

sustainable development commission

SDC Response to the DfES
consultation

Every Child Matters:
Primary capital
programme

June 2006

The Sustainable Development Commission (SDC) welcomes the opportunity to respond to the Department for Education and Skills (DfES) consultation on the Primary Capital Programme (PCP) proposals.

The Sustainable Development Commission is the Government's independent adviser on sustainable development. The SDC is a non-departmental public body. The SDC advises Government across a range of policy areas including education and young people, buildings, climate change and health.

The twin goals of **sustainable development**, defined in the UK Sustainable Development Strategy¹, are *living within environmental limits* and *ensuring a strong, healthy and just society*. The UK Government has said it will achieve these goals through a *sustainable economy, good governance* and *using sound science responsibly*.

The **four priority areas for action** identified in the UK Sustainable Development Strategy are:

- *Sustainable consumption and production* - working towards achieving more with less and assessing costs and benefits across the whole life-cycle.
- *Climate change and energy* - confronting the greatest threat to our environment and society.
- *Natural resource protection and environmental enhancement* - protecting the natural resources on which we depend.
- *Sustainable communities* - creating places where people want to live and work, now and in the future.

In addition to these four priorities, *leading by example* and *changing behaviour* are integral to delivering on Government's vision for sustainable development. The Primary Capital Programme is the major opportunity for the Government put sustainable development into action on the primary schools estate. To do this the public sector should put sustainable principles at the centre of its capital investment to create school buildings, grounds and facilities that support sustainable behaviours among pupils, parents and the local communities.

The Prime Minister called for this in September 2004 when he said:

"Sustainable development will not just be a subject in the classroom: it will be in its bricks and mortar and the way the school uses and even generates its own power. Our students won't just be told about sustainable development, they will see and work within it: a living, learning place in which to explore what a sustainable lifestyle means."

The Government's Sustainable Development Strategy builds on this:

"Sustainable development principles must lie at the core of the education system, such that schools, colleges and universities become showcases of sustainable development among the communities they serve."

¹ HM Government 2005, *Securing the Future: Delivering Sustainable Development Strategy* TSO

The DfES Sustainable Schools strategy² – currently out for consultation until end August 2006 – proposes a framework for sustainable development in schools through eight ‘doorways’ (sustainability themes) as follows:

- Food and drink
- Energy and water
- Travel and traffic
- Purchasing and waste
- Buildings and grounds
- Inclusion and participation
- Local well-being
- Global dimension

1. What are the most important ways that capital investment can help primary schools play a role at the heart of the community and deliver wider services to children?

We welcome the department’s recognition of the impact of the learning environment on young people’s ability to learn, and how the building links in with the curriculum and other initiatives such as better school food and extended services. There is also a positive focus on schools as part of sustainable communities and the role of capital investment in tackling deprivation.

We believe that capital investment in the built environment can have a wide ranging effect on delivering sustainable development in the following ways:

- Curriculum: learning how the built environment affects individuals and the natural world
- Campus: learning how the building may impact on the behaviour, learning and well-being of both pupils and staff
- Community: serving as an example to stakeholders, and for example helping to reduce car-dependency by providing a pedestrian focussed environment, including safe walking and cycling routes to schools.

We need to make a radical impact on children’s understanding and experience of sustainable development if they are to develop the life skills needed to build a sustainable society. Formal education has a crucial role to play in promoting sustainable development, both in raising awareness and developing skills.

Promoting sustainable development in schools means integrating high standards of achievement and behaviour with the goals of healthy living, environmental awareness, community involvement and citizenship - many of the same aspirations of Every Child Matters. For example, the design of a building can promote not only physical health, but mental and emotional health as well. It can ensure that children are safe from accidents, crime and anti-social behaviour. Buildings can be designed to be attractive and inspirational to pupils so that they feel encouraged to attend and to achieve.

A strong theme within the DfES Sustainable Schools strategy is that school buildings, grounds and the local surroundings offer a resource for learning about

² DfES 2006, *Sustainable Schools: For pupils, communities and the environment*. Consultation Paper

real issues in real places among real people as a natural part of their education. The school then becomes a testing ground where pupils think through the problems and opportunities right on their doorstep, while learning about the connections to larger, sometimes global challenges. In other words places where sustainable living is normal behaviour, rather than the exception.

School buildings should ensure that sustainable design features are revealed, interpreted and amenable to 'hands on' monitoring and use by pupils. We see the PCP as a major opportunity to integrate 'design for learning' features into all new and refurbished building designs.

