

scala

Christmas 2004

news

Construction & architecture news for the public sector



Kingsmead
Primary
School

in this issue: Kingsmead Primary School, So how do you shape up?, Acoustics in schools, Travellers tales from Cambodia, Outsourcing architectural work



Editorial comments



Well, here we are then -

The last edition by the trainee editor - I've put the eye shades, coffee maker and the set of blue pencils up for sale on E-Bay and am looking forward to a life of painting and banjo playing (plus, of course, the annual challenge of the Yearbook - I look forward to receiving your wonderful submissions very soon!)

When Bernard suggested that I take over while he was away I had some doubts but in fact its been very enjoyable- not least

because of the willingness of contributors to share their experience and knowledge for the common good.

When one or two have missed deadlines I've had to remind myself that, unlike me, most of them are fitting the writing into a full time job, and I know that a number have laboured at weekends to deliver the copy more or less on time.

To all of them I give my sincere thanks and apologies for being a pain in the bum when chasing them.

As you would expect I've majored on sustainability for my last bash - we have Keith Bate on the flagship Kingsmead School, an article on the BREEAM for Schools initiative, Liz McLean's report on Sustainability in Scotland, and Cliff Woodward putting a different slant on sustainability.

In addition, as promised Bernard describes his and Sue's S E Asian adventures, Paul Eade looks at the new BB93 on acoustics, and Nigel Badcock sets out the results of the LGTF/SCALA procurement survey.

Plus, of course our excellent regular contributions from CAFE, the LGTF, Hays Montrose, and CIPFA.

What a feast for the discerning reader!

I would like to think that in years to come someone will come across some dusty copies of these last four issues and admire the breadth of subject and sheer brilliance of the writing inspired by the editor but somehow I doubt it (most of it is destined to be turned into loo paper or cardboard boxes - so much for the power of the press!) Perhaps I'll just take comfort from the thought that some of the articles may have been useful to some of the readers some of the time.

So, as they used to say at the end of Saturday Morning Cinema - 'That's it folks!'

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Cover picture: Kingsmead Primary School



Local Government Task Force



Hays Montrose

Kingsmead⁵ Primary School

Keith Bate describes the sustainability flagship Kingsmead Primary School scheme.


Cheshire County Council's most recently completed new school project, Kingsmead Primary School in Northwich, sets out to be an exemplar of sustainable design and construction. This ethos informs every aspect of the design, from the building's orientation on the site, the selection of natural materials with low embodied energy and the use of intelligent natural ventilation and daylighting techniques, to the landscape concept. Not only is the school designed to enhance the teaching and learning environment for pupils and staff alike but it is also intended to be used as a learning tool in its own right, both for the pupils at the school and to the wider population through the North West Learning Grid.

The idea to build a sustainable school grew out of frustration at Cheshire's recent relative lack of success in taking forward the sustainability agenda, despite pioneering the concept of the green design guide in the early 1990's. An opportunity to address this deficiency arose in late 2002 when I presented a new sustainable construction policy to the Council's Green Authority Team. My proposal that maximum impact, in terms of raising awareness of sustainability issues, would be achieved by applying this new policy to a flagship scheme was warmly endorsed. More importantly, colleagues in the Education Department enthusiastically took up the cause, and with Elected Member support, we were able to proceed on a fairly fast track procurement route.

Truly sustainable solutions demand holistic thinking throughout the design and construction process. To a large extent this was made possible by our decision to

procure Kingsmead through a partnering agreement with contractor Willmott Dixon, with whom we had already established an effective collaborative track record through the construction of two new primary schools during the previous year. Also key to the success of the project was the appointment of White Design, an architectural practice who specialise in the design of context sensitive, integrated low energy and low environmental buildings. Arup were the M & E Engineers and Mander Structural design were Structural Engineers.

Design concept

The single storey building's dynamic form reflects its main structural element, traditional glulam portal frames manufactured from sustainable sources in Denmark. However what makes this building special is that the frames have been split in two at the apex and erected in a back to back arrangement with exposed timber columns supporting them at their two highest points. The portal frames are set at 5m centres, each cranked by 4 degrees to its neighbour to give the building its attractive crescent shape. Within this structural framework, timber external walls and concrete block internal walls divide the rooms. These are not load bearing and can be safely removed and broken down into their component parts for recycling, along with the timber frame. The resultant inverted roof has been designed so that all of the rainwater that falls on it can be harvested and used to flush toilets and urinals, reducing the demand for potable water. The roof requires no gutters and fewer down pipes than a traditional form. 

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The orientation of the building takes advantage of daylight and sunlight to minimise energy use.

All classrooms have been designed to face north, which flies in the face of conventional wisdom, but this ensures that they receive consistent light levels without problems of unwanted summer heat gain and glare. However beneficial gain in the winter months can be brought into the classrooms via strategically located rooflights which are fitted with motorised solar control and rain sensors.

The cross section of the building has been carefully designed to aid natural ventilation and provide a spacious, light, airy and comfortable learning environment. Careful integration of a sophisticated Building Management System (BMS) allows each classroom to be ventilated automatically via automated windows in the façade and roof which work together to allow fresh air in and hot air out, taking account of wind speed and internal and external temperatures.


The external fabric of the building is of super-insulated construction, with walls and roof having at least 200mm of insulation (made in part from recycled glass).

High performance windows fitted with low-emissivity argon filled double glazing units contribute to a U-value significantly better than current building regulations call for. The internal blockwork walls provide thermal mass, which helps to keep the building cool in summer and warm in winter, reducing energy consumption.

Great care has been taken to specify natural sustainable materials wherever possible, and this brings with it many benefits, some more obvious than others. Natural timber is prominent throughout the building, all of which has been purchased from Forest

Stewardship Council accredited sources. Not only does this provide a palette of beautiful materials that are warm to the touch, but they are less toxic to people and the environment in their production. The embodied energy (the energy used in a material's manufacture and transport) is also an important factor. Wood has one of the lowest levels of embodied energy of all building materials - brick has 4 times and steel some 24 times that of wood.

Whilst the building is largely constructed from timber, clearly not everything can be made from this material. However, in these instances the team have endeavoured wherever possible to select products that are manufactured from natural, waste or recycled materials. For example, floor coverings are bamboo, linoleum or recycled content carpet, water based paints and glues are used throughout, as these are less toxic to people and the environment in their use and application, and the single layer roofing membrane is made from rubber, a natural product, which incidentally out-performs PVC based membrane alternatives.

The building has been located close to the site entrance which reduces the length of service connections and the amount of entrance road leaving more of the site available for landscaping. The grounds have been designed to promote nature conservation and include an educational 'eco-walk'. Storm water from the site is disposed of via a sustainable urban drainage system which utilises an existing network of swales and ponds. 



“Truly sustainable solutions demand holistic thinking throughout the design and construction process.”

Energy use

The aim of the project was to cut energy consumption to a minimum, with the target of reducing running costs by up to two thirds of that of a typical primary school. In addition to the basic design concept of a super-insulated building with high levels of natural lighting and ventilation, a number of other strategies have been adopted.

The main heating source is a biomass boiler which runs on wood pellets made from waste timber from a local factory. An array of solar panels have been installed on the roof, which use the sun's energy to pre-heat the hot water, alongside photovoltaic panels which generate up to 15% of the school's electricity needs.

The design of the building maximises the use of natural light thus reducing the reliance on artificial lighting to a minimum. In addition to this each bank of lights in the classrooms are fitted with sensors which will dim the lights to the level required rather than running continuously at 100% capacity.

