemplar of best practice for sharing of resources between local authorities.

20: Local authorities' partnering and governance arrangements with the LEP must be tested with the LEP Toolkit as part of the Gateway Review.

21: PfS should investigate introducing a minimum threshold for the ICT component of the LEP.

22: BSF must retain its commitment to delivering quality rather than focusing on lowest cost.

23: Government must ensure BSF funding is sufficient to allow it to maintain 'critical mass'.

Information and Communication Technology

24: PfS must ensure that procurement is structured to promote innovation in ICT. This may involve promoting different procurement strategies for ICT depending on the authority.

25: DCSF and HM Treasury must move away from a strictly capital approach to ICT and ring-fence funding for change management and CPD for schools to allow them to better identify what they want, and to ensure that potential benefits of new technology are realised.

26: PfS must encourage schools to take a more balanced approach to the application of service levels around the innovative components of an ICT bid.

27: PfS must make it a requirement that as part of the managed service the ICT provider must work with the school to reduce the energy usage of ICT in schools.

Furniture, Fixtures and Equipment

28: The Department must make the European chair standard, EN1729, mandatory for the procurement of all school chairs.

29: The DCSF must ring-fence 5% of the capital budget to guard against a lowest cost mentality in the procurement of FFE.

30: PfS should ensure that LEPs initiate procurement of the FFE supplier early enough to allow them to influence the design of the school.

Post-Occupancy Evaluations

31: Government should immediately commission a systematic study of Academies to ensure that, where applicable, BSF learns educational and operational lessons from the Academies programme.

32: Post Occupancy Evaluations in BSF must be sufficiently rigorous that, where operational outcomes fall short of design aspirations, the specific cause is identified.

33: BSF must develop feedback loops and provide the necessary guidance and resources so that schools can fully utilise the lessons learnt from their individual POE. This will allow schools to realise the buildings predicted benefits.

34: PfS must ensure that POEs are conducted in a transparent manner and that their findings are made regularly available.

METHODOLOGY

Introduction

The inquiry was initiated in January 2009 and a navigational seminar was held in February. A range of inquiry sessions were held between May and July 2009 to investigate issues raised in the navigational seminar.

The report is based on evidence collected from inquiry sessions, written submissions and extensive interviews involving business leaders, local and central government representatives, architects, environmental engineers, headteachers and other stakeholders.

Inquiry sessions

Evidence was taken in a series of meetings led by the inquiry co-chairs Barry Sheerman MP, Chairman of the Children's, Schools and Families Select Committee and former construction minster, the Rt Hon Nick Raynsford MP. A range of expert witnesses appeared before the inquiry and discussions during the sessions were led by a Steering Group composed of leading stakeholders in the area.

The sessions covered the following areas of inquiry:

Inquiry Sessions i & ii: 26 May, 2-4pm
i. BSF in the Community
ii. Green Schools

Inquiry Session iii: 8 June, 2-4pm
iii. Financial Sustainability

Inquiry Sessions iv & v: 16 June, 9.30 – 12pm
iv. Transformational Learning
v. ICT & School Furniture

Inquiry Session vi & vii: 23 June, 2 - 4.30pm
vi. Responsibility for Managing Change
vii. Measuring Success

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The inquiry took evidence from the following people:

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Ray Barker
British Educational Suppliers Association

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1 Environmental Sustainability

In 2008, the UK Climate Change Act was passed, requiring the UK to meet the target to reduce carbon dioxide emissions by 80% by 2050 compared to 1990 levels. The schools estate represents 2% of total national carbon emissions. Tackling carbon emissions from new school buildings in the UK will play a significant role in meeting these targets. When BSF was announced in 2003, sustainability was not high on the agenda. However, a range of sustainability considerations have since been added to the programme.

1.1.1 BSF carbon targets

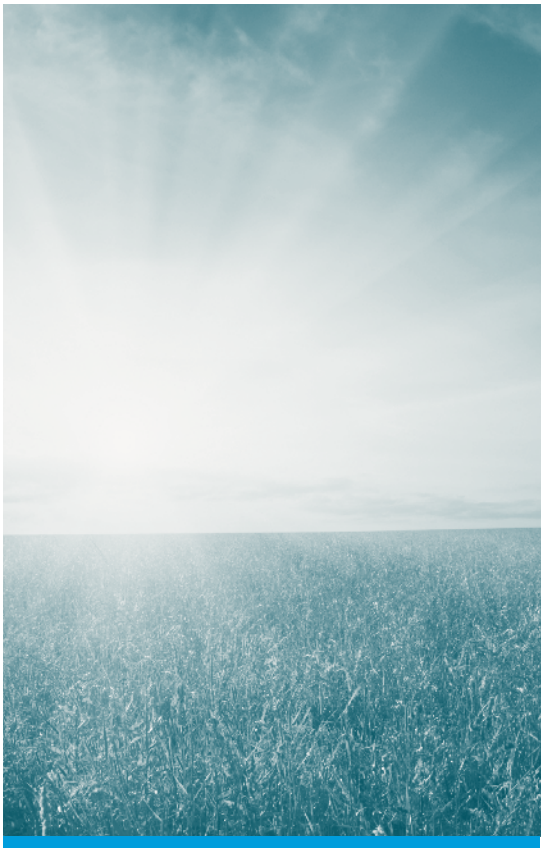
To meet the UK's climate change targets, the Department for Children, Schools and Families (DCSF) announced in the Children's Plan in 2007 that as of 2016 all new school buildings must be zero carbon. The definition of zero carbon homes and non-domestic buildings is currently being considered by the Department for Communities and Local Government (DCLG), following a consultation earlier this year.

The Zero Carbon Schools Task Force (ZCTF) has been set up to establish how the Zero Carbon Target will be achieved. It will make recommendations for projects delivered through BSF, including Academies and non- BSF projects. It will work with designers, builders, local authorities and other key stakeholders to develop a roadmap to zero carbon schools, setting targets and milestones to be met along the way. An interim report was published in March 2009, and the final report or 'sustainability action plan' is expected in December 2009.

In addition to the Zero Carbon Target the DCSF introduced an immediate requirement for all new schools within BSF (and the Academies programme) to reduce their carbon emissions by at least 60% against the benchmark of the 2002 building regulations. To avoid complications arising from the extended use of schools, buildings are only being measured from 8am to 6pm and not during holidays. Split metering is expected to make this differentiation possible. To achieve this target the Department allocated an additional £110 million of funding over three years to enable schools in the BSF and the Academies programme to incorporate energy efficiency and renewable energy measures. All of this additional funding has now been allocated.

Energy efficiency measures relate to reducing demand for mechanical ventilation, heating, cooling, lighting and ICT. The biggest contribution from renewable technologies is expected to come from biomass boilers, using primarily wood, which will require the UK to increase its supply of wood chips and other sources of biomass. Major contributions to meeting carbon reduction targets are also expected from heat pumps, large wind turbines and combined heat and power, although there may also be a role for solar heating of hot water, photo voltaics and small scale wind turbines.

Schools are being given the extra funding over three years to meet the 60% carbon reduction target at a rate of £50/m2, which equates to an average of



£500,000 for a typical secondary school. To qualify for the funding, it is necessary to demonstrate a 60% reduction in carbon emissions at the design stage, using the Carbon Calculator. The Carbon Calculator has been developed to assist with the selection of the measures to reduce carbon emissions, allowing users to test combinations of technical solutions and provide initial estimates of carbon savings and capital costs.

The inquiry found that the Government's approach to BSF prioritised technologies such as biomass boilers and mechanical lighting systems as a means of addressing carbon in new school buildings. This can be seen in the allocation of the additional £110 million of funding introduced to help meet the 60% reduction target, which only applies to energy efficiency and renewable energy technologies.

1.1.2 Additional BSF environmental sustainability requirements

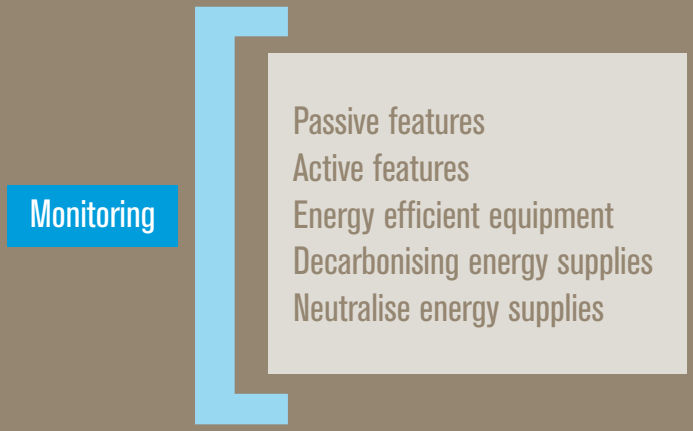
In addition to the 60% reduction target, new schools built under BSF must achieve a 'very good' rating under the Building Research Establishment Environmental Assessment Method (BREEAM). As of the summer of 2009, PfS also requires all new authorities entering the programme to demonstrate that they are addressing environmental sustainability.

1.1.3 The Carbon Hierarchy

The inquiry welcomes the 'energy/carbon hierarchy' outlined by the ZCTF during the inquiry as a general approach to energy/carbon issues (see Table A). The hierarchy involves (i) reducing energy consumption through passive and active features, (ii) using energy efficiency equipment, (iii) decarbonising energy supplies and finally (iv) neutralising energy supplies, with monitoring at all stages. As Bill Bordass of the Usable Buildings Trust has stated, "halve the demand, double the efficiency, and halve the carbon in the supplies, and you are down to one-eighth of the emissions".

> "Halve the demand, double the efficiency, and halve the carbon in the supplies, and you are down to one-eighth of the emissions"

ENERGY / CARBON HIERARCHY



The first task on the hierarchy is to tackle energy consumption. Reducing energy consumption has two key dimensions: introducing or exploiting passive features such as building orientation, air tightness and natural ventilation, and addressing active features such as encouraging sustainable behaviours, or 'behaviour change', and providing appropriate controls. The next step is to make the equipment and energy sources more efficient not only in relation to controls but also boilers, pumps, lighting and particularly ICT. Following this energy supplies should be decarbonised by supplementing with low carbon or on-site/ near-site renewable energy schemes. Finally energy supplies should be neutralised through measures such as off-site renewable energy sources.