Future learning needs should also be considered fully within school designs such that school buildings become environments in which enable young people and their communities can engage with sustainable development in theory and practice.

Capital investment can ensure that buildings can be used for extended services and activities offered through the school for both the primary school children and their families. The PCP plans should ensure that there are appropriate facilities/space for practitioners of children's services to be located on the school site, and work with children in an appropriate environment.

As schools increasingly become a community resource, communities should have greater involvement in their creation. Pupils, parents, teaching staff, non-teaching staff, heads and governors should all be engaged in the development of the brief and design process. Participation in design must be very carefully handled in order to ensure it can be meaningful and provide satisfactory outcomes for all parties.

As noted by the DfES Sustainable Schools strategy, *'Schools that involve pupils in the design of playing areas experience reduced incidents of bad behaviour, including bullying and vandalism. Pupils begin to feel, "This is my school and I want to look after it."'*

We believe that creating sustainable school buildings and grounds is central to delivering children's services. We believe that the proposals for capital investment in primary schools do not take this on board sufficiently – there is no overarching vision for a sustainable primary schools estate. **Higher standards must be built into the capital investment programme in order to deliver this.**

2 Do you agree with the proposal to allocate funding on a formulaic basis, with every authority benefiting from additional funding from the second year of the programme?

We find the proposal for allocation of funding unclear, particularly in terms of the criteria for choosing schools.

We understand that at the end of the programme, the following objectives will have been fulfilled:

- *“Every primary school building will have been brought up to a good standard.*
- *Every child and family will have access to year-round, 8am-6pm childcare, parenting support, specialist support services, a good range of after-school activities and access to ICT and sports and arts facilities after hours; access will be at their child’s primary school or at a school or venue nearby, with supervised transfer arrangements for children.*
- *Appropriate kitchen and dining facilities to help raise the nutritional standards of school meals and other food and drink consumed on school premises, and increase the uptake of school meals, including free school meals”.*

How does the PCP intend to bring every primary school building up to a good standard if only 50 per cent are receiving funding? We need to understand what the DfES definition of ‘a good standard’ is in the context of the PCP.

While the PCP aims to work with at least 50 per cent of schools, the only opportunity listed for the other 50 per cent is continuation of existing funding opportunities.

What is the ‘open, simple formula’ and what is the long-term strategy for schools that do not receive this capital investment funding?

By 2010 all primary schools will be offering childcare between 8am and 6pm, year round, either at their school or in partnership with others. The expectation is that half of schools will be providing this before then.³ How will the extended schools initiative impact on this work? Will a school’s plan to become an extended school influence whether they receive funding?

We suggest above that higher standards need to be built into this capital investment programme in order to deliver the transformation that is needed for sustainable schools. The question is whether this will require additional funding. **Our proposal is that these higher standards may be partly achieved by industry within current budgets as part of ‘good design’; they may be achieved through better economies of scale and standardisation; and through allowing whole life costing in the programme. If these measures will not enable the programme to deliver higher standards, then it may be necessary to adjust the outputs of the programme.**

There continues to be a split between the management of capital and running cost budgets, which works against the use of whole life costing in design. As capital budgets for schools are fixed on a formula basis, there is currently no flexibility to ensure that whole life costs may be minimised through increased capital investment. **The DfES should consider accommodating whole life costing in the capital budget formula, in line with the priorities outlined in the UK Sustainable Development Strategy.** We understand that the capital

³ Every Child Matters, Extended Schools, <http://www.everychildmatters.gov.uk/ete/extendedschools/> (accessed 7 June 2006)

investment and revenue (through savings in utility bills) is currently split between central and local government, but this barrier must be resolved.

Sustainable design and management saves money through energy, water, waste and purchasing efficiency, cushioning school budgets from the effects of rapidly rising utility bills. This is likely to be an increasingly important consideration over the lifespan of the new and refurbished school building stock. Doing 'more with less' – and doing it at the earliest opportunity – produces a classic 'win-win' for the environment and the school budget. A primary school in Hadleigh in Suffolk has no heating bill due to high building efficiency, solar water heating and, naturally, human body heat. This school can move into the future without the burden of an escalating heating bill.