The school as a learning resource

The building of Kingsmead has turned our vision of the primary school of the 21st century into reality, and not just in terms of the end product, but also in terms of the ethos of its procurement. This is reflected in the award of demonstration project status from Constructing Excellence (Cheshire's 6th project to achieve this accolade) as a model for sustainable construction delivered through working in partnership, and also in the tangible form of financial support from the North West Development Agency.



However, perhaps most gratifying has been the support of the DfES, through a capital grant as part of the 'Teaching Environments for the Future Programme' and their acknowledgement of Kingsmead as an



exemplar school for the 21st century, providing an exciting and stimulating environment for teaching and learning.

A great deal of thought has gone into creating a school that is in itself a teaching tool, with its clearly exposed structure, services and fabric, and its innovative use of technology whereby pupils can use the BMS to monitor room temperatures, how much rainwater has been recycled, how much energy has been used and so on. The head teacher and her staff are determined to use this resource to its full to give the children in their care a better understanding of the complex ecological issues to do with conserving the planet's natural resources and guarding against global warming. A promising start has already been made with classes learning about 'food miles' by growing their own food in the school vegetable garden and the promotion of a 'green travel to school scheme' to encourage parents to leave their cars at home. After all, the world's future will rest in our children's hands. The better they understand these issues, the better for us all.

Where Next?

We feel that the construction of Kingsmead Primary School has successfully met our original objective of building a high profile flagship project to raise awareness of sustainability. However, we are keen that this is not just seen as a 'one-off', and to prove the point, our next sustainable school (Wistaston Green Junior School in Crewe, also built in partnership with Willmott Dixon) is well on the way towards completion. The challenge in the future will be to apply the principles of sustainable construction to all of our projects, be they large or small. Watch this space! ■

"Wood has one of the lowest levels of embodied energy of all building materials - brick has 4 times and steel some 24 times that of wood."

Professional ¹¹ services procurement

Nigel Badcock reports on the LGTF/SCALA Survey on Professional Services procurement.

Rethinking Construction is at the centre of the Governments drive to transform the construction industry. Improving the performance of local authorities is one of its key objectives. The survey was designed to assess the improvement which has taken place in performance, efficiency and team building in the supply chain, and to ascertain which procurement models have been adopted since it was formed in 2000, and whether these changes are part of what is accepted as Best Practice, as employed by high performing councils.

The questionnaire covered the methods of procurement of professional services in all areas of capital and revenue funded building and engineering construction.

It was sent to a sample of 109 (73%) of the 150 Upper Tier Authorities (Unitary, Met Boroughs, London Boroughs, and County Councils) in England. Of these, 26 authorities (24%) returned the form. It also went to 205 (86%) of the 238 District Councils in England. Of these, 20 authorities (10%) returned the form.

The results were as follows:

Corporate procurement.

Upper tier Authorities

85% had adopted a Corporate Procurement Strategy.

89% had a central unit/officer in a strategic, advisory and co-ordination role, with the responsibility for the services being retained by individual departments.

No authorities had a central officer with full corporate responsibility for procurement.

39% planned to change their methods of procurement of professional services for construction work.

85% procured professional services for construction work from both the public and private sectors.

11% procured professional services for construction work only from the private sector.

4% provided all professional services for construction work from in house sources.

District Councils

65% had adopted a Corporate Procurement Strategy.

60% had a central unit/officer in a strategic, advisory and co-ordination role, with the responsibility for the services being retained by individual departments.

No authorities had a central officer with full corporate responsibility for procurement.

25% planned to change their methods of procurement of professional services for construction work.

65% procured professional services for construction work from both the public and private sectors.

15% procured professional services for construction work only from the private sector.

10% provided all professional services for construction work from in house source.

Methods of procurement for construction professional services.

Upper Tier Authorities

The information returned on this part of the questionnaire was not as detailed as had been hoped. Of the 26 returns, all but three of the authorities indicated which procurement methods they used in 2003/04 but 13 councils completed the information for either their building or engineering programmes only, not both. A large proportion also appear to have had difficulty estimating the percentage that each method was of their expenditure programme. Information regarding the size of capital and revenue programmes was also insufficient, which means it was not been possible to quantify the financial impact of the various procurement methods used. In addition, although ▶



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the responding authorities were all in the upper tier, their financial influence on the industry differs greatly e.g. capital programmes varied from £5.6 up to £176 million and revenue from £1.2 up to £150 million.

The information does confirm that the majority of authorities (69%) used a wide variety of procurement methods. Five (22%) could be described as having used traditional methods of procurement only i.e. traditional selection on a project by project basis or from an 'Approved' list of consultants. No authorities had exclusive out sourcing agreements but two (9%) had exclusively appointed through strategic partnering etc.

The majority of upper tier authorities each used several of the following procurement methods:

52% procured by individual project appointments by means of a selection process (interviews, references, bids) in the traditional manner, including 'Agency' agreements for highway engineering with other authorities,

57% selected from an 'Approved' list of consultants,

43% appointed as part of 'Design & Build' packages, either on a single project basis or as part of a 'Framework' agreement,

52% appointed as part of 'Partnering' agreements, either on a single project basis or as part of a 'Framework' agreement,

22% appointed through privatisation, externalisation, or out sourcing agreements with consultants etc,

17% appointed through PFI arrangements, and

39% appointed through strategic partnering, joint ventures, public sector consortia, joint service provision or PPP arrangements.

Further analysis reveals:

74% used to some degree the traditional selection methods or appointed from an 'Approved' list,

61% used various types of 'Framework' agreements, and

43% had an involvement in the more enterprising forms of procurement, i.e. PFI, strategic partnering, joint ventures etc.

District Councils

Of the 20 returned questionnaires, three authorities did not give a breakdown of their procurement methods. Again, the majority (76%) of councils used a wide variety of procurement methods. However, two (12%) selected professional services for construction work through traditional methods or from an 'Approved' list only, one authority (6%) had totally out sourced through an agreement with consultants, privatisation or externalisation, and one (6%) had an exclusive partnering agreement. No authorities had entered into any PFI agreements.

The majority of authorities each used several of the following procurement methods:

76% procured through individual project appointments by means of a selection process (interviews, references, bids) in the traditional manner, including 'Agency' agreements for highway engineering with other authorities,

29% selected from an 'Approved' list of consultants,

53% appointed as part of 'Design & Build' packages, either on a single project basis or as part of a 'Framework' agreement,


59% appointed as part of 'Partnering' agreement, either on a single project basis or as part of a 'Framework' agreement,

18% appointed through privatisation, externalisation, or an out sourcing agreement with consultants,

0% appointed through PFI agreements, and

12% appointed through strategic partnering, joint ventures, public sector consortia, joint service provision, or PPP arrangements.

Summary

The lower level of response than planned was disappointing. Although the questionnaire was designed to be easy and quick to complete, some authorities appear to have had difficulty in providing all the information requested. Of course this is disappointing and could pose the question as to why those councils which completed the document, did so? For instance, were the majority of returns 

“The drive for efficiency, effectiveness, improved quality and value for money has made authorities more actively seek the most appropriate methods of procuring the resources to achieve their construction programmes.”

14 Professional services procurement

“The smaller authorities, in terms of both status and expenditure, will undoubtedly always use the simplest methods of procurement.”

from the only authorities in the country which have complied with the requirements of the National Procurement Strategy by 2004 and, therefore, have nothing to hide?

Realistically, I do not think this is the case. Although the number of returns were relatively small, the numbers in both the upper tier and the district categories were still sufficient in statistical terms to make the survey results valid.