1.2 OBSTACLES TO ACHIEVING THE ZERO CARBON TARGET

1.2.1 Planning

One of the first obstacles that the inquiry identified to achieving carbon reduction targets was UK planning law. The Zero Carbon Task Force has identified that schools should, where possible, face North. Failing that, schools should face south or, as a last resort, east, never west. In spite of this, the inquiry identified schools, although not BSF schools, that have been built in direct contravention of these principles due to planning regulations[1]. Robin Nicholson, Chair of the Zero Carbon Task Force commented that "most planners are development control officers rather than planning for sustainable futures. They don't think about planning heat and power, which they must do, because they have never been asked to".

Recommendation 1: Government must ensure that planning authorities address location and other relevant issues in considering new schoool applications in order to meet low carbon targets.

1.2.2 Operational Outcomes

The biggest problem identified by the inquiry for the delivery of low and zero carbon schools in BSF has been a failure to address operational outcomes. This has seen the procurement process in BSF consistently incentivise the demonstration of sustainable input measures rather than the delivery of sustainable performance. This approach seems to be founded on the assumption that sustainability can be tackled and solved in the design and build stages of a building, usually by the application of complex technological solutions. This has led to a failure to address behavioural issues relating to the buildings occupancy and operation.

1.2.3 Technological Solutions

BSF's preference for technological and design based measures to address carbon reduction is best evidenced by the Carbon Calculator. The Carbon Calculator allocates additional funding on the basis of design decisions rather than outcomes. The inquiry found that, in certain circumstances, compliance with the Carbon Calculator meant the inclusion of a biomass boiler in schools. This incentivises the

[1] The introduction of the minimum design standard should ensure that buildings are correctly orientated to address environmental consideration.

designer to generate energy, rather than find ways of conserving it. The inquiry also identified a number of concerns about biomass boilers themselves. These ranged from issues over their reliability to concerns that the UK will be unable to produce enough woodchips to power them and will be forced to import the fuel from abroad.

The inquiry noted that in some cases schools have opted to use off-site server farms as a means of meeting the 60% reduction commitment. However, witnesses to the inquiry noted that while the using off-site server farms can help schools to meet the target, they do not reduce the UK's carbon footprint.

1.2.4 Managing Buildings Efficiently

The inquiry found that the proliferation of high-tech solutions in BSF also means that schools are being left to manage highly complex systems, the task of which is often left to relatively untrained members of staff. Roderic Bunn, a buildings analyst at BSRIA, noted that 'these systems are billed as "fit and forget", but they're not, they're "fit and manage"'. The problem created by the introduction of these low carbon technologies is two fold. Firstly, it relies on the day-to-day management of complex technologies by a usually non-skilled or untrained member of staff, be they caretaker or headteacher. Secondly, the technologies will usually only realise their energy efficient potential if they are finely tuned. However, a contractor is only liable if a piece of technology is classified as malfunctioning. In effect this means the responsibility for tuning complex technologies also passes to the school. One way of addressing this identified by the inquiry is through the application of the Soft Landings methodology. The key message delivered to the inquiry was that schools should run independently of the technical support available. Roderic Bunn noted that the principle should always be "keep it simple, do it well, only get complicated when you have to".

Recommendation 2: Greater focus should be placed on using passive design features as a means of reducing energy consumption in schools, although not to the exclusion of complex technologies.

1.2.5 Behavioural Challenges

The inquiry found that the single biggest factor in reducing energy use in schools is behaviour. This entails teaching the users of a school about how to maximise the effectiveness of the buildings sustainability features and encouraging them to buy in to a broader ethos of saving energy. However, the inquiry found little evidence that BSF is addressing behavioural issues in this way. The inquiry identified a number of schools that addressed this issue through heightening pupil and staff awareness and empowerment to tackle energy usage through the use of school councils. This stands in contrast to high-tech solutions such as automatic lights which disempower the user.

Recommendation 3: PfS must focus on addressing behaviour change in schools as the primary method of delivering low-carbon schools.

"Keep it simple, do it well, only get complicated when you have to"

Young people as the key driver of sustainable behaviour in schools

CASE STUDY ON THE BLUE SCHOOL

The Blue School in Wells, Somerset, is based on the principle that the key to encouraging sustainable behaviours in schools is to provide young people with the tools to drive the change themselves. The school has Energy Teams made up of students who self-elect, organise and manage the teams themselves once they have received the relevant training.

The school's 2006/07 Energy Team described their aim as to 'raise awareness of energy problems; save energy and money for the whole school community'.

Neil Mantell, Link Teacher for The Blue School's Community Council, stressed the significance of the learning achieved by the teams in carrying out their projects and how they have raised awareness in the rest of the school. The teams produce annual plans and reviews, collaborating with others such as the school site manager and external agencies. The team has also decided that they would like to use modern media to help their messages reach a wider audience and have produced a film on saving energy.

When the students were asked why they were a member of the Energy Team, Douglas Cooley, 10AW, commented,

"I am here because reducing CO_2 emissions is vital in making the world a better place and I wish to help become a part of the solution to this major worldwide problem by taking part in changing the energy usage in the Blue School."

Another student, Sandy Collingham, 7RM, stated, "I am here because I want to save energy for the World."

Through Learning to Lead, a training and consultancy organisation, the school has been able to share the tools and approaches it has taken with other schools. The organisation provides an inspiring programme of training for teachers in using those tools to support young people becoming engaged in all aspects of their life and learning.

1.3 DELIVERING LOW CARBON SCHOOLS

1.3.1 The Zero Carbon Target

One witness to the inquiry noted that "as an aspiration zero carbon schools is great; as a target, it's ridiculous". The inquiry found that factors such as the improved air-tightness of school construction meant energy consumption for heating had been significantly reduced. However, the inquiry also found that electricity consumption was often vastly greater than that predicted in the design, sometimes by as much as 300%. The cost implications alone for this are significant with schools having to pay tens of thousands of pounds a year in additional electricity costs. It also indicates that the chances of meeting the zero carbon targets are very small.

The attempt to tackle energy use through application of high-tech solutions, rather than addressing behaviour, is indicative of a consistent trend in BSF to focus almost solely on capital based solutions rather than approaching issues in a more holistic manner. Sunand Prasad, President of RIBA commented that 'there is no such thing as a low or zero carbon school, but we can build schools that enable their communities to have low or zero carbon footprints'. It is therefore vital that BSF finds a way to engage with the operational side of a school if it is to successfully address energy use issues. Witnesses to the inquiry also noted that this issue severely limits the potential of BREEAM to drive environmental sustainability. This is because BREEAM assesses the design rather than the performance of a building.

The need to connect the construction aspect of BSF with its operational outcomes also highlights a problem with the Zero Carbon target. The target requires that all new schools built after 2016 are zero carbon. Local authorities are responsible for running schools but are not required to meet a similar target for non-domestic public buildings until 2018 and are therefore not bound by the 2016 zero carbon target. As previously noted, for a school to be zero carbon, its operational side must be successfully addressed. It would therefore seem that the Zero Carbon target is not one that the DCSF is in a position to guarantee meeting, even if the considerable practical considerations around meeting it were to be achieved.

A number of witnesses to the inquiry also drew analogies between the target for zero-carbon schools and the Code for Sustainable Homes. The Code for Sustainable Homes was initially a very effective tool for encouraging house builders to address environmental sustainability. However, it was noted that achieving Code Level 6 homes was exorbitantly expensive and money would have been more effectively spent elsewhere. BSF is completely rebuilding only half of the secondary schools estate. It may prove to be more cost-effective to settle for something less than zero carbon schools, and direct more funding at reducing the carbon footprint of refurbished schools.

Recommendation 4: The Zero Carbon Task Force should assess the respective merits for cost effective action to reduce the carbon footprint in existing schools as against the attempt to make new schools zero carbon.

1.3.2 Soft Landings

The key obstacle to delivering low carbon school buildings would therefore seem to be overcoming the disconnect between the construction and operation of the building. One method proposed for this is that of Soft Landings, a methodology launched by BSRIA in 2009. The methodology involves the contactor being allocated a set of augmented duties once the school has been opened. As such the contractor maintains a level of responsibility for ensuring a building is operating to user satisfaction for the first two to three years of its operation. The nature of fine tuning a building means that these duties will decline rapidly in intensity over that period.

The benefit of Soft Landings is that the builder is responsible for ensuring that a building's sustainability features are operating as intended, rather than leaving that task to the technically ill-equipped school. Soft Landings also provides a means of ensuring that a building is being operated as was intended in the design. Roderic Bunn of BSRIA and the Usable Buildings Trust said that the state of tune achieved in the first eight weeks of a building's operation is likely to set the pattern for the next eight years. Soft Landings therefore provides a means of ensuring that behavioural issues are addressed in the school. The inquiry understands that PfS are currently examining incorporating Soft Landings into the delivery of BSF.

Recommendation 5: PfS should immediately begin piloting Soft Landings in new BSF schools.

The state of tune achieved in the first eight weeks of a building's operation is likely to set the pattern for the next eight years

1.3.3 Private Finance Initiative

Around 40% of BSF will be delivered through the use of Private Finance Initiatives (PFI). The inquiry noted that this delivery model offers an effective method for addressing energy usage. One of the benefits of PFI is that it places responsibility for running a building with the contractor who built it and in doing so creates a financial incentive for the contractor to approach the construction with a whole-life perspective. The inquiry found that in many cases BSF PFIs are applying this incentive to energy reduction and environmental sustainability. As such, in addition to designing, building and maintaining a school, the contractor is also responsible for energy consumption once the building is operational.

PFI therefore seems to offer an effective means of securing the continued engagement of the contractor and ensuring that design aspirations are realised as operational outcomes. However, only half of BSF is being delivered through PFI. There is therefore the significant danger in non-PFI projects that contractors will not be effectively incentivised.