The PCP consultation document mentions the opportunity for 'invest to save' funding in sustainability measures. We would be interested in the DfES proposals for this. Such resources are currently very limited at the local level. The recently announced £20m revolving loan fund for energy efficiency to be administered by local authorities should be expanded so that it is available to all schools. This would enable schools to make investments in resource efficiency which would reduce utilities bills, allowing the school to pay back the initial investment over several years and benefit from savings into the future. If this is not practical then DfES should consider increasing capital funding to schools to install energy efficiency and other environmental technologies, for example through a new Comprehensive Spending Review bid.

Finally, we expect that the energy efficiency standards will rise as PCP progresses and therefore the first schools tackled could be disadvantaged through lower standards and higher running costs. Whilst we welcome the fact that earlier funding is focusing on deprived schools which will address inequality issues, these schools may also become saddled with higher lifetime energy bills. It may therefore be necessary to provide additional funding for sustainable design in earlier schools.

3 Do you agree with the proposed framework of national targets, planning and monitoring?

The PCP will not deliver a sustainable primary school estate or contribute fully to the DfES Sustainable Schools strategy without programme-wide targets on delivering sustainable development. We are concerned that this major programme may be rushed, with the focus on spending the funds, and success measured by numbers of schools tackled rather than the quality of the result.

The DfES's response to the environmental agenda has been to make it a condition of capital funding that major new build and refurbishment projects achieve at

least a “very good” rating under the BRE’s environmental assessment method for schools ‘BREEAM Schools’⁴.

The Government’s commitment to the use of BREEAM Schools on all capital investment in schools is encouraging, and will ensure that school buildings are delivered to an environmental performance level beyond the statutory minimum of the Building Regulations and DfES Building Bulletins. BREEAM Schools is relatively new and will require some time to become settled in the construction industry, and it will be some time before its impact can be fully evaluated. We are very keen for this evaluation to be conducted independently of Government and for the lessons learned to be disseminated widely.

The major limitation of BREEAM Schools is that it does not encapsulate a vision for sustainable school buildings and is therefore unable to inspire, and is not designed to assist with the basic design decisions necessary to make the most of the current capital investment opportunities. The current urgency on the climate change situation and lack of progress towards sustainable development demands a very much stronger response than BREEAM and the question of whether to seek BREEAM “very good” or “excellent” is something of a red herring as neither would on its own create a generation of sustainable school buildings. If BREEAM is the limit of the aspiration, PCP and other capital programmes will fail to support schools sufficiently in meeting these goals.

We suggest that DfES should develop a series of targets and goals, in partnership with stakeholders such as schools representatives, Defra, SDC, Cabe, construction industry, and NGOs. These targets should reflect the eight ‘doorways’ of the DfES Sustainable Schools consultation, as well as national priorities such as the 60% carbon reduction target by 2050.

There is a range of Key Performance Indicators (KPIs) that has been developed for the Building Schools for the Future that should be adopted for PCP. **We also recommend that further KPIs should be developed in order to fully track implementation of sustainable development objectives within the programme.**

It is important that lessons are learnt throughout the PCP programme in order that it achieves continuous improvement in delivery of good sustainable design. **A formal process for learning the pros and cons from one project to the next is necessary.**

Finally, a process for monitoring and feedback of actual performance of actual buildings delivered through PCP through Post Occupancy Evaluation (POE) of the buildings in use (including occupant satisfaction surveys and actual resource use readings) is vital.

⁴ BREEAM Schools www.breeam.org/schools

5 Do you agree with the proposed approach for ensuring good, sustainable design in the primary capital programme?

As noted above, the DfES has committed to apply BREEAM Schools on all major refurbishment and rebuild projects. A brief analysis of BREEAM Schools against the DfES Sustainable Schools strategy vision⁵, suggests that although BREEAM Schools does encourage incremental improvement in environmental design of school buildings, by itself it offers no guarantee that projects will deliver the standard of buildings needed to support sustainable schools. For example, it does not contribute to the vision on 'food and drink'; does not define any overarching goals for the school estate; does not have high aspirations for encouraging cycling/pedestrian travel to school; and does not sufficiently support stakeholder engagement in design, or design for learning.

We feel that some elements of the BREEAM process could be improved to deliver a short-term advantage:

- **a radical review of the standards in BREEAM Schools** and the Building Bulletins will be necessary to deliver the sustainable schools vision.
- tradability on key resource efficiency areas such as energy and water consumption should be reduced to **set minimum standards for key resource efficiency criteria**. This would mean that all schools achieving BREEAM "Very Good", for example, would have to achieve a defined energy efficiency/carbon reduction standard above the regulatory minimum. The development of the Code for Sustainable Homes is an example where this weakness is being tackled.
- other versions of BREEAM require a **Post Construction Review** to ensure that elements designed into the building are delivered during construction. Without this, changes and 'value engineering' during construction may mean that the completed building does not actually achieve its BREEAM standard. This should become included in BREEAM Schools.