They show that authorities of all types are acting more corporately and that the majority have adopted Corporate Procurement Strategies. The 85% indicated by the upper tier is well supported by the 60% rate of the districts. It is quite normal for the smaller districts to be marginally behind the larger authorities in adjusting to policy issues. Again, the appointment of procurement officers in central strategic roles by the majority of authorities strongly supports this conclusion.

The high percentage of councils, 85% and 65% in each category respectively, which procured professional services from both the public and private sectors indicates that authorities are becoming more

open minded and are now making the best use of skills from all sections of the construction professions in order to raise standards and improve quality.

The smaller authorities, in terms of both status and expenditure, will undoubtedly always use the simplest methods of procurement, as shown by the low percentage that either put all their work out to the private sector or keep it all in house.

The information provided from Section Two of the Survey shows that local authorities really are using a wide variety of procurement methods for the appointment. However, as stated previously, the quality of the information returned in this section was not consistent and did not allow a quantifiable assessment. The drive for efficiency, effectiveness, improved quality and value for money has made authorities more actively seek the most appropriate methods of procuring the resources to achieve their construction programmes. Large percentages, 52% and 59% of the two categories, are using partnering agreements which must be a driving force for a real improvement. With 39% of the upper tier authorities involved in strategic partnering etc, it would appear that current Government policies are having a substantial effect. ■

So how do you shape up?

The Local Government Task Force was established as a mechanism for driving change within the local government sector of the construction community.

It filled a void, providing a mechanism for effecting dialogue between government, the construction industry, and local authorities. It never fails to amaze me how little people outside the world of local government understand about its role, or its very diverse nature. Step away from the ODPM, and people think that you can just mandate local authorities, and change will simply flow from that directive.

How naive.

Local authorities have no simple model. Not long ago I heard a dispute between two chief executives who were comparing their very different views on the location of call centres - actually in their locality or remotely in India? Both arguments were equally valid, and their chosen solution suited the needs of their own authority. So if nothing else, the LGTF has at the very least been able to explain the culture of local government to both government and industry. But the LGTF was set up to implement change in local government and so it is vital that we benchmark local authority practice, and see whether we really have made a difference.

So we have recently received the results of a survey, conducted on our behalf by an independent market research company, BMG Research. The picture we got was mixed, but encouraging. Progress made, but more to do is probably the summary. And the survey was far from simple. BMG threw us completely by asking us what the principles of Rethinking Construction are, and where they are set down. Well that threw the cat amongst the pigeons, but eventually we agreed six key principles:

- Quality not cost alone
- Partnering not confrontation
- Performance management
- Customer focus
- Innovation
- Commitment to people

BMG were asked to survey all top-tier authorities. Districts were omitted because of their relatively


modest spends. We also asked them to examine four markets - buildings capital and revenue, and highways capital and revenue.

All of the chief executives interviewed (78) claimed that their authority had a corporate procurement strategy and of them over 90% said that this was under the control of a senior member and director. Encouragingly 85% reported that the policy explicitly states that contracts should not be let on price alone. When practitioners were asked what happened in practice 65% said that none of their last three contracts had been let on price alone. But that does mean that 35% have let at least one on the basis of lowest price. Also encouragingly 79% of authorities have long-term relationships that extend beyond the life of the contract, but then conversely 21% did not. Perhaps disappointingly, but not surprisingly, the involvement of suppliers and sub-contractors at the design stage was only 9% - clearly an area that the whole industry needs to look at more closely.

Well over 80% used performance measurement (why not all?), and most sought the views of end users and measured user satisfaction. Innovation in project delivery was highly regarded, but only 53% incentivised contractors to innovate. And on the subject where we would hope that local authorities lead the way, commitment to people, then the picture was indeed rosy.

Construction procurement is a key facet of the National Procurement Strategy, and now that it has been agreed that the efficiency review targets are to be delivered through the new regional centres of excellence, we are confident that local government construction professionals, are well placed to do their bit!

Will the LGTF go on driving change? Whilst there is room for improvement the answer must be yes.

Full details of the survey can be found on the LGTF web site at www.lgtf.org.uk - click in the local government task force tab under sectors. 



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16 The Environmental Assessment Method for new school buildings



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Fiona recently presented at the SCALA Study Day, explaining about the environmental assessment methods, BREEAM and SEAM, for schools.

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Sustainability for schools is now an overarching government objective encompassing social, economic and environmental issues.

It requires a holistic approach which is supported (and understood) by the whole school and needs to be included in both the design and the operation of the school as well as forming part of the curriculum through education for sustainable development.

Funding for schools and particularly funding for school buildings has increased from £700 million in 1996-97 to £5.1 billion in 2005-06. To make the most of this substantial increase in funding, the Department is starting a key strategic programme in 2005-06 - Building Schools for the Future (BSF), see www.teachernet.gov.uk/bsf - to create a new approach to capital investment for transforming secondary schools. Also, the funding will provide substantial new investment in primary school buildings in this period. Existing successful capital programmes will continue to be available, to ensure that primary schools, and also secondary schools that are not in the early phases of BSF, can maintain their buildings properly. An important part of the development or refurbishment of new school buildings will be that they are sustainable.

Therefore, it was decided to include an objective within the Department's Sustainable Development Action Plan, see www.dfes.gov.uk/sd, to encourage the inclusion of sustainable thinking within the procurement of new school buildings.

'Identify mechanisms to apply a Building Research Establishment Environmental Assessment Method (BREEAM) assessment to the Building Schools for the Future Programme'.

This has been taken further by looking at how BREEAM could be incorporated into other forms of funding for new school buildings.

In January 2004, the Department contracted BRE to develop a BREEAM for new school buildings and major refurbishments. It is based upon BREEAM for offices

(<http://products.bre.co.uk/breeam/index.html>).

Currently, it is at the pilot stage of the project with the final version being launched at the end of October 2004.

BREEAM is a method for assessing the environmental attributes of a building. It uses Building Regulations as the minimum standard and incorporates environmental KPIs and best practice guidance. BREEAM rewards compliance with the following best practice:

- CIBSE standards - used for ventilation rates, lighting levels, legionellosis, thermal comfort, energy modelling and commissioning.
- HVCA - Maintenance and commissioning requirements.
- Environment Agency - Pollution from site, site run off and ecological protection.
- BSRIA/CIRIA/BRE - Commissioning regimes; Construction site management; Construction waste, construction materials and energy management.
- Considerate Constructors Scheme - including other similar independently auditable schemes.
- FSC/PEFC - Timber certification.

And for schools this will include Building Bulletins.

BREEAM for Schools is organised into nine themes:

- Management
- Energy
- Transport
- Environmental conditions
- Health and wellbeing
- Water
- Materials
- Land use and ecology
- Pollution

Management covers a number of issues related to choice of site and its long term environmental impact, issues related to the building users and community (consultation with users and community, possibility of out of hours use, using the building as an





Showing how rainwater is used at the school

educational resource, ease of future maintenance, and a building users guide) the construction process (reuse of materials, construction site impacts, commissioning) and the publication of building information to spread good practice.

Health and well being covers issues related the health of the occupants of the building, including issues related to daylighting and good lighting design, thermal comfort, acoustic design, volatile organic compounds (VOCs), microbial contamination, ventilation, indoor air pollution, security, and the provision of drinking water.

Energy covers issues related to the management of energy within a school, carbon dioxide emissions and the provision of renewable energy.

Transport covers the ability and availability, and subsequent provision of travel to the school and the safety of pedestrians and cyclists.

Water use considers water efficiency and reducing the risk of wasting water, management of water and the reuse of water.

The materials and waste section covers the environmental impact of the building materials, use of sustainable timber, and the provision of storage for recycling materials.