The inquiry also noted that there is a disconnect in Government's recent allocation of £110 million to achieve a 60% carbon reduction. On average schools received an additional £500,000 of capital funding to meet the target. This equates to approximately £20,000 a year for the duration of a PFI contract. However, under both PFI and non-PFI models, a contractor will receive this additional funding if they demonstrate a 60% reduction at the design stage, regardless of whether it is delivered as an operational outcome. This is not just a failure of the payment mechanism. Witnesses to the inquiry noted that the Carbon Calculator is relatively prescriptive in mandating how the reduction in carbon should be achieved. A contractor cannot be held liable for the success of a Government prescribed solution. Instead the inquiry found that the contractor should be set an outcome target and allowed to innovate in how it would meet this target.

Recommendation 6: Government must ensure that, where possible, all new PFI projects place responsibility for energy consumption with the contractor. PfS should also explore methods of ensuring that contractors in non-PFI projects are held liable for delivering operational outcomes predicted at the design stage.

1.4 Sustainable Procurement

The inquiry noted that private sector was often willing to tackle issues around environmental sustainability. However, contractors priorities are determined by their ability to win contracts. Witnesses noted that currently environmental sustainability does not receive sufficient weighting in the scoring mechanism used to evaluate bids. Unless significant proportions of the scoring mechanism are related to environmental sustainability, bidders will not focus on this issue. There also need to be effective methodologies for evaluating these scores.

Recommendation 7: Greater weighting must be given to environmental sustainability in the evaluation of bids to deliver BSF schools. PfS should develop methodologies to evaluate the environmental sustainability aspects of bids to provide consistency and generate momentum.

As has been noted, schools represent 2% of the UK's total carbon emissions. Therefore reducing their emissions will play an important part in achieving the UK's broader carbon emissions targets. However, BSF also has the potential to act as a pathfinder for the rest of the public sector and develop methods and set a standard for sustainable development.

BSF is also the biggest piece of procurement that the UK will undertake for a generation. As such it has enormous potential to dramatically affect the market; to promote research and development and create demand for low carbon technologies and practices.

Recommendation 8: Government should utilise the potential for BSF to act as an exemplar in relation to the UK's broader sustainability agenda.

2 Educational Transformation

When launching BSF the then schools minister, David Miliband MP, emphasised that the programme was about much more than just building schools. Speaking at the launch of BSF in 2004 Mr Miliband commented that:

"For the first time since the Victorian era, we are joining major capital investment with major educational reform to transform secondary education all over the country. BSF will deliver tailored classroom facilities to support innovative teaching styles; high-quality facilities to support subject specialism; and integrated ICT. All of this will help deliver personalised learning tailored to the needs, interests and aptitudes of every child."

This inquiry recognises the validity of this ambition and how crucial it is that BSF address transformational learning. One of the strongest and most consistent messages heard by the inquiry was that BSF must be more than a building programme. Transformational learning is at the heart of this consideration. Rather than viewing new buildings as ends in themselves, local authorities (LAs) must identify what educational and broader outcomes they want to achieve and design school buildings as a tool with which to realise these objectives.

The inquiry noted that BSF has already demonstrated its ability to deliver educational outcomes. Audited GCSE results show that BSF schools are improving at a rate of 10% against a national average of 2%. However, the inquiry identified concerns that BSF is not always succeeding in delivering transformational learning. A number of inquiry witnesses noted that some LAs are simply using BSF as an opportunity to rationalise their school estate and get rid of underperforming schools when a much more innovative approach is necessary.

2.1 Preparing for change

While this inquiry is disappointed that the transformational aspect of BSF does not yet appear to have been fully realised, it does recognise that achieving it represents a major challenge. Addressing transformational learning requires a local authority to thoroughly assess the state of education in its locality, and develop a vision to address its particular challenges in a manner that is both immediately applicable and sensitive to future requirements. LAs are expected to address these issues in the development of a Strategy for Change (SfC).

The SfC is developed by the local authority in anticipation of entering BSF. In essence, the SFC asks an authority to provide a frank assessment of education in the locality, a vision for its future delivery that is responsive to the challenges facing the area, and details of how BSF will help to secure the vision. The SfC also requires the LA to address a broad range of logistical concerns about how the change will be managed.

Schools are now expected to develop their own individual SfC concurrently and in conjunction with the LA. The school SfC should then feed into the LA SfC and support it. The inquiry recognised the importance of this development and its use in ensuring that the SfC becomes a vision owned by the authority as a whole, rather than something developed in isolation by an individual or an individual group within the local authority.

The 2007 Education and Skills Select Committee report *Sustainable Schools* noted that the 'Strategy for Change is key to the success of the whole process. People need to be given enough time to think through the issues about how secondary education should be provided in their area before they are required to start making firm decisions'. This finding was echoed throughout the inquiry which established that if transformational learning is not properly addressed in the SfC, it is highly unlikely to be delivered later in the programme.

The inquiry noted that there were initially significant concerns that the seven months allocated to the development of the SfC was insufficient. One witness to the inquiry noted that in the case of school amalgamations it is impossible to engage in meaningful consultation with the relevant stakeholders within the seven months. As such PfS has introduced a process of pre-engagement. Under this system LAs are required to hold consultations and develop a vision and a strategy for delivering it before they enter the programme. If LAs fail to do so, they will not pass a 'readiness to deliver' test and will not be allowed to enter the programme.

While the SfC is crucial to the delivery of transformational learning, the inquiry was concerned that this importance was not mirrored in the resources it is allocated. Local authorities are expected to fund the development of the SfC. However, the inquiry spoke to a number of LAs that commented that they had struggled to assemble the necessary resources, skills and competencies. LAs are also under no obligation to provide additional resources to individual schools preparing their SfC.

PricewaterhouseCooper's second annual report on BSF noted that:

> *four of the 11 LAs interviewed stated that they did not provide funding for this purpose. Reasons for this included the fact that such funding reduced the total amount of money available to support schools' involvement in the programme, and that schools were encouraged to view BSF as part of their normal development programme.*[2]

The inquiry was concerned by these findings. If BSF is to deliver transformational learning it cannot simply be viewed as part of a schools normal development but must instead be seen as an opportunity to radically address the educational needs of the locality.

Recommendation 9: Government must provide additional ring-fenced funding to resource the development of the Strategy for Change.

One obstacle identified to by the inquiry to the development of an SfC is widespread confusion as to what is meant by transformational learning. In a written submission to the inquiry, Knowsley, stated that 'we do not detect a common language or understanding around "education transformation"' and that while 'BSF is certainly a catalyst for more consideration around transformation…the debate is taking place in pockets rather than across the sector'.

The inquiry was concerned by the confusion that seems to surround the issue of transformational education. The inquiry was also concerned by a lack of certainty as to where responsibility lay for defining the term. The inquiry recognises the work done by PfS in improving the delivery of the programme, but transformational learning is an issue of policy and as such its definition can only be addressed by the DCSF.

The Department has moved to address this confusion with the publication of the White Paper, '21st Century Schools' in June 2009. It is too early to judge the success of this paper as it must be measured by the degree to which it addresses confusion over educational transformation amongst teachers and other stakeholders. However, the inquiry identified concerns that the White Paper still fails to adequately define transformational learning.

[2] PwC, Evaluation of Building Schools for the Future - 2nd Annual Report, p.41

Recommendation 10: The DCSF must ensure there is clarity over educational transformation and provide local authorities with the guidance, support and encouragement to pursue it.

In addition PfS must be uncompromising in its requirement that, LAs demonstrate real ambition towards, and properly address the issue of, educational transformation. One ramification of this may be that delivery of the overall programme is slowed. One of the most persistent criticisms of the programme is that its early predictions for the speed of delivery where overly optimistic. Whilst it is clear that once LAs enter the programme, cost efficiency considerations demand that delivery be held to schedule, it would be rash in the extreme for elements of the programme to be compromised to ensure the achievement of an artificial deadline.

It is increasingly recognised across public sector procurement that poor planning and a lack of clarity over objectives and requirements of the procurement will often result in increased procurement timescales and costs. This is especially prevalent in the Competitive Dialogue process where a poorly prepared authority will usually dialogue more than they would have needed to if they had determined up front what they wanted. Therefore, by preventing ill-prepared authorities from entering the programme too early, it is to be expected that later delays may be reduced.

Delivering the programme over a slightly increased period, so long as a certain critical mass is retained, would also seem appropriate in light of constrained capital spending for the foreseeable future.

Recommendation 11: PfS must not permit ill-prepared local authorities to enter BSF and, correspondingly, Government must not prioritise the timeliness of delivery over quality.

An innovative visioning process

CASE STUDY ON KNOWSLEY COUNCIL

Knowsley Council has been praised for its innovation-led approach to setting a vision and long term aims for the transformation of education across Knowsley. During the late 1990s, Knowsely was at the bottom of national education league tables and had just received a critical Local Authority OFSTED report. The appointment of a new management team in 2000 led the authority to radically reassess its educational priorities.

In 2001 the Council formalised a 'Transformation Agenda' strategy incorporating five programmes to address different aspects of the local education system, including a Transformational Teaching and Learning programme that reflected a more pupil-led approach to learning. An Independent Schools Commission was appointed by the Council in 2002 to consider the whole system in light of the future development of education. The Council also adopted a stakeholder driven approach to innovation, involving local authority officers, head teachers, governors and other interested community groups in consultations.

One outcome of these processes was the beginnings of the 'Future Schooling in Knowsely' long term strategy in 2003 which arrived at a common vision for 21st century education for the Borough. That same year BSF was announced and the Council was able to use the programme to enhance its approach to education, and so coordinating its work with national policies. Knowsley refresh their 'Future Schooling in Knowsley' strategy every two years.

Under BSF, Knowsley Council will replace all 11 secondary schools in the area with seven new Centres for Learning for 11-18 education that will all be open by 2010.