On an estate-wide scale, BREEAM Schools does little to influence the overall environmental performance of the building stock. BREEAM Schools will not ensure that the capital investment programmes will result in the primary schools estate producing higher or lower carbon emissions, nor can it ensure reduced impact of water demand, waste production, traffic or other environmental factors. As noted above, we propose that DfES develop a vision for a sustainable schools estate, developed in partnership with stakeholder organisation and to be delivered initially through capital investment.

Taking into account leading practice, the DfES should commission research into (a) the true costs and benefits of high quality sustainable design based on the vision outlined above, and not restricting their thinking to 'very good' or 'excellent' on the BREEAM Schools scale; and (b) methods of linking sustainable design to pupil learning, in order to feed into design guidance.

⁵ SDC 2006, Submission to the Education and Skills Committee Inquiry on Sustainable Schools.

This vision of what PCP is aiming to achieve in terms of sustainable development should be included in all PCP documentation and made clear to clients, designers and contractors. Cabe Client Design Advisers should help with dissemination of the vision.

There is currently no standard for the resource efficiency of schools in use. The operational energy use of buildings is notoriously complex to predict as it is determined by a range of building management factors. Monitoring of a number of 'sustainable' schools (research for the DfES 'shiny green book') revealed that their energy consumption was significantly higher than predicted.

A payment mechanism is included in BSF contracts which attempts to encourage energy efficient management and operation of school buildings in use. This transfers the demand risk of energy consumption onto the private sector operator without exposing them to the risk of price volatility. However it does not appear that the payment mechanism incentivises continuous improvement in energy efficiency or installation of low carbon technologies. **Better incentivisation arrangements will need to be developed for PCP to ensure schools are maintained and operated to minimise emissions.**

The communications of the delivery body, Partnerships for Schools (Pfs), make scant reference to sustainable development. It is necessary to **improve the focus of Pfs on sustainable development** in order that the private sector delivery organisations take this agenda seriously and understand that it is an overarching priority for the programme rather than one item on among many.

We are pleased with the 'Primary Ideas' initiative mentioned in the PCP consultation document, but suggest that it is positioned as a contribution to the 'buildings and grounds' doorway of the Sustainable Schools strategy. More explicit references and examples to environmental management and footprint reduction would also be welcome.

Climate Change and Schools

The UK's climate change goal is to reduce carbon emissions by 60% by 2050. In the face of rising consumption, this is a major challenge and will require significant effort from all sectors. The Government is committed to leading by example and a clear commitment in a major public building programme will send a powerful message to the private sector that Government is committed to early action on meeting this goal. It is unlikely that there will be another overhaul of the primary school estate before 2050 on a comparable scale to the current investment, and there is no guarantee that it will ever be repeated.

A recent scoping study commissioned by the DfES with the SDC⁶ investigated the total carbon footprint of the schools estate – including emissions from energy use in school buildings, commuting to school and procurement activities. The scoping

⁶ SDC 2006, *Schools carbon footprinting. Scoping study - final report* (with GAP, SEI, Eco-Logica)

study shows that while the schools estate contributes 2% to national carbon emissions, it represents almost 15% of UK public sector emissions. Half of the emissions that schools produce derive from energy use within school buildings.

The SDC is exploring, with DfES, next steps for this study and how targeted emissions reductions could be achieved, giving wider benefits. For example reducing emissions from commuting to school by encouraging cycling and walking brings health benefits.

Schools spend a significant amount of money on heating and powering buildings. Primary schools each spend on average £6,300/year on energy, and secondary schools each spend £39,000-£55,000/year on energy⁷, the latter is comparable to the cost of a teacher. Volatile energy and water prices mean schools could be at risk of unaffordable bills if they are not safeguarded through well designed efficient school buildings. Further, the extended schools programme will increase energy costs for buildings by up to 50% due to increased opening hours of school buildings.

6 Is this the best way to achieve efficiency and best value for money?

The Government is undertaking a series of major capital investment programmes in school buildings which will radically alter children's learning environments. Huge sums of money are committed to these programmes, with very tight timescales. The next major opportunity presented through comprehensive renewal of school building stock is likely to be up to 60 years away.