Land use and ecology covers re-use of land, contaminated land, use of land with low ecological value, protection of features with high ecological value and reducing the long term impact on biodiversity, and encouraging staff and pupils to view the land as an educational resource.


Pollution covers reducing night time pollution from lights, water run off and atmospheric pollution, reducing the potential release of refrigerants with global warming potentials and ozone depleting substances, and substances harmful to health from refrigerants, thermal insulation (including its manufacture), reducing pollution from boilers. It aims to reduce substances that are hazardous to health and reducing atmospheric pollution by using renewable energy.

Each of these themes is weighted using figures derived from an industry wide consensus on the relative importance of each of the themes. The weighted themes are then totalled which gives a percentage score and that indicates the overall rating achieved. There are four levels of rating:

- Fail - does not achieve building regulations.
- Good - just exceeds building regulations.
- Very Good - sustainability has been considered from the start and should be achievable within normal cost guidelines.
- Excellent - inspirational buildings that are in the forefront of sustainable development and technology. This may require additional resources. Sustainability will need to be included throughout the design process.

Currently the Department is looking at setting an aim of all school buildings to achieve a 'very good' rating.

In the case of BREEAM for Schools, an assessment of the school building designs is carried out at RIBA Stage D/E. This allows time to change designs if they do not meet the aspirations. Also, following the completion of the works it will be possible to carry out a further BREEAM assessment to make sure that nothing has been 'designed or engineered out'.

It is important to remember that having a design assessed against BREEAM, does not mean it is a good design, just that it is sustainable. There can still be failings within the design and construction where things have not been thought through, for example fire alarms being placed in the wrong area which caused the whiteboard to be split in two, sensors being fitted so that they do not sense right people, or the things that users will do... leaving lights and taps on, or opening windows instead of switching off radiators. 

“The lessons that students take home today on sustainability will be passed onto their parents as well as future generations.”

18 The Environmental Assessment Method for new school buildings

“Identify mechanisms to apply a Building Research Establishment Environmental Assessment Method (BREEAM) assessment to the Building Schools for the Future Programme.”



Keeping an eye on useage

With this in mind the Department is developing a framework for sustainable development in

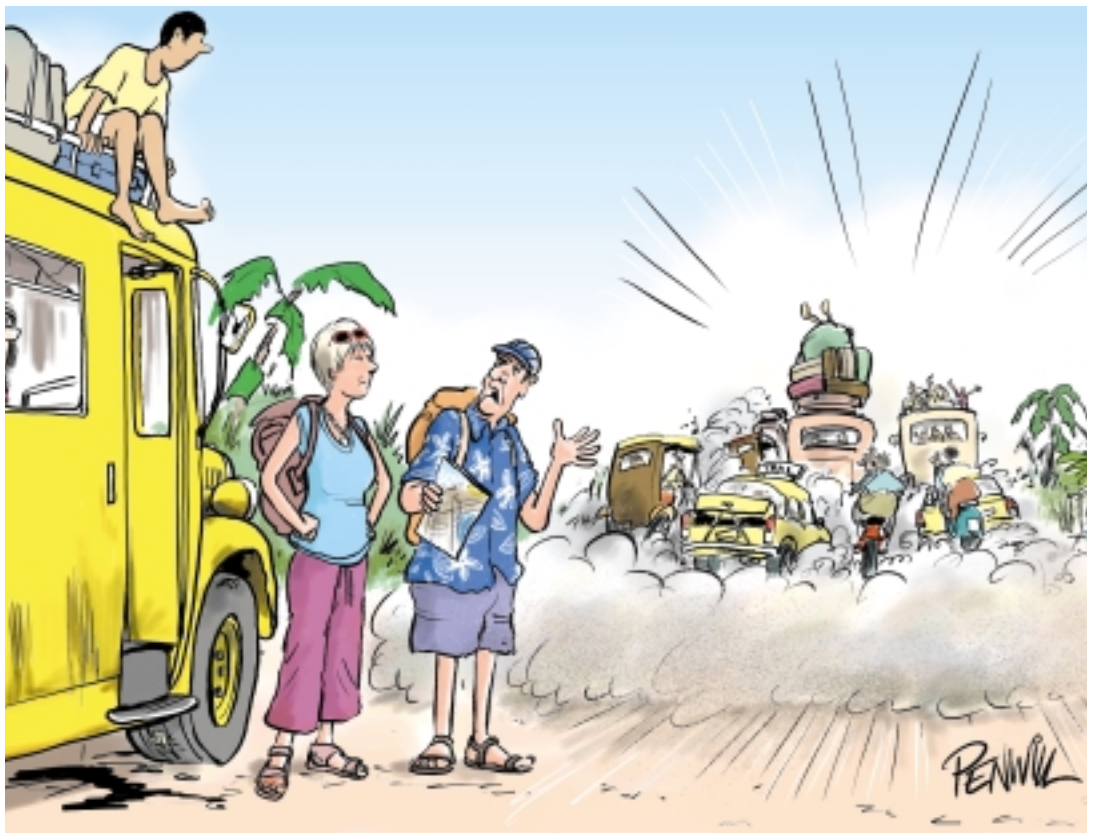
existing schools, combining schools building, management, and curriculum issues. The work on school buildings and management will be based upon the Schools Environmental Assessment Method (SEAM) which was produced in 1996. This project is still being developed but it aims to be a web based, easily updateable tool that can be used by all schools to assist in setting and achieving a sustainability plan which is appropriate to them. An important part of this will be the sign-posting to organisations that could assist them. The Framework will use the seven themes of the WWF (World Wildlife Fund) ‘learning for sustainability’ model. These are: energy, natural resources (including water and materials), waste, biodiversity, global and international issues, transport, and healthy living.

Work has already started on the themes, and the Department’s existing energy and water web pages (www.teachernet.gov.uk/sdenergy and www.teachernet.gov.uk/sdwater) will be subsumed into a new framework portal in the near future.

Much has been done developing the new BREEAM for new school buildings and major refurbishments, so special thanks must go to the steering group and all those that have been involved with the case studies and pilots. ■



Monitoring equipment used in the school



“ALL I DID WAS TO TRY TO SELL THEM A COPY OF SCALA NEWS”

Travellers tales ¹⁹ from Cambodia

Our journey first took us to Cambodia where after travelling for 24 hours we arrived at Seam Reap, a modest international airport in the NW corner of the country about 200 miles east of Bangkok.

Leaving the airport we were rather taken aback by an ongoing mine clearing operation in the fields opposite and shocked when our taxi driver told us of the horrors of Khymer Rouge rule in the 1970s. In less than a four year period between one and two million people, or 20% of the population, perished. Hardly a family was untouched by the terror in which cities were emptied, families broken up and intellectuals as well as political opponents eliminated. This accounts for the almost total absence of French speakers in the former colony.

Despite this we found the Cambodians remarkably cheerful and friendly and eager to show us the fruits of their culture from a more productive era.

This area called Angkor was the heart of the Khymer Empire between 802 and 1431 and is a UNESCO World Heritage site covering some 300sqkms.

Angkor comprised state-temples serving the devaraja cult which existed alongside the prevailing Hinduism. The layouts reflect the Hindu cosmos with a central sanctuary, or group of towers, often in the form of a multi-level pyramid. Surrounding this would typically be a series of concentric rectangular enclosures created by walls and/or moats.