2.2 Securing transformation

The inquiry was concerned to find that some LAs, having done significant work to create a transformational vision, were experiencing difficulties in delivering it. One senior LA representative noted that "we had a good focus early on about what it was we were looking for, the vision, and then that got parked while we designed and built things". BSF must ensure that this educational vision is not lost as the programme is delivered. The inquiry was encouraged by PfS's introduction of benefits realisation strategies as a means of retaining focus on the delivery of outcomes as opposed to buildings. The inquiry was also encouraged that these measures appear to be filtering through to private sector partners in the form of collective partnership targets. However, the inquiry identified a number of obstacles to the realisation of educational transformation once a new school is opened.

One of the most common concerns raised during the course of the inquiry was that Continuing Professional Development (CPD) is not being properly addressed. A number of witnesses to the inquiry recounted their experience of seeing teachers struggling to deliver traditional teaching in innovative new buildings, ill-designed for old practices. CPD was identified as a crucial means of embedding educational transformation within schools. However, no additional funding is provided as part of BSF to address CPD. Witnesses noted that some authorities have begun to address CPD by appropriating funds from the ICT budget, but this is not standard practice. Government must make the necessary resources available to ensure that CPD is provided and buildings can be properly utilised to achieve educational objectives.

In addressing CPD, it is essential that the form it takes is properly considered. A number of witnesses expressed concern about the quality of inset day training. One respondent to the inquiry noted that "we talk about personalisation for students, yet we're still happy to sit teachers in a hall for five days and talk at them about educational change".

Recommendation 12: Government must formalise CPD as part of BSF with ring-fenced funding to ensure that teachers are able to properly utilise new buildings and deliver educational transformation.

The inquiry also noted that where a local authority grasps the transformational agenda, the current assessment framework makes radical solutions much harder. Jon Barker, Headteacher at Hugh Christie Technology College, commented that "the assessment framework is still too rigid and does not encourage transformational learning, it still encourages the traditional model. Until we have a really strong look at what we are assessing and how we assess we're never going to move forward." This viewpoint was echoed by other LA and school representatives who were worried about how innovative approaches would fare under the standard assessment framework.

Recommendation 13: Government must create the space necessary to allow educational transformation by giving innovative schools some leeway under the current assessment framework in the short term and investigate how the assessment framework can be harmonised with the goal of educational transformation in the long term.

2.3 Climate Change

As has already been noted, for BSF to significantly reduce the carbon footprint of the schools estate it is vital that the behaviour of a schools users are addressed. Whilst engaging students in energy reduction will not be straightforward, it should have a useful concomitant of providing students with practical guidance on climate change. One witness to the inquiry noted that "our children are going to have to make some uncomfortable decisions when they're adults". It is vital that children are educated about climate change to prepare them for these decisions. The inquiry heard a number of examples in which the school buildings had demonstrated considerable potential as a tool in delivering this lesson.

In addition to teaching children about the reality of climate change, the inquiry also noted that schools should prepare students to cope with some of its effects. However, the inquiry heard that the Training and Development Agency for Schools (TDA) has not sufficiently addressed this issue. One witness to the inquiry commented that the TDA is at "a beginner level".

Recommendation 14: The Department must ensure that educational transformation addresses climate change, providing students with an understanding of its existence and causes, and the skills and knowledge to tackle it and adapt to its effects.

3 Community Regeneration

The potential for schools to drive broader community regeneration is widely recognised. This chapter analyses school led community regeneration and the obstacles to its achievement. The chapter goes on to identify where BSF and Government more broadly can support this agenda.

3.1 Extended Schools

In a deprived area schools often represent the most significant community resource and as such have considerable potential to drive community regeneration. On the most basic level the school provides educational output that equips children in the community with skills and motivations that can help to address regeneration. Traditionally the school has only offered these services for core opening times, roughly eight til four, remaining closed during weekends and holidays. However, the extended schools agenda requires schools to go much further; schools must open earlier and close later and provide a greater range of both educational and leisure activities. These services have also been opened up to include adults and families in the area. The Government expects that all schools should offer extended services by 2011.

3.2 The School and its Environment

While the inquiry recognises the important and regenerative effects of the extended schools agenda, witnesses noted that regeneration is deeper than just the extended use of the school. One witness to the inquiry noted that "schools are not islands" and are hugely affected by, and capable of affecting, the surrounding environment, such as health and social care services, to other factors such as local housing, leisure centres, opportunities for retail development, parks and even street design. All of these factors have a significant impact on the morale of the community and by improving them, as one witness stated, "you can arrest a downward spiral".

In terms of developing the surrounding area, from health services to housing and retail, the inquiry noted that if these projects are joined up much more can be achieved. This goal of greater coordination is evident in the DCSF's provision of a £200 million co-location fund which supports projects that co-locate services, which is now being delivered by PfS on behalf of the Department. Witnesses to the inquiry identified the Local Education Partnership (LEP) as an ideal vehicle with which to secure greater coordination benefits, by providing a long-term private sector partner who can respond more intelligently to the needs of the community. While the inquiry was disappointed to note that LEP OJEU Contract Notices (Official Journal of the European Union notice – the advertisement of the intention to tender for public sector work required by European procurement law) were often too tightly drawn to permit broader

regeneration work in early waves of BSF, it was noted that PfS has moved to address this failing. As such all OJEU notices are now drawn so as not to preclude further work.

The inquiry noted that BSF also has significant potential to promote regeneration as the scale of the investment can act as a magnet for further investments. However, Steve Robinson, Headteacher at Chaucer College Sheffield, noted that "there has to be an opportunistic, entrepreneurial element at ground level to join things up and it is not something that can be systemised". The key finding of the inquiry was that while BSF can be used as a catalyst to drive community regeneration, it cannot be centrally driven. The inquiry also noted the benefits of the recently introduced Homes and Communities Agency's 'single conversation' as a means of promoting greater coordination in addressing regeneration.

Recommendation 15: LAs should be encouraged to view BSF investment as an opportunity to attract further investment into the local area as a means of addressing community regeneration. This can take place both through the LEP or more generally in the area.

3.3 The School as a Community Resource

The inquiry also identified the potential for the school to act as a broader community resource. Schools can provide a community hub using links with community members to bring people together and to provide a space in which groups can form and develop the community. The inquiry also identified the potential for the school to support these groups and to help them engage local issues.

In utilising the school as a broader community resource, the inquiry noted that the difficulties of this work being led by BSF were, if anything, more acute. One of the most significant problems in addressing this area is the nature of community. Steve Robinson noted that "When you talk about community do you mean the families and their children that come to your school? Do you mean the family of schools that you work with? Is it your catchment area? Is it the neighbourhood in which you're based?" Added to this problem is the overriding importance of context. The nature of the work undertaken to regenerate a community will be hugely dependent on the area. One witness to the inquiry noted that some areas don't need regenerating. As such, demographic and even geographic factors make it impossible for central government to prescribe community regeneration.

> "There has to be an opportunistic, entrepreneurial element at ground level to join things up and it is not something that can be systemised"

3.4 Local Collaboration

While central government cannot drive community regeneration, the inquiry identified a number of areas where Government could act to make its attainment easier. One important factor raised by witnesses was that of local collaboration. Witnesses noted that it was ineffective and inappropriate for regeneration work to be led by individual schools and headteachers, and that some form of local collaboration is necessary to avoid a "scattergun" approach. The inquiry noted that this runs contrary to many recent developments in school policy that have encouraged greater school independence. Alan Dyson, Professor of Education at the Centre for Equity in Education, noted that "the lack of allegiance of many Academies to LAs makes their incorporation in local strategies problematic". Other witnesses also noted that this problem is often associated with faith schools. Paul Hanbury from Navigant Consulting commented that "schools shouldn't be acting as little islands . . . there should be more encouragement to use federation arrangements." The idea that schools should be under an obligation to participate in some form of collaboration with neighbouring schools won broad support during the course of the inquiry.

The inquiry noted that there was particular potential for collaboration between primary and secondary schools. PfS should be well placed to facilitate this collaboration now that it has assumed responsibility for the Primary Capital Programme.

Recommendation 16: The Department should place an obligation on BSF schools to engage in meaningful and locally appropriate forms of collaboration with schools in their area.

3.5 Accountabilities

One of the most commonly cited obstacles to community regeneration during the course of the inquiry was the existing system of accountabilities such as OFSTED inspections. Paul Hanbury noted that "when a school is inspected, it's inspected in a very sterile, inside the fence way because OFSTED tends to be driven by a very narrow agenda and that's not what some of these communities need". Other witnesses noted that accountability mechanisms were often uncoordinated, short-termist and punitive in a manner that discouraged innovative and collaborative approaches to regeneration. The overriding problem often appeared to be that accountability mechanisms did not take account of both local context and how schools were responding to that context. The inquiry noted that one of the key problems with developing more nuanced accountability mechanisms is that, once it is accepted that schools do not operate in vacuums; that they are partially determined by their environment and partially determine it, accountabilities have to become shared. This means that the welfare of the whole community becomes partially the responsibility of the headteacher whilst the educational outcomes of a school can again only be viewed as partially the responsibility of the school.

Recommendation 17: The Department must investigate developing an accountability system which recognises a school's attempts to engage with the broader community.

4 Procurement

This chapter analyses issues around the procurement of BSF with regard to client capability. The chapter then goes on to examine the introduction of Local Education Partnerships (LEPs) as the standard procurement model for BSF.

4.1 Client Capability

The inquiry welcomed BSF's structure as locally led, recognising that local authorities are well-situated to determine the particular educational requirements of their locality and develop a tailored and context sensitive solution. However, this structure makes the programme heavily reliant on the capability of the individual LA. As such PfS provides a relatively tight procurement framework within which LAs procure BSF. The need for such a framework is apparent as the inquiry identified one example where an authority with poor procurement capability attempted an innovative procurement with particularly detrimental results.

Clearly there is some tension between the need for a tight procurement framework for BSF and allowing local authorities the space to create their own tailored solution. This tension has led to some accusations that PfS has been 'bullying'[3] LAs. However, the inquiry noted that such accusations were to some extent inevitable because of PfS's role in ensuring the efficient allocation of resources and, as such, not of concern in themselves. However, the inquiry also identified LAs with strong professional capacity that followed an innovative procurement with apparent success.