The PCP offers the opportunity to change not only the built environment, but the whole school experience for generations of children and communities. PCP is a programme of national significance in terms of financial expenditure and resource use in construction, creating an opportunity to transform the construction industry and product markets. This has relevance across many policy agendas for public procurement, not just education. The economies of scale will allow cost savings to be made, through for example standardisation.

PCP offers the government a high profile opportunity to lead by example in cutting carbon emissions and resource use. But these opportunities will only be realised if those running BSF think at the scale of the programme, seeing their decisions in the context of a big shared vision.

There is a risk of PCP delivering best value for budget rather than best value for money. **To deliver best value for money, PCP should allow more flexibility in funding, to reflect whole life costing.** Assessment of the value of public service delivery through regular reviews is necessary to evaluate progress.

⁷ BRE 2006a, *Review of opportunities for improved carbon savings from spend on education buildings* (report for Sustainable Development Commission)

PCP should allow smaller players – small architects practices for example – to enter the market, bringing innovation and a fresh approach to these buildings which are smaller and less complicated than secondary schools.

This could help good design to be delivered on smaller budgets.

7 Do you agree with the aims and approach for ICT within this programme?

The SDC appreciates that ICT is integral to delivering 21st century learning. However it is important to recognise the rising demand for energy from ICT. ICT systems use electricity which is very carbon-intensive. Developments such as ‘thin client’ computer systems can deliver important efficiency gains.

The DfES should look to at least compensate for increases in carbon emissions through efficiencies in other areas to address the upward trend in energy demand. Further, microgeneration of electricity could play a key role in meeting this additional demand.

8 What additional support is needed to build the skills and capacity of those involved in making the programme a success?

As with any procurement route, the quality of design of buildings (including their contribution to sustainable development) depends on the leadership of the client developing a clear brief, and the delivery teams successfully taking this on through construction to the operational phase. In order to deliver sustainable school buildings and grounds, additional skills are needed beyond traditional design and construction skills. The many different skills and teams need to integrate at the earliest opportunity to deliver the best outcome.

Many public sector clients are inexperienced and have never procured a building before, never mind a sustainable building. As a result they are unprepared for the complexities of building procurement, particularly PFI, and often lack both an understanding of the need for high-quality design and the skills necessary to ensure quality is delivered. **A major programme of support is needed for the client teams to ensure they play their part in full in delivering what they need, and that the process is not overly dominated by contractors or designers.** Client design advisors, with a track record in delivering good sustainable design can help.

Summary of Recommendations

We believe that creating sustainable school buildings and grounds is central to delivering children’s services. We believe that the proposals for capital investment in primary schools do not take this on board sufficiently – there is no overarching vision for a sustainable primary schools estate. Higher standards must be built into

the capital investment programme in order to deliver this. The DfES should recognise sustainable development as the overarching principle for PCP and not one in a long list of competing agendas.

DfES should develop a series of targets and goals for sustainable development across the primary school estate, in partnership with stakeholders such as schools representatives, Defra, SDC, Cabe, construction industry, and NGOs. These targets should reflect the eight 'doorways' of the DfES Sustainable Schools consultation, as well as national priorities such as the 60% carbon reduction target by 2050.

Taking into account leading practice, the DfES should commission research into (a) the true costs and benefits of high quality sustainable design based on the vision outlined above, and not restricting their thinking to 'very good' or 'excellent' on the BREEAM Schools scale; and (b) methods of linking sustainable design to pupil learning.

DfES should review BREEAM Schools to ensure it best contributes to delivery of the sustainable schools vision. The requirement to achieve BREEAM Schools should include a Post Construction Review to ensure measures are actually delivered in buildings.

The DfES should accommodate whole life costing in the capital budget formula, in line with the priorities outlined in the UK Sustainable Development Strategy. We understand that the capital investment and revenue (through savings in utility bills) is currently split between central and local government, but this barrier must be resolved. Incentives should be developed to encourage resource efficient operation of school buildings.

It is important that lessons are learnt throughout the PCP programme in order that it achieves continuous improvement in delivery of good sustainable design. A formal process for learning the pros and cons from each project to the next is necessary.

A process should be developed for monitoring and feedback of actual performance of actual buildings delivered through PCP through Post Occupancy Evaluation of the buildings in use (including occupant satisfaction surveys and actual resource use readings).

PCP should allow smaller players – small architects practices for example – to enter the market, bringing innovation and a fresh approach to these buildings which are smaller and less complicated than secondary schools.