The breathtaking towers and carvings of Angkor Wat covering an area 1,500 sq m are the main reason for visitors to come to this area, but equally impressive is Angkor Thom with it's gateways topped with four huge stone faces. The description given by Chinese envoy



These stone faces at Angkor Thom formed part of an entrance gate to the Khymer court

Chou Ta-Kuan, who visited the Khymer court at the end of the 13th century is still accurate - *"The wall of the city is some five miles in circumference. It has five gates each with double portals... Outside the wall stretches a great moat, across which access to the city is given by massive causeways. Flanking the causeways on each side are 54 divinities resembling warlords in stone, huge and terrifying..."*

Temples are open from dawn until dusk and entry passes are available for one day (\$20), three days (\$40) and seven days (\$60). We found three days sufficient which avoided getting too 'templed out'. This allowed us to see the inner temple group of Angkor Wat and Thom, plus Ta Prohm, on the first day, followed by a 100km. trip to see far flung temples and carvings with a final group of a dozen or so temples in the outer group on the final day. Our guide provided a far too detailed explanation and a guide book such as Lonely Planet or Rough Guide proved sufficient. We found a driver extremely useful as you often need transport within larger temples, as well as between them.

A tuk-tuk was sufficient on the first day but a car is necessary for the longer trips and there is no problem in finding local people eager to offer you their services, just sharpen your negotiating skills beforehand! ▶



Bernard and Sue

gave up their jobs at the end of 2003 to travel in South East Asia, Australia, NZ, the Cook Islands and California for six months. Bernard was previously SCALA Company Secretary and Editor of **Scalanews** while Sue is a Counsellor and worked for the NSPCC.



The impressively carved structures at Angkor Wat

20 Travellers tales from Cambodia

“When we got off the bus we were assaulted by about 100 taxi, moto and guest-house owners all vying for our custom.”



This once busy monastery at Ta Prohm now lies overgrown

The most atmospheric temple for us was Ta Prohm where nature still rules and enormous kapok trees embrace this Buddhist monastery in their grip. As a working monastery it once housed


12,000 people with a further 80,000 employed locally to service and maintain the complex.

Whilst at the temples, we often got involved in conversation with the local children and at one we were shocked to find that out of approx. 15 children we met, five were deaf and mute. We assume that this is probably because they had a hearing problem which was not addressed. Health care here is so poor and the Khmer Rouge got rid of all the educated population so there is a huge gap in the population of 40-50 year-olds and the skills they had developed.

At a silk farm we watched the whole process from beginning to end and found that these little worms eat an awful lot of mulberry leaves! The cocoon is used for the silk with the tougher outside being used for raw silk and the finer stuff inside used for the finer silk. Once the thread has been extracted, any bits of dirt have to be removed by hand and the ends of the threads tied together again - an incredibly time-consuming process. It then gets washed, dyed, put on a spool and eventually gets woven - it then takes half a day to weave a half metre of cloth and finally sells for between \$3 and \$15 a metre. You can imagine what people get paid for all this work. We then went onto a large reservoir where the locals swim and enjoy R&R - we found it a bit bleak and uninviting and the water looked rather brown. The locals swim in their clothes and are shocked by foreigners exposing so much flesh!

We caught a bus to the capital, Phnom Penh which took eight hours on a range of poor to awful roads many of which were dirt roads and therefore incredibly dusty and dirty. The bus journey was quite entertaining - after all the seats filled up extra people got on and congregated on extra seats and ledges around the front of the bus - supervising the passengers, their problems and their luggage. After two hours there was a horrendous stench coming from the back of the bus. Everybody had their handkerchiefs over their noses and all were looking for the guilty party - amidst much hilarity and good humour. The bus was evacuated at an unscheduled stop while the offending child was hosed down and the bus fumigated with insecticide and talcum powder (all that was available) and then we continued on our way. We really enjoyed the journey - driving through the Cambodian countryside and listening to their lovely music. A film was shown and although we couldn't understand a word of the language the universal themes of love, life, death, religion etc made it easy to get the gist of it.

When we got off the bus we were assaulted by about 100 taxi, moto and guest-house owners all vying for our custom. We had to choose one and he took us to a range of places by the river - as we had heard it is less polluted there. We eventually settled on a Chinese hotel which has the most incredible interior design! There's several Xmas trees up with flashing lights for the forthcoming Chinese New Year, an artificial pond in reception with the stones painted gold, huge carved chairs which weigh a ton but despite these horrors the welcome was very, very friendly.

Phnom Penh was a bit of a shock after Siem Reap as it is much dirtier, noisier and smellier - also there are quite a few beggars and small children asking for food. Crossing the road is very difficult as hordes of traffic just keeps coming and there are no lights. The Royal Palace is absolutely beautiful and set in gardens with other buildings - rather a contrast to the rest of town. The roof-tops are gilded and lacquered in a range of colours, there are solid silver floor tiles and an exquisite full-sized gold Buddha encrusted with 2,000 diamonds as well as lots of other Buddha statues in different materials and other works of art all constructed in the last 100 years. 



The Royal Palace and gardens are a peaceful contrast to the majority of Phnom Penh

We also visited several markets and enjoyed the excellent food which is available in Khymer, Thai and Vietnamese styles with a strong French influence in quality, particularly the excellent bread which has usually been of much poorer quality on previous trips. A sobering part of visit was to Toul Sleng, the genocide museum and former secondary school where the Khymer Rouge took 17,000 people and forced them to falsely confess to crimes before being bludgeoned to death at the Killing Fields outside the city.

It was then time for some R&R in Sihanoukville, a beach resort south west of Phnom Penh. We stayed on Serendipity Beach, narrow but with good swimming and backed by lines of beach chairs and umbrellas staffed by entrepreneurial locals. There was an adjacent shack to prepare food and drinks whose purchase ensured a free chair and umbrella for the day. This was not all, for whilst relaxing you could also



Traders in Sihanoukville can get you a massage with your food

enjoy a massage or nail treatment, fruit or a freshly cooked snack from passing vendors. We especially liked the thin white pancake filled with fresh grated coconut and sprinkled with nuts. Bernard also tried a Mekong whisky which consisted of a glass of coke and quarter bottle of whisky- fortunately the whisky was not as strong as it looked! Regrettably, this local initiative will not survive as there are plans for an international company to develop the beach frontage.

After a very pleasant break we passed through Kampot, an old French colonial town, on our way back to Phnom Penh and a three day, two night, one way tour down the Mekong to the fleshpots of Saigon and the sights and smells of Vietnam. ■

“After a very pleasant break we passed through Kampot, an old French colonial town.”

Scaladiary

ACA

Fiona Griffiths 020 8325 1402

Council Meetings: 20th Oct, 8th Dec.

Seminars:

PPC2000 Workshops: Southampton 3rd Nov.

SCALA

AGM: London 11th Nov.

‘Creating Memorable Places’:

London 12th Nov.

Council and Forum Meetings: 3rd Dec.

Wales: 18th Nov.

Midlands: Kevin Kendall 0121 304 6781 - 10th Nov.

Eastern: Roger Robertson 01473 584351 - 10th Nov.

Yorkshire: Steven George 01482 612481 - 10th Nov.

South West: Tim Parker 01452 425752

SCALA (Scotland)

Liz McLean 01620 827353

Area Meetings: 5th Nov.

Executive Meetings: 26th Nov. ■



Risk, a Four-Letter Word or a Long Sentence?

David Bentley discusses Risk Management in Construction & Property.

We are all of us Risk Managers. We all assess risks, perhaps subconsciously, as part of our everyday working lives. But how many of us think about risk, managing risk and mitigating risk in any kind of structured way?

Risk Management isn't rocket science. You identify the risks associated with your programme, project or initiative, you assess the likelihood and potential impact of these events occurring and you put in place processes to manage, transfer or mitigate the key risks. What could be simpler than that?