In response to these issues, PfS has begun to develop a tight-loose approach to its engagement with LAs that is sensitive to client capability. However, for this approach to be successful it is vital that PfS develops a robust and transparent methodology for measuring client capability. Depending on the results of this test, PfS can then determine what scope there is for an authority to innovate within the standard procurement model. The inquiry also noted that the LEP model should be viewed as continually evolving. A number of witnesses emphasised the potential for PfS to incorporate examples of best practice from innovative authorities into the structure of the LEP.

Recommendation 18: PfS should develop robust and transparent criteria for determining the client capability of local authorities. Based on their performance against this criteria, more capable authorities should be afforded flexibility within the standard procurement model, whilst less capable authorities should be provided with a tighter framework within which to work.

[3] Building Blocks, Policy Exchange, 2009

4.1.1 Retaining Skills

One of the key reasons identified by the inquiry for weak client capability is that local authorities often struggle to attract and retain staff with the necessary skills. The inquiry heard that when a local authority procures schools in BSF, it is often the first procurement of its kind that its staff undertake. The inquiry also heard that experienced staff are often attracted to work in the private sector. One witness to the inquiry noted that this move to the private sector may be driven by the desire to work on major projects and that procurers can become "transaction junkies".

The inquiry established that it is vital that BSF retains and recycles the skills acquired by public procurers in the delivery of the programme. The inquiry noted that in some cases this has already begun to happen on an ad hoc basis with experienced staff being recruited by LAs in anticipation of entering the programme. The inquiry also heard that PfS has done substantial work with the London boroughs and Capital Ambition in an attempt to create a central resource of skills that is available to LAs when they need it.

Recommendation 19: The public sector must retain and recycle skilled staff for the procurement and delivery of BSF. Government should also utilise the potential for the programme to act as an exemplar of best practice for sharing of resources between local authorities.

4.2 Local Education Partnerships

One of the key features of BSF has been the introduction of Local Education Partnerships (LEPs) as the default delivery model. LEPs are joint venture companies comprised of the local authority and Building Schools for the Future Investments (BSFI) who each hold 10% percent of the shares, and the private sector partner who holds the remaining 80%. The composition of the LEP is designed to align the interests of the contractor with that of the LA. Contractors bid to form the LEP by assembling a consortium of suppliers with whom they draw up sample schemes for initial projects. The LEP is not used in all BSF procurement but it is the presumptive model except where a LA can demonstrate a strong alternative, or is deemed too small to make it viable.

To date LEPs have been expensive to procure with total set up costs often in the region of £9-10 millon. PfS introduced a number of adjustments to the process in 2008 which are expected to cut competitive dialogue from 82 to 74 weeks and are predicted to save £250 million. In spite of this, the process will continue to be arduous but it is hoped that LEPs will deliver savings during the course of their existence by avoiding repeat procurement costs. PfS are also in the process of carrying out a further procurement review with the overarching ambition of reducing the procurement process to 52 weeks.

One of the key benefits of the LEP model is that it can mitigate the problem of a weak client by transferring risk for the successful integration of BSF from the client to the LEP who then cascades that risk the supply chain. The inquiry also noted that LEPs provide a degree of stability for such a long-running investment. In a written submission to the inquiry Knowsley Metropolitan Borough Council noted that 'It is undoubtedly beneficial to both national and local government in the long term to have in place arrangements such as LEPs which are able to organise and systematise this scale of public investment'.

The National Audit Office noted in their report on BSF in early 2009 that 'it is too early for local authorities to be able to tell if the expected benefits of the LEP model will be realised', though they did recognise that some initial cost and time savings are beginning to emerge. This was echoed during the course of this inquiry with many witnesses positive that LEPs would prove to be value for money, whilst others voiced concerns that the model will have to change.

4.2.1. Governance

The inquiry was consistently informed that good governance is crucial to the success of the LEP. One witness noted that good governance "holds the LEP to account, gives it direction and gives it focus". However, witnesses were often less sure what could be done to secure good governance. This seemed partly to result from the wide range of ways in which LAs conducted their engagement with BSF. Bob Vince, Head of Education at Interserve, commented that the most important factor is to "find out who owns the programme in the local authority and have them responsible for the governance of the LEP". In doing so the clarity of communication between the LA and the LEP is enhanced and the LEP can act with greater confidence.

It was also noted that building trust was crucial in maximising the potential of the LEP. The inquiry was encouraged to hear evidence of a number of LAs where the LEP, after initial suspicion, had come to be viewed as a very useful partner. The inquiry also spoke to a number of witnesses who had mixed feelings about not having used the LEP model. Mike Rees, Head of Policy at Knowsley, noted that:

"If we had had more longitudinal certainty about capital investment in the education sector beyond BSF then the debate in Knowsley as to whether or not to use a LEP would have taken on a different dimension. We supposed Government would want to invest in the primary sector but, at the time (early in BSF), we had to make our decision on the facts before us and we couldn't be absolutely sure. I would expect that smaller unitary authorities coming into BSF now have far more clarity around the balance of secondary and primary investment and would therefore be better placed to consider the cost effectiveness of a LEP option for a small local authority. As matters have turned out we are adopting LEP like habits within a PFI procurement. On the one hand it has its limitations but on the other hand it suggests that the LEP concept is a robust one".

4.2.2 Partnering

One problem identified by the inquiry was that, although LEPs have the potential to secure strong partnering between local authorities and contractors, they do not always achieve it. A number of witnesses to the inquiry commented that this could be due to insufficient guidance being provided on the day to day running of the LEP. The inquiry noted that PfS has been working to address this problem and the NAO has noted that some LAs are starting to see the benefits of strong partnering[4]. The inquiry also noted that in June 2009 PfS published a Toolkit to improve the operation of LEPs that should address a number of the issues identified by the inquiry.

Recommendation 20: Local authorities' partnering and governance arrangements with the LEP must be tested with the LEP Toolkit as part of the Gateway Review.

[4] National Audit Office, *The Building Schools for the Future Programme: Renewing the secondary school estate*, 2009

4.2.3 Staffing the LEP

One of the most significant problems identified by the inquiry was the problem of staffing the LEP. The inquiry was told of a number of occasions in which planning had delayed the commencement of schools in an authority, during which time the LEP would not have much work or many staff, and then a number of schools would begin at the same time, greatly increasing the workload of the LEP and meaning they had to rapidly increase the number of staff. Witnesses to the inquiry stated that this intermittent workflow can make the LEP very hard to manage. One suggestion heard by the inquiry for addressing this issue was for a centralised team located in PfS that could be hired out to LEPs on a commercial basis where necessary. PfS should investigate this and other potential methods of addressing this issue.

4.2.4 The Composition of the LEP

One of the areas of concern that was often raised by local authority representatives during the course of the inquiry was that in procuring a LEP, the authority is procuring a consortium of companies and loses the ability to select individual suppliers. This often means that in procuring a LEP there will be one or more suppliers within it, whose bids are weaker than their equivalents in other LEP tenders. The manifestation of this issue has been particularly noticeable in the area of design. A number of witnesses noted experiences of a LEP being procured primarily on the basis of the partnering being offered, but at the expense of weak design. While the integration benefits of LEPs are undoubtedly valuable, they cannot be allowed to permit poor design.

The Department and PfS have moved to address this problem through the introduction of the Minimum Design Standard. The standard provides a threshold for design, below which projects will not be able to continue. It is too early to judge the success of the standard but the concept of applying thresholds would seem sensible. While the inquiry noted the importance of the requirement for continuous improvement for future LEP projects, a number of witnesses also commented that it should be possible to apply thresholds to other aspects of the LEP. The key to doing this successfully must be to communicate exactly what the threshold entails at the earliest possible stage to the potential bidder.

Recommendation 21: PfS should investigate introducing a minimum threshold for the ICT component of the LEP.

4.2.5 Value for Money

A consistent cause for concern throughout the inquiry was whether LEPs will secure value for money. Usually the public sector ensures value for money through a well run competitive procurement process. While a competitive procurement process (currently all BSF procurements are undertaken using Competitive Dialogue procedure) is still used for the tender process to identify the winning bidder, after that projects will be delivered by the LEP under a ten-year exclusivity arrangement. There are therefore real concerns that LAs will struggle to get tight pricing on these projects.

PfS have introduced a range of measures to combat this problem including continuous improvement contract clauses and the provision for market testing. The most significant measure being adopted is that of benchmarking. This involves PfS collecting comprehensive data on the cost and price of schools. The NAO noted that the 'system is a significant improvement over previous programmes and will allow local authorities to gain better assurance on the value for money of the schools they are procuring'[5].

The difficulty presented by benchmarking is that in a programme such as BSF there is an almost infinite amount of information, the collection of which would make any database unmanageable. There is a further problem that data will always be context specific with factors such as labour costs and even building techniques differing across the country. Managing the database clearly will be very challenging and will need sufficient resource dedicated to it but, as one witness put it, "without it, you're stuffed". The issue of benchmarking in BSF is therefore one that will require constant scrutiny.

While LEPs may not deliver the tightest possible pricing on subsequent individual projects, they can be viewed as an attempt to secure broader value for money. James Stewart, Chief Executive of Partnerships UK, noted that with regard to the ten-year exclusivity granted under LEPs, "the intention was always to encourage research and development

[5] National Audit Office, *The Building Schools for the Future Programme: Renewing the secondary school estate*, 2007

"Find out who owns the programme in the local authority and have them responsible for the governance of the LEP"

from the public sector and private sector". Mr Stewart went on to note that it is reasonable to assume that this will have had benefits for all of BSF, not just those LAs that have employed the LEP model. If LEPs do secure greater investment in research and development in the sector at the cost of less tight pricing then they can viewed as an admirable commitment to delivering quality rather than focusing on lowest cost.

Recommendation 22: BSF must retain its commitment to delivering quality rather than focusing on lowest cost.

4.3 Standardisation

One issue raised by a number of respondents to the inquiry was that of standardisation and its potential to promote cost efficiencies over the course of BSF. This can clearly be seen in the standardisation of the procurement process with a number of witnesses commenting on the benefits of standardised contracts terms. However, the inquiry also noted that contractors have made considerable progress in this area with the modularisation of various design aspects ranging from school toilets to wiring systems. The inquiry heard that PfS has been effective in gathering examples of best practice.

However, a number of witnesses to the inquiry were keen to emphasise the limits of modularisation. Where BSF has been successful it has been as a result of delivering a tailored solution, sensitive to the needs of the locality. As such, one witness from a major contractor noted that there is "no such thing as a standard classroom block". In addition to this another witness raised concerns that overly standardised schools would inevitably be "linked to notions of austerity". This could potentially undermine what one respondent noted as one of the key messages of BSF; "it tells pupils and teachers that, 'you're worth it'".

4.4 The Economic Downturn

The inquiry recognised the work done by PfS in securing continued funding for the programme, including through the European Investment Bank. The inquiry noted that in spite of the economic downturn, BSF has generally remained an attractive proposition for investors. It was noted that LEPs in general should be resistant to some slowing of work but it is essential their progress continues at a pace that maintains critical mass. The inquiry established that it would be extremely detrimental for the programme to become stop-start in nature.

Recommendation 23: Government must ensure BSF funding is sufficient to allow it to maintain 'critical mass'.

5 Information & Comm Technology

Information and Communication Technology (ICT) is a key component of BSF. It accounts for ten percent of the capital spending on BSF schools and is integral to the realisation of the Government's transformational learning agenda.

There is considerable debate as to what extent ICT is revolutionising teaching. However, the majority of witnesses interviewed by the inquiry, including those unhappy with their particular experience of ICT, spoke of the educational potential for ICT. In particular, its ability to provide an interesting and motivational classroom experience, revolutionise access to information and facilitate new forms of collaboration and communication.

The inquiry found that while ICT seemed to have real potential to deliver positive educational outcomes, securing these was dependent on far more than simply procuring equipment. This chapter analyses the manner in which ICT is being provided in BSF as part of a managed service and issues with the supplier market. It then addresses issues around procuring innovative ICT and the importance of engaging local authorities and schools in doing so. Finally the chapter examines issues around the increased use of ICT and the low-carbon agenda.

5.1 Managed Services

One of the key aspects of delivering ICT as part of BSF is the introduction of managed services for local authorities. The managed service aggregates the provision of ICT in schools across an authority into a single contract. The managed service provider is usually procured as part of the LEP and is then responsible for the delivery of all aspects of ICT, from hardware and safe internet connectivity, to data management and learning platforms.

The introduction of managed services has met with some resistance in schools based in part on an inevitable reduction in the freedom of schools in how they use their ICT. While the inquiry was alive to these concerns, two key factors were identified as providing justification for the introduction of managed services.

i) Economies of Scale The typical size of a secondary school is usually in the region of 1,000 pupils. Based on the number of support staff required for a reliable ICT service, the inquiry found that it is not cost efficient to have a separate ICT management service for each school.

ii) Professionalisation The inquiry recognises that a significant number of schools have developed their form of ICT provision in a very successful manner. However, the quality of this provision is still very much dependent on the ability of the individual ICT technicians within a school, which varies considerably. The professionalisation of ICT

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through the managed service is designed to remove this element of chance and in doing so provide guaranteed service levels; this in turn should allow schools and teachers to focus on the application of technology, rather than its management.

The inquiry noted that managed services do appear to take some time to bed down. Inquiry witnesses cited estimates of one to three years before the full benefits of managed services are apparent. Moreover early problems appeared to be reasonably common. However, studies by BECTA have shown that in the long-term managed services lead to increased reliability, increased staff confidence, improved learner confidence and greater embedding of technology and maturity of use.

While the inquiry did find some instances where schools were unhappy with their current managed service, these appeared to be the result of transitional problems or poor management of the managed service, rather than the product of any systemic flaw with managed services as a whole.

5.2 The Supply Market

The strength of the supplier market was consistently identified as a major concern in the delivery of ICT in BSF. A number of respondents to the inquiry voiced concern that there are some suppliers operating within the market that are not of sufficient quality. Unfortunately the often difficult early period in managed services makes it hard to identify the cause of these problems. In spite of this a number of witnesses commented that BSF's programme structure should be used to identify poor suppliers over time.

BECTA is currently developing a framework for 2010 which will identify a range of suppliers (expected to be between 10-15) from whom local authorities will be able to procure managed services without having to go through due diligence. In addition BECTA will provide a degree of scrutiny over these providers.

In spite of concerns over the depth of the supplier market, as of August 2009 there were twelve active ICT bidders in BSF, of which ten had won bids. However, these are all companies of substantial size. The inquiry found that some of the most innovative companies are of a much smaller size, but that these companies are finding it extremely hard to engage with the programme. There is an additional concern that as the programme goes on, and the number of schools that have gone through BSF increases, these

suppliers will find fewer and fewer places to operate. There is therefore the possibility that BSF may actually damage an already weak supplier market unless steps are taken to stimulate innovation.

5.3.1 Procuring Innovation

Successfully fostering innovation in BSF is central to the delivery of the Government's transformational learning agenda. However, while BSF would seem to offer the possibility of guaranteeing service levels of ICT provision, the inquiry identified serious concerns that BSF is failing to deliver innovative ICT in schools. The key reason cited for this failure is the procurement process.

One of the key motivations for the procurement of a LEP is that the LEP, rather than the local authority, assumes the risk for integrating the various components of a school. However, in choosing between consortia bidding for LEPs, the local authority can only select the best consortium, not the best individual components or companies. Respondents to the inquiry cited a number of instances in which a consortium had lost a bid despite having the highest scoring ICT supplier within their consortium. This in itself is an inevitable part of consortium bidding but the problem is exacerbated with ICT. Respondents to the inquiry noted that you can only incentivise innovation when it affects whether or not the supplier wins or loses the contract, but the structure of the LEP seems to make it difficult to do that. This is because the "innovation layer" within ICT only comprises 20-30% of the overall ICT component, therefore significantly limiting the weighting that can be ascribed to the innovation in ICT when evaluating an overall LEP bid.

Developing an innovative ICT bid is also both relatively expensive and necessarily risky, as the nature of innovation lies in doing something untried. Together these factors mean that an innovative bid can be viewed as less attractive to a contractor assembling a consortium due to higher risk, and more expensive for the ICT supplier, while at the same time providing little increased chance of winning a bid. As such there are concerns that innovation is being incentivised out of BSF. One witness to the inquiry noted that "If you're only incentivising the supplier to be good enough to allow construction to continue, they won't do much more".

Concerns were also raised that this structure is excluding many smaller and more innovative companies from the BSF process because they cannot afford to bid for a contract when they cannot substantially affect their ability to win by differentiating themselves on the quality of their tender. Other respondents to the inquiry cited the need for a performance bond, roughly in the region of £1 million, to be paid upfront to the LEP by the ICT supplier, as the key obstacle to smaller companies engagement with the programme.

In response to these concerns PfS have been examining three different procurement routes for ICT in BSF:

Standard LEP. The crucial benefit provided by the standard model is that of integration. The model means that the authority has no contract with the ICT provider and that the LEP bears all the risk for ensuring the successful integration and delivery of ICT. As such the model should encourage the integration of ICT considerations into the design of the building. The model also means that in the event of an underperforming ICT partner, the LEP is responsible for finding a replacement partner. As discussed, the key problem heard by the inquiry with the Standard LEP model for procuring ICT is that it does not incentivise innovation. The inquiry noted that to overcome this problem some authorities have begun to attribute significantly higher weighting to ICT when scoring LEP bids.

ICT First. Under this model the ICT partner is procured before the LEP. This means that ICT should again be in a good position to influence the design of the building. However, to successfully adopt this model means that the local authority must procure ICT nine to twelve months before the local authority publishes an OJEU notice for the LEP procurement. There are also concerns that this model will leave the procurement of the LEP open to legal challenge if a contractor perceives that the ICT partner has preferenced one of the LEP bidders.

Separate and Concurrent. This model has been trialled in a number of authorities, including Leeds, where it is widely considered to have been a success. The model involves procuring a separate LEP contractor and ICT supplier at the same time while mandating the ICT provider to work with the LEP to integrate ICT. The model thus avoids the possibility of legal challenge. Theoretically there should remain

time between procurement and construction for the ICT provider to influence design. However, the inquiry identified concerns that ICT would not be properly integrated and that it will be significantly more onerous for the LA to conduct two procurements.

'ICT First' and 'Separate and Concurrent' models mean that the local authority bears the risk for integration and therefore no performance bond is needed, thus removing a key barrier to the engagement of smaller companies in BSF. Both models also allow ICT to be procured on its own merits therefore providing greater scope for the supplier to differentiate themselves through innovation. However, both models have raised concerns over difficulties in the integration of ICT, particularly with regard to the 'Separate and Concurrent' model. As of August 2009 eleven BSF contracts had been procured separately. The inquiry heard mixed reports as to the success in integrating the ICT in these separate procurements.

While both 'ICT First' and 'Separate and Concurrent' appear to offer viable methods of fostering greater innovation, it is important to note that running two separate procurements is more onerous for the local authority. There is a further concern with regard to the 'ICT First' model. In procuring innovative ICT, an authority should be procuring ICT that responds to the educational vision for the authority. As has been previously noted, concerns over the time needed to develop a vision have led PfS to adopt a strategy of pre-engagement where authorities develop a vision and a strategy for its engagement before they enter the programme. However, for authorities to develop a vision before procuring ICT which has to be procured nine to twelve months before the LEP, would seem to raise concerns that either the whole process could become overly lengthy, or that the time allocated for addressing these various issues might be squeezed.

Recommendation 24: PfS must ensure that procurement is structured to promote innovation in ICT. This may involve promoting different procurement strategies for ICT depending on the authority.