Well, if it's that simple, and we're already doing it, why is it we see headlines like these?

"Tragedy may result in court action"
"Asbestos scare closes Primary School"
"40% of construction contracts overrun"

Perhaps there are some risks that cannot be identified or managed? Perhaps we think we are managing risk, when in fact we are not? Do we need to look at risk as an everyday activity through the changing life cycle of our buildings, from inception to design to procurement to operation to disposal?

This next series of Construction & Property Forum events will help you challenge your current approaches to risk management. Are you as good at risk management as you thought you were? Are there ways of doing it differently to make it more robust?

Through a combination of presentations and workshops we will examine:

What is risk?

What are the main categories of risk you should be concerned about?

What tools and techniques can be used for the identification of these risks?

What methods can be used for measuring risk?

What are the options for managing or transferring risk?

What risk management systems or standards are available for you to utilise?

As usual we will start each event with our traditional update session providing the essential and comprehensive guide to current issues in the world of Local Government and Construction & Property.

As usual, we will try to keep the numbers to 30 to encourage practical involvement by all attendees. In addition to the usual slide handouts, each delegate will receive a FREE CD Rom of all of the presentations for the series. This has proved extremely popular with delegates and provides an essential tool for future reference, and for sharing with colleagues.

The day will provide an essential and practical guide to Risk Management principles as they relate to Construction and Property and you won't have to be an experienced 'risk manager' to understand it.

The dates, and venues for each event are set out below:

- 02 November 2004 - Blackburn**
- 03 November 2004 - Buih Wells**
- 04 November 2004 - Taunton**
- 09 November 2004 - Peterborough**
- 10 November 2004 - Durham**
- 11 November 2004 - Burton-on-Trent**
- 19 November 2004 - London**

I do hope that you will be able to attend. I anticipate that demand for these workshops will be high and would therefore recommend that you book as early as possible to avoid disappointment. If you wish to book, please contact Eve Billings by e-mail Eve.Billings@ipf.co.uk or by phone on 020 8667 8580. The cost of these workshops is £295.00 plus VAT per delegate. Should you subsequently decide to subscribe to the service, the cost of this workshop will be deducted from your subscription fee. (The subscription application must be received before the next series of workshops for this offer to apply).

We look forward to seeing you at these events. ■

To find out more about the **CIPFA BV&QF** please contact:



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Outsourcing architectural work

Outsourcing is one of the biggest issues currently affecting local authorities, not least because of the hidden costs involved. Cathy Sheppard looks at why skills shortages are a recurring problem within the industry:

As specialist recruitment consultants to architects within both the public and private sector, we have noticed a trend occurring more and more within local authorities over the past few years to outsource during peak periods to private firms. Organisations taking this action believe they are saving money by reducing their base level of permanent staff, as well as cutting costs on hourly rates paid to temporary workers. Indeed, although outsourcing private architectural firms costs more per project than completing works internally, when longterm workload is uncertain, this can turn out to be more cost efficient. However in our experience we have found that this is not always the case.

More and more private firms are approaching us to supply temporary staff for work on local authority projects. They are then adding their own margins on top of ours and supplying temps to the public sector, which means organisations are effectively paying augmented salaries to the people they are using for these projects - often people they might well have employed directly at a lesser cost. This inflates the final cost of a project dramatically, and leads to a number of other problems within the local authority.

We have recently seen fairly dramatic architectural redundancies at a number of UK local authorities whilst the majority of their larger projects are outsourced, suggesting corners are being cut to save money on salaries while times are quiet. This, however, means that the choice whether or not to outsource is removed, as it becomes a necessity. This also means more problems for local authorities in terms of attracting top quality candidates who may be looking for large new-build projects with more scope for design.

These recruitment trends point towards a lack of stability in the workload of local authorities. There is often prolonged uncertainty about which projects will

go ahead and which will be put on hold - which will be outsourced and which will stay in-house.

Serious secondary problems occur when, at times, programmes cannot be planned efficiently or staff taken on with enough advance to train them up sufficiently. It also means line managers often do not have the flexibility to take someone on if a particularly good speculative CV lands on their desk and because of this, they are often missing out on good candidates.

An added downside is that this phenomenon can lead to insecurity of in-house staff as more work is outsourced. They therefore may begin to look for other jobs, often not being replaced immediately or at all, which leads yet again to the vicious circle of more enforced outsourcing. Often this is compounded by the time it can take to recruit a permanent member of staff. The response from advertisements for permanent technical vacancies can be quite 'hit and miss', meaning it can take several months (the average is six to nine months) to get someone on board. This leaves the local authority with no choice but to outsource more work, during which time the original vacancy will be put on hold, wasting valuable time and money on advertisements for a job which is no longer available.

A local authority candidate we placed, a Senior/Project Architect with 25 years' experience within the industry (both private and public) says the issue needs to be viewed in the context of local authorities in general: "There needs to be a residual, core staff who have a vested interest in the local area. The push to outsource really comes from central government. They want us to get rid of directly employed staff and use competitively priced companies to provide the same work, but there are two reasons why this is not always as effective; they lose the benefits of both experience and of local knowledge."



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“These recruitment trends point towards a lack of stability in the workload of local authorities.”

“Private firms will look to make money rather than assess the issues particular to a local authority such as complex social problems and the nature of the people living there, and it is not easy to carry out what can be quite in-depth projects whilst feeling under-valued if you are an in-house staff member.” He also insists that this is not always a cost-efficient solution: “An agency will make a tender based on an initial brief from the local authority, but costs can easily spiral when the brief is not entirely correct for the ensuing project. As with many plans, things change along the way and this results in the end costs far outweighing the initial tender.”

However, it is not all bad news. On a positive note, working with the private sector brings a great deal of diversity to a more traditionally run public sector. Private firms can contribute an enormous amount in the way of staff with more varied experience, and in certain areas, local authorities are working closely with the private sector to deliver the best of both worlds to residents: innovative, as well as community-conscious design.

Some local authorities are finding a good compromise by partnering with private consultancies. In most cases, the staff from both organisations will be working closely together, and often in the same building. Although at first some teething problems can occur, there are many benefits to be reaped as the two learn how best to work together.

Candidates interested in public sector work are still able to have this intrinsic involvement, whereas candidates who may previously have been prejudiced

against working for a local authority are able to retain a CV of named private companies. In addition, the projects are in essence being kept in-house, meaning there is far more control on a daily basis and better liaison with other departments within the local authority (for example with planners and surveyors) than if the projects were being dealt with by a totally separate private entity. The workload is also more flexible, in terms of delegating different stages of projects according to skill sets and peaks and troughs in other schemes, which in turn gives more flexibility in accepting and scheduling works and deadlines.

In an ideal world, best value would always be taken into consideration. A wider variety of schemes would be kept in-house, with larger projects kept rather than partially or entirely outsourced. This would maintain the interest and job security of staff and therefore attract better candidates, keeping staff retention down. This could be backed up either by the use of short-term temporary staff in-house or with close partnership with a specific, carefully selected private company. Additionally, because local authority contracts are such valuable business for private companies, high quality service would be provided and good working relationships maintained.

The key to keeping staff turnover and costs down may well be to strike a sturdy balance between utilising the talents of core in-house staff, and outsourcing to chosen private firms for new ideas, cost-efficient design and flexibility, thereby delivering the best possible service to local communities. ■



PLEASE DON'T FORGET!!!!

To put in your schemes for the
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See the enclosed entry form

DO IT TODAY

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Acoustics in schools ²⁷

Paul Eade of Acoustic Design Consultants comments on the recent changes to Part E of the Building Regulations and the recently issued Building Bulletin 93 (BB93) 'The Acoustic Design of Schools' which contains standards needed to ensure compliance with Part E.