5.3.2 Delivering Innovation

One of the most consistent messages heard by the inquiry was the importance of involving the school to ensure successful engagement with ICT. One witness noted that "there has been too much focus on shovelling kit into schools" which in itself will not bring about change. The inquiry also noted that engaging school users in ICT procurement is crucial. Dr Stephen Lucey of BECTA commented that, "learning platforms do not in themselves create innovation; the way teachers and students develop their use to enhance learning and communication provides the innovation". The inquiry identified that engaging with schools and LAs early in the procurement process to determine what they want from ICT and develop a tailored package is essential in delivering innovative ICT. The inquiry also noted the importance of ensuring that ICT is properly used once the school is operational.

In the early stages of BSF, the procurement of ICT was much more local authority driven. One witness to the inquiry noted that in waves 1-3, "local authorities did ICT to schools". PfS has moved to address this with the requirement for schools to develop their own individual Strategy for Change documents that address ICT, without which a local authority will not be able to progress within the programme. However, there is a concern that many schools are simply delegating this work to consultants, rather than properly engaging in the process. Dr Lucey stated that "I believe the Strategy for Change has to be school led. Where schools have abdicated responsibility to the LEP or consultants, they will find it is considerably more difficult to achieve a service that truly adds value". The consistent message to the inquiry here was that this process requires high level management engagement within the school to be successful. Without this engagement the inquiry found there is a strong possibility that while ICT may be procured for the school, it will not be used.

There is a further concern that in some areas ICT suppliers are still failing to offer schools real choice in the products they want, and instead are forcing their own products on schools. It is essential that PfS continue to scrutinise this situation and identify suppliers guilty of this behaviour.

A number of witnesses to the inquiry have noted that so far BSF's approach to ICT has been overly capital intensive. The inquiry found that in procuring ICT, insufficient resources are dedicated both to making the school a "smart client" and training them in what to ask for, and to providing continuous professional development that trains teachers how to utilise new technology. One witness noted that BSF could secure much better value for money if it was to convert

"There has been too much focus on shovelling kit into schools"

10-15% of the capital funding available for ICT into revenue to resource CPD. In doing so it would train teachers not only how to use the technology available to them, but also how to develop innovative solutions in a technology rich environment. While some schools have found ways to transfer some of their ICT capital funding to CPD, this is not standard practice.

Recommendation 25: DCSF and Treasury must move away from a strictly capital approach to ICT and ring-fence funding for change management and CPD for schools to allow them to better identify what they want, and to ensure that potential benefits of new technology are realised.

Another consideration in delivering innovative ICT in schools relates to the allocation of risk. As previously noted, the innovation layer only comprises 20-30% of an ICT bid. The rest relates to core services. The core services will be relatively standardised between schools and as such strict service levels can be set with penalties for non-compliance. However, delivering an innovative service necessitates an element of risk as it will not have been tried before. Witnesses to the inquiry have noted that it is important that the same strict service levels are not applied to this innovation layer. This is because its successful delivery cannot always be guaranteed and in attempting to do so a school will dissuade a provider from attempting an innovative service.

Recommendation 26: PfS must encourage schools to take a more balanced approach to the application of service levels around the innovative components of an ICT bid.

5.4 ICT and the Carbon Agenda

In increasing the amount of ICT used in schools substantially, it is important to assess how this will affect both the UK's broader carbon reduction commitments, and specifically the 2016 zero-carbon target. The inquiry identified three key aspects to consider with regard to ICT's carbon footprint in BSF: behaviour, components and design. Behaviour was identified as the biggest single factor in reducing the carbon footprint of ICT. The most persistent problem the inquiry identified was that of schools switching off the power management features on computers.

Recommendation 27: PfS must make it a requirement that as part of the managed service the ICT provider must work with the school to reduce the energy usage of ICT in schools.

With regard to the impact of components and low carbon ICT, the inquiry found that much of the technology already existed. However, respondents to the inquiry noted that currently suppliers are not being incentivised to utilise this technology and that the points available for low energy solutions in the ICT part of the bid criteria are insignificant. The inquiry noted that the separation of ICT procurement from the rest of the LEP would help to mitigate this problem.

The other key aspect the inquiry identified in terms of low carbon ICT was school design. Respondents noted that unless the ICT, and in particular the server room, was thoughtfully integrated into the design of the school, the opportunities to reduce the carbon footprint of technology was drastically reduced. To do this successfully it was noted that it is essential to consider ICT at the earliest stages of design. However, the inquiry heard that ICT continues to be viewed too late and treated as a "bolt-on".

One prospect for reducing the carbon footprint of schools in the future is the use of energy efficient off-site data farms to address heat generated problems. These farms would hold the majority of information and provide most of the processing power for schools, negating the need for energy intensive on-site servers. Respondents to the inquiry expected that much of this technology should be available by 2016. However, while off-site farms are more energy efficient, they still have a carbon footprint. Therefore, while the energy use of the school itself will be reduced by a move to off-site farms, it is key that the footprint of the farms is considered.

The inquiry also noted that ICT has the potential to form part of the solution with regard to reducing energy consumption. The introduction of area based managed services and 'anytime, anywhere' access for students has enormous potential for remote learning and could substantially reduce transport needs.

ICT as a component of Educational Transformation

CASE STUDY ON PARK CAMPUS

Park Campus in West Norwood, Lambeth Council has introduced a number of different ICT technologies. The school is a specialist site that provides education for up to eighty 11 to 16-year-olds who have a range of social, emotional and behavioural difficulties. It opened as a new BSF school in November 2008.

In addition to benefiting from interactive whiteboards, new projectors, audio systems and electronic notepads, the school has integrated LCD screens across the site to provide 'Park Campus TV'. This allows students to publish and share their work right across the school. The school has also acquired Apple Macs which support the use of creative software packages that can be used for digital movie making, digital animation and music composition.

In order to use ICT to facilitate learning both at home and at school, the school's new Kaleidos Learning Platform will be developed, and may include a parent portal which will allow parents to access the learning platform and share information with other parents. Mini-book laptops will also be used by students at home and at school, and are low cost devices that provide ICT to students who otherwise have difficulty accessing online learning resources

Through BSF the school has benefited from SIMS (Schools Information Management System), a tool which streamlines school data, such as that relating to student attendance, behaviour and performance into one centrally managed system. This can then be used to text parents on their mobile phones to advise them of student absences.

6 Furniture, Fixtures & Equipment

Furniture, fixtures and equipment (FFE) includes chairs, tables, technical items and machinery. PfS guidance states that LAs allocate £1,000 per pupil for FFE in a new school build[6], as such it is vital that the public sector secures value for money.

The quality of FFE has considerable implications for learning, health and safety and sustainability. The British Educational Suppliers Association (BESA) has stated that

> *sitting for extended periods on chairs that are of inappropriate size and that lack ergonomic design and at desks or tables whose height relative to the chair is incorrect, will be uncomfortable, will reduce attention and is recognised as a major cause of back pain in adolescence and later life[7].*

However, a number of witnesses to the inquiry noted that "FFE is the poor relation of BSF". Another witness noted that "when I see images of brand new BSF school buildings, I can't help notice the chairs which are often inadequate". This chapter will analyse and propose solutions to obstacles to the procurement of high quality FFE in BSF.

6.1 Furniture Standards

The most persistent area of concern raised by witnesses with regard to FFE was seating. As has been noted, there is substantial evidence that the quality of seating can affect learning and cause back problems later on in life. However, in spite of the proliferation of health and safety standards in the workplace that mandate a certain quality of seating, the inquiry heard that in schools "it is still legal to sit children on orange crates".

A report published by the Furniture Industry Research Association in 2001 noted that the majority of school furniture is designed according to measurements of children made in the 1970s. The report established that children today have, on average, longer legs and arms, and that there is a greater variation amongst children in terms of size. In response to the report European school chair standard, EN1729, was drawn up by the Technical Committee for Europe. The standard addresses ergonomic and durability issues with regard to school seating. James Barrow, Managing Director of Morleys, an education furniture supplier, commented that EN1729 is "a highly developed Europe-wide standard for classroom furniture, the result of years of work into the anthropometrics of correct posture".

[6] http://www.partnershipsforschools.org.uk/documents/BSF_Guidance_Documents/FundingGuidancefor BSFProjectsIncludingAcademiesAugust2007.doc

[7] BESA, *Policy Commission*, 2008

However, while the standard is recognised in the UK and the inquiry found that some LAs have specified it in their engagement with BSF, it is not mandatory. Moreover, the inquiry was told that many teachers remain unaware of it. One witness noted that there has been some improvement in this area and that while "PfS is not that prescriptive in its requirements for FFE, it is becoming more critical of bidders who have not addressed FFE". The inquiry welcomes this development but urges the DCSF to go further.

Recommendation 28: The Department must make the European chair standard, EN1729, mandatory for the procurement of all school chairs.

6.2 Buying Quality

One of the most common problems identified in the procurement of FFE was a tendency towards lowest cost which led to poor quality procurement. One witness to the inquiry noted that "because FFE is the last material budget of any size, it gets raided for absolutely everything". This is particularly problematic when added to the vast range in prices for FFE. The inquiry heard that the range of prices for chairs varies from £7 for a chair expected to last for a few years, to £50 for an ergonomically designed chairs that comes with a 30 year guarantee. The quality of FFE therefore clearly has substantial implications for lifecycle maintenance cost in a school and environmental sustainability in terms of reducing waste.

Dennis Vyse, Managing Director of Nortek noted PFI has become a driver of quality in FFE because of lifecycle considerations. Conversely a number of witness expressed concern that design and buildprojects were incentivised to cut cost in FFE and that this often led to the procurement of poor quality furniture.

Recommendation 29: The DCSF must ring-fence 5% of the capital budget to guard against a lowest cost mentality in the procurement of FFE.

While it is essential to guard against a lowest cost mentality in the procurement of FFE, the inquiry also identified a major sustainability concern with regard to FFE in BSF. The inquiry found that because of the budget available for FFE in schools, many schools were throwing away legacy furniture in good condition. The inquiry found that substantial amounts

"FFE is the poor relation of BSF"

of money had been spent by LAs sending this FFE to landfill with substantial cost and sustainability implications. As such the inquiry welcomes the decision by PfS to require LAs to reuse or recycle all FFE from schools closed as part of BSF as crucial to ensuring ring-fenced budgets do not promote waste.

6.3 Flexible Learning Environments

The inquiry heard that FFE has considerable potential to support the Government's transformational learning agenda by providing flexible learning environments. However, the inquiry heard that BSF often fails to grasp the potential for the procurement of FFE as an opportunity to explore options for flexible learning environments. As such the inquiry found that in many cases schools are just purchasing what they had before. The inquiry found that teachers consistently ask for more cupboards for greater storage space for items such as educational videos, despite the fact that these are increasingly being replaced by online media.

A number of witnesses to the inquiry noted that staff and students are not equipped to respond to the technical and spatial queries asked of them. The Department must move to address this by providing CPD that trains teachers how to ask for and utilise flexible learning environments.

One of the key methods identified by the inquiry for ensuring that schools realise the potential of new FFE is through greater engagement with suppliers. The inquiry spoke to a number of FFE suppliers who noted that they were often contacted too late in the procurement process. One witness noted that the problem is that the supplier is not involved in the process, they are just asked to provide a selection of products.

Recommendation 30: PfS should ensure that LEPs initiate procurement of the FFE supplier early enough to allow them to influence the design of the school.

Furniture as an environmental and social sustainability issue

EDUCATION FOR ALL CASE STUDY

Education for All was established as a charity in 2007 to ensure that furniture removed from schools as part of BSF is reused in the UK or by communities in developing countries. In this way, Education for All recognises the benefits of furniture reuse on a "local, national and global level by promoting life-long learning and sustainability for everyone, whilst seeking environmental mitigation of landfill [sic]". Their work therefore combines environmental and social benefits.

It is estimated that the cost to local authorities to dispose of furniture amounts to £30,000 per school, £15,000 of this being the direct costs of taking it to landfill as a result of the landfill tax. The Government is committed to increasing the landfill tax, which is currently set at £40 per tonne, by £8 per tonne per year to at least 2013.

Education for All follows the waste hierarchy, which incorporates the '3 Rs' of reduce, reuse and recycle. They recycle 46% and reuse 52% of all education resources collected. In Bassetlaw, North Nottinghamshire, Education for All worked with Balfour Beatty on a BSF project, and managed to divert 94.4% of the legacy furniture from landfill by re-distributing 61.1% for re-use oversees and recycling the remainder. As a result of this work, Balfour Beatty Construction North received a Green Apple Award for environmental best practice.

As part of its role in sending any reusable furniture to communities in other counties, Education for All has sent containers, each providing furniture for 500 pupils, to countries such as Tanzania, Ghana and South Africa. This has provided opportunities to develop partnerships with organisations such as the BEFSA (Borien Educational Foundation for Southern Africa) based in the Eastern Cape of South Africa.

Moreover, the programme has a further benefit of educating young people in the UK about sustainable resources and on issues of global citizenship. One student, Emily Cummins, a young entrepreneur who designed an evaporation refrigerator for developing countries, told the inquiry;

"Nice new chairs used to simply appear after the school holidays, but now students have the opportunity to think about the whereabouts of the old ones and the effects on the environment caused by their disposal. By participating in furniture reuse programmes, students also gain greater insights into areas of study such as Global Citizenship and Humanities as they discover how their old school furniture can still be useful."

7 Post-Occupancy Evaluations

BSF has been extensively reviewed but there is comparatively little quantifiable evidence as to how effectively the programme is delivering on its stated aims. This chapter will examine proposed methods of assessment for the programme and how they can be used to improve the standard of the individual school being assessed, and schools yet to be built, both in and out of the programme.

The need for post-occupancy evaluations (POEs) to be performed as standard in all BSF schools has been raised in a number of reports including the Education and Skills Select Committee report, Sustainable Schools: Are we Building Schools for the Future?, and the National Audit Office report, The Building Schools for the Future Programme: Renewing the Secondary Schools Estate. In response to this PfS has commissioned the British Council for School Environments (BCSE) and Building Research Establishment (BRE) to develop a POE that will provide a quantitative and qualitative assessment school buildings are performing. PfS will then feed the results of the POE back into the programme as a means of driving higher standards.

The BCSE has noted that POE will 'enshrine the positive aspects of [BSF] spending within public policy and Government more widely'[8]. The need for a consistent methodology for providing both user feedback and operational data for the building is clear, however, the inquiry identified a number of important issues surrounding the commissioning and use of POEs.

[8] Children, Schools and Families Select Committee, *Sustainable Schools and Building Schools for the Future*, Written Evidence, 2008.

7.1 Learning from Academies

To reliably determine energy usage a building must be running for at least twelve months which delays the accumulation of POE data. In addition, it will often take teachers some time to adapt to a new building, particularly if it is an innovative design. As of September 2009, 127 BSF schools have opened, but there are relatively few that are ready for post-occupancy evaluations. The Academy programme began in 2000 and 200 have now been opened, the majority of which have been running for a number of years. While there have been substantial alterations to the manner in which schools are conceived, procured and built as part of BSF, there is a concern that important educational and operational lessons have not been learnt from the Academies Programme. This can be seen in the issue of energy usage where electricity consumption exceeding expected levels is a problem that the inquiry identified in both academies and BSF schools.

Recommendation 31: Government should immediately commission a systematic study of Academies to ensure that, where applicable, BSF learns educational and operational lessons from the Academies programme.

7.2 The Nature of POEs

The inquiry welcomed the decision by PfS to conduct POEs on all BSF schools as a vital step in ensuring lessons are learned and the delivery of the programme continues to improve. However, the inquiry noted that there is uncertainty about exactly how POEs are expected to be utilised. Witnesses to the inquiry noted that it is essential that POEs do not just assess whether the building has been built as it was designed, but whether that design has secured the benefits it was designed to deliver and if not, why not. This is particularly pertinent with regard to concerns over energy usage. In the chapter examining environmental sustainability it was noted that a key problem in reducing energy usage had been the proliferation of complex technologies. When this fact is applied to the practicalities of carrying out a post-occupancy evaluation, it can become very hard to identify the cause of excessive energy consumption. However, for a POE to be useful it is insufficient to identify that a school is using too much energy; it must identify where additional energy usage is occurring and why. Roderic Bunn, a buildings analyst at BSRIA, noted that this can be an incredibly onerous process.

The inquiry was pleased to note the introduction of split-metering which will create a record of energy usage at different times of the day, as a means of securing more detailed energy usage data. However, the inquiry was also informed that in some schools not even the most basic data exists such as accurate energy bills, without which a useful POE becomes almost impossible.

Recommendation 32: Post Occupancy Evaluations in BSF must be sufficiently rigorous that, where operational outcomes fall short of design aspirations, the specific cause is identified.

7.3 The Purpose of POEs

It is important to note that POEs alone are insufficient without a feedback loop that makes use of the information provided. However, there seems to be some debate as to what the purpose of POEs will be in BSF. The inquiry identified a number of means in which the information gathered in POEs might be used:

- To provide the evaluated school with the information and guidance necessary to improve the manner in which it is being run

POE will 'enshrine the positive aspects of (BSF) spending within public policy and government more widely'

- To provide PfS with information to better inform the construction of new schools as part of BSF
- To create a body of information to better inform public construction as a whole
- To provide a standardised method for scrutinising the results of BSF

The inquiry noted that it is vital that the post-occupancy data is fully utilised to help the school to achieve optimal operational outcomes. The inquiry has established that PfS is examining utilising Soft Landings to ensure that contractors ensure the building operates as predicted to address this concern.

Recommendation 33: BSF must develop feedback loops and provide the necessary guidance and resources so that schools can fully utilise the lessons learnt from their individual POE. This will allow schools to realise the buildings predicted benefits.

Such is the scale of BSF that, when included with the other programmes that have been added to its remit, PfS has recently been referred to as a 'super quango'[9]. The inquiry found that overall PfS warranted its extra responsibilities and has been widely acknowledged as the key force in improving and stream-lining the delivery of BSF. However, the scale of their role is now such that scrutiny must be both systemised and independent. Moreover, the key determinant of PfS's success cannot lie in the procurement process but in the operational outcomes achieved by new schools which will be determined by POEs. The inquiry was therefore pleased to note that the independent organisations, BCSE and BRE, have been commissioned to conduct the POEs and that their findings will be made publicly available.

Recommendation 34: PfS must ensure that POEs are conducted in a transparent manner and that their findings are made regularly available.

7.4 Continued Contractor Engagement

Another significant benefit to rigorous, independent and publicly available POEs in BSF is their ability to incentivise better contractor engagement. One of the central findings of this inquiry has been the importance of the post-construction phase, particularly the early occupation phase. Publicly available POEs would expose contractors to substantial reputational risk if the buildings they construct are deemed to have failed to deliver promised benefits. This inquiry has already identified the payment mechanism in PFIs and Soft Landings as a means of securing better contractor engagement in the operational stage of the building. Martyn Coles, Principal at the City of London Academy commented that, "When the building is finished, the builders and architects walk away and I have to deal with any problems and pay for work from the revenue budget." POEs offer another potential incentive to ensure this does not happen.

[9] Policy Exchange, *Building Blocks*, 2009

APPENDIX I - ACRONYMS

BCSE
British Council for School Environments

BECTA
British Educational Communications and Technology Agency

BESA
British Educational Suppliers Association

BRE
Building Research Establishment

BREEAM
Building Research Establishment Envionmental Assessment Method

BSF
Building Schools for the Future

BSRIA
Building Services Research and Information Association

CD
Competitive Dialogue

CPD
Continuing Professional Development

DCSF
Department for Children, Schools and Families

FFE
Furniture, Fixtures and Equipment

ICT
Information and Communication Technology

GCSE
General Certificate for Secondary Education

LA
Local Authority

LEP
Local Education Partnership

NAO
National Audit Office

OFSTED
Office for Standards in Education, Children's Services and Skills

OJEU
Official Journal of the European Union

PFI
Private Finance Initiative

PfS
Partnerships for Schools

POE
Post Occupancy Evaluation

PwC
PricewaterhouseCoopers

RIBA
Royal Institute of British Architects

SfC
Strategy for Change

TDA
Training and Development Agency

ZCTF
Zero Carbon Task Force

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