Introduction

Guidance on acoustics within schools has been in place since the 1970s, when the DfES issued BB51. This was later superseded by BB87 in 1997.

Both these documents have in practice had the status of guidance with no mandatory requirement to meet the standards they suggest. With the implementation of the new Part E on 1st July 2003 this situation has changed. To demonstrate compliance with Part E (Requirement E4) for new and refurbished school projects it will be necessary to show that the design meets the acoustic standards in Section 1 of BB93.

The move to mandatory requirements has been driven by a number of factors, which include an increased awareness of the importance of good acoustics in educational environments, the needs of modern subjects and teaching methods, as well as the integration of hearing and sight impaired pupils into the mainstream.

The existing stock of school buildings in England and Wales (BB93 does not apply in Scotland) consists of a wide variety of building types from Victorian to relatively modern lightweight constructions. It was not unknown in the 50s and 60s for schools to be put on land that was seen as too noisy for housing, with a lightweight construction being used for economy. Such design choices have left a legacy of poor acoustic standards and some teachers with voice problems. Viewed in this light, the introduction of BB93 and the regulatory framework to police its implementation is a welcome step forward.

BB93 Performance Standards

BB93 is a large comprehensive document with a wealth of guidance and relevant information contained within seven main sections and eleven appendices. It can be downloaded from www.teachernet.gov.uk/acoustics or



New acoustics guidelines will affect most schools

purchased from the DfES at: Prolog, PO Box 5050, Sherwood Park, Annesley, Notts NG15 0DJ.
E-mail: dfes@prolog.uk.com Telephone: 0845 602 2260
Fax: 0845 603 3360.

Section 1 contains the acoustic standards that are to be achieved to demonstrate compliance with Part E. Sections 2 to 7 give extensive advice on achieving the standards in Section 1 together with case histories. (This format is similar to the parts of Approved Document E dealing with party wall and floor sound insulation where the performance standards are laid out in the first section (Section 0 this case) and following sections give guidance on how to achieve the standards.)

Performance standards are defined for the following:

- Indoor ambient noise levels from external sources (e.g. road traffic), and building services (e.g. mechanical ventilation) defined on a room type basis. (Noise from teaching activities, school equipment (e.g. computers) and rain is excluded).
- Airborne sound insulation between spaces. (Requirements are laid out in a matrix defined by the likely level of noise generation within a room and the likely tolerance of a room to noise intrusion).
- Impact sound insulation of floors (to control footfall noise).



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28 Acoustics in schools

“...one can have a good design, but this can be let down by poor implementation (workmanship, site design changes etc). Testing is needed to pick this up and it should be included in the contract.”

- Reverberation within teaching and study spaces - defined for unfurnished and unoccupied spaces.
- Sound absorption requirements for corridors, stairwells and entrance halls. (The methods recommended in Approved Document E for common areas in dwellings is applied).
- Speech intelligibility requirements in open plan spaces.

The general form of the units used to define the performance standards are well accepted in acoustics. In some instances BB93 has refined the units to meet a perceived requirement specific to schools.

For example, sound insulation between spaces is defined in terms of $DnT(T_{mf, max})_w$ where $T_{mf, max}$ is the maximum mid-frequency reverberation time for the receiving space (arithmetic average of 500Hz, 1kHz and 2kHz octave-band values for T). In Part E the sound insulation standards for walls and floors between dwellings are defined in terms of DnT_w which is slightly different. There is a technical argument in favour of this complication, but it can add to the confusion surrounding the topic. Experience will tell whether this ‘technically correct approach’ is justified. As an acoustic consultant who specialises in such issues - I am not complaining, just commenting!

BB93 recommends submission of appropriate details to the Building Control Body to demonstrate compliance with Requirement E4 of Part E. Details are given in BB93 and Appendix 10 contains a sample submission. The detail suggested implies that personnel with specialist skills in acoustics will be needed to prepare the submission and implicitly will be required on the design team for all but the very simplest of projects.

BB93 does not go as far as making testing to demonstrate compliance once the building is complete, mandatory. It strongly recommends a regime of testing but puts the onus on the contract between the client and contractor. As BB93 acknowledges, one can have a good design, but this can be let down by poor implementation (workmanship, site design changes etc). Testing is needed to pick this up and it should be included in the contract. If tests are failed, of course, this makes life difficult for the contractor, but the knowledge that testing is going to take place can have a dramatic



Sound advice for schools

effect on the quality of the end product. (When mandatory testing was introduced in Scotland for

dwelling party walls and floors an initial failure rate of 70% soon fell to 10% - objective achieved!).

Practicalities

As with any large new piece of legislation and guidance, experience of its use in practice is needed to highlight difficulties. This experience base is only just beginning to form.

BB93 addresses the majority of the acoustic problems that we at ADC have encountered within schools in our professional work. It does appear to be very detailed and prescriptive allowing little scope for variation and innovation. Having said this the guidance does in places acknowledge that there may be circumstances where changes to the requirements would be justified. The nature of the approval process, via Building Control, should enable practical compromise and changes when appropriate.

Some of the requirements of BB93, particularly in relation to external noise break-in and sound insulation between spaces are stringent and may not be achievable in particular cases. Our experience also indicates that some of the required reverberation times, which are for unfurnished and unoccupied rooms, may be too short.

Conclusion

On initial reading BB93 is a complicated document that is not easy to use. It is, however, together with the revised Part E, already forcing designers to think about the issue of acoustics in schools and causing them to seek professional advice. This is an essential first step to improving standards.

As designers, acoustic consultants, building control officers and educational professionals gain experience with BB93's use, implementation of its requirements should become more effective and efficient. ■

News and views

from the Commission for Architecture & the Built Environment

Skills: the missing link?

Picking up on Lee Scott's summary of the findings of CABE's survey of local authority planning departments, reported in the last issue of **Scalanews**, this edition of CABE news and views has a skills focus: Why are skills such a hot topic? What is CABE doing to help?

Over the next five years we are going to see the largest public investment in new buildings and the public realm for a generation. Without even considering education and health, on its own the sustainable communities plan accounts for around £22 billion of investment in housing improvements, expansion and renewal around the country.

The scale of this investment offers an enormous opportunity, one that will be felt for generations to come. Unfortunately our recent track record is not good. As a country, we've tended to accept too much development that, as Lord Falconer once put it, is "designed for nowhere and found everywhere".

Nevertheless, good design has never been higher on the public policy agenda than it is today. As put forward in draft Planning Policy Statement 1, it is expected that the imminent PPS1 will place design at the heart of the planning system. Regional and local government are implementing new guidance that actively promotes design quality. An increasing number of councils are appointing senior officers and elected members as Design Champions to take the lead in embedding expectations of design quality across all their services.

But there is a critical missing link: the skills to deliver. The continuing gap in skills is widely acknowledged as the single biggest barrier to successful delivery of the Government's Sustainable Communities Plan.

What skills? It is not just a matter of training more professionals, although that is an issue. Instead, it is more about the nature of the skills needed, who needs them (or access to them) and the way they are used. In his recent Review of Skills for Sustainable Communities, Sir John Egan identified the need to

both increase the numbers of professionals as well as to develop the skills of a much wider group of stakeholders, to enable them to engage in the process. He placed particular emphasis upon the development of a range of generic skills and knowledge - those that complement the technical skills gained through professional training that are required for the multidisciplinary team working needed to deliver well-designed, sustainable communities.

So what is CABE doing?

CABE Skills

CABE Skills was established during 2003 to co-ordinate and support existing skills development work across CABE, as well as to develop new learning packages and approaches.

During its first year of operation the team has focused upon developing a number of targeted programmes in response to known needs, including:

- Design workshops for local authority members.
- Urban design training for highways engineers.
- Opportunities for senior house builders to discuss design.



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Good design is increasingly part of council policies

“...highways and transportation professionals take urban design decisions every day, yet few have received any urban design training?”

This year has also seen the launch of the first of what is hoped will become an annual CAFE Urban Design Summer School, and the commission of further research into diversity in the built environment professions. Some of the activities of the CAFE Skills team are set out below. These programmes complement the skills development work carried out elsewhere in CAFE, particularly by the Enabling team, CAFE Space and through the Regions programme.

Looking ahead, CAFE is working closely with ODPM on plans to establish a National Centre for Sustainable Communities Skills (one of the key recommendations of the Egan Review of Skills for Sustainable Communities). At the same time the Skills team are continuing to develop new learning packages and approaches. Immediate priorities are:

- To build on the programmes developed for local authorities, highways engineers and house builders in the past year.
- To start implementing a strategy to enhance the skills and knowledge required to deliver quality green spaces, building on research undertaken by CAFE Space.
- To develop more opportunities for multi-disciplinary learning, like the Urban Design Summer School.
- To raise the profile of urban design as a career, and encourage greater representation of women, black and minority ethnic groups and disabled people in the built environment professions.

For more information about CAFE's skills programme see www.cabe.org.uk/skills or e-mail skills@cabe.org.uk. If you would like to discuss the programme in more detail, Carlton Roberts-James, Head of Skills, would be happy to hear from you.

Urban Design Summer School

In June, CAFE teamed up with the University of Westminster to deliver its first Urban Design Summer School. The desire was to create a learning programme that would gather together those who play key roles in how our towns and cities are built and unite them with a common purpose: making better places.

Based in Ashford in Kent, the School centred on four charettes tackling estate renewal; green and brownfield development; town centre regeneration; and housing intensification. Alongside the charettes were an array of urban design skills seminars, keynote speakers and best practice sessions that drew on the talents of some of our most innovative and engaging practitioners.

The event's strength stemmed from the disciplinary diversity of participating delegates. The process of planners, engineers, councillors, architects and others working together to design successful places broke down misconceptions and fostered new relationships. On top of learning about the issues and elements of good urban design, delegates also learned about the different approaches and priorities of their peers.

For more detailed information about the Summer School, or to join the list for next year, contact Roy Robinson on 020 7960 4890 or e-mail: robinson@cabe.org.uk.

Streets for People: highways engineers role in making places

In late 2003 a consortium led by the Institution of Highways and Transportation, and including the Urban Design Group, Transport 2000 and PTRC Ltd, was commissioned by CAFE to develop and deliver a national programme of urban design training for highways and transportation professionals. ▶



Urban planning keeps road usage under control

About 80% of the public space between buildings is managed under highways legislation, with the result that highways and transportation professionals take urban design decisions every day. Yet few have received any urban design training, either as part of their initial professional education or continuing professional development.

The Streets for People programme included a survey of the experiences and perceptions of 1,000 highways and transportation professionals, eight regional workshops, IHT branch events and a high profile national summit.

The popular regional workshops enabled practitioners to explore the basic principles of urban design and to consider questions like 'How do other countries live with traffic?', 'Why are things so different in the UK?', 'What would need to change for highways professionals to play a greater role in making places?' These questions and the survey findings were explored further at a national conference in London in March.

Overall, the programme demonstrated a clear demand for urban design skills training amongst highways and transportation professionals, and directly engaged over 500 in learning. CABA Skills is now exploring ways of building upon and maintaining interest generated by the programme.

For more information see www.cabe.org.uk/skills or www.iht.org or contact Paul Ducker at CABA.

Design Workshops for Elected Members

The pilot programme, 'CABA Design Workshops for Councillors', delivered on behalf of CABA by Urban Initiatives, was developed in response to requests from local authorities for a simple training package for councillors, particularly those on planning committees.

Pressure for development, an increasing focus on design for sustainability and dissatisfaction with the impact of past decisions have all contributed to a growing demand from local authorities and elected members for high quality, relevant learning on recognising and achieving good design. The need is

not for training that turns councillors into designers but rather learning that develops their confidence to ask questions and draw on the skills of others in achieving high standards of design locally.

Between May 2003 and March 2004, 19 workshops were delivered in a range of regional settings, reaching a total of 348 elected members and officers. The backbone of each workshop was a tailored presentation on the principles of good urban design and the use of the planning toolkit to improve design standards. Key to their success was the inclusion of relevant, local case studies to explore the practical application of the principles and the planning toolkit.

The lessons learnt from the pilot programme of workshops are being carried forward as part of the CABA Local Authority Learning Programme 2004/05, due to be launched later in the Autumn.

For information about both the Design Workshops for Councillors and the CABA Local Authority Learning Programme, see www.cabe.org.uk/skills or contact Paul Ducker at CABA.

Recent CABA Publications

- Thinking of buying a new home? 'The Home Buyer's Guide' has been produced to help you find, and buy, a home that is well-designed. For more information see www.thehomebuyersguide.org.
- 'Parks Need People Need Parks' illustrates the serious skills shortage that is affecting staff from senior management to operational levels in Local Authority park departments. ■

"CABA is working closely with ODPM on plans to establish a National Centre for Sustainable Communities Skills."

32 Sustainable design in Scotland

Liz McLean

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Liz McLean describes The Scottish Local Authorities' approach to Sustainability. In April 2002, First Minister, Jack McConnell, set out the priorities for Sustainable Development in Scotland which would frame future actions for the government. These are Resource Use, Energy and Travel.

In April 2002, First Minister, Jack McConnell, set out the priorities for Sustainable Development in Scotland which would frame future actions for the government. These are Resource Use, Energy and Travel.

The Scottish Executive Environment Group's policy paper, 'Meeting the Needs... Priorities, Actions and Targets for Sustainable Development in Scotland' establishes the vision and lists 24 Indicators of Sustainable Development grouped under the three main priority areas. These Indicators, with their detailed targets are overarching aims and how these are translated into processes which ensure real change is still a challenge for most professionals.

While all local authorities have Environmental Strategies, until recently, active promotion of sustainable design and construction was often reliant upon particular individuals' own interest and commitment to the issue.

This is changing and SCALA Scotland is working with others to promote the agenda within Scottish local authorities.

One authority has taken the lead in this and in 2001, John Porter, Head of Architectural Services at Dundee City Council, established the Scottish Sustainable Construction Forum which has as its aim, 'to promote the implementation of sustainable initiatives, identify what is best practice in the use of sustainable materials, reduce waste and increase recycling and contribute to energy efficiency and improvement of the environment'. The group has around 120 members, representing 59 different organisations, including 20 of the 32 Scottish local authorities and a wide range of other public sector and private and professional bodies. It is a real networking group,

exchanging ideas and initiatives, sharing successes and failures alike in an open and supportive format. The aims of the Forum have now been endorsed by the Scottish Executive, which has agreed to provide funding years for the administration of the forum for the next three years. This has also assisted with the development of a website (www.sscforum.org.uk). The group meets for a day, three times a year, with speakers, case studies and discussions. Topics covered include timber management and sourcing, waste minimisation and landfill reduction, geothermal heat pumps, PVs, ISO 14001, funding for renewables and low energy construction. A sustainability check list, developed by Dundee City, based on RIBA work stages is now attached to the website and is being used by several member organisations.

Sust.org is Scotland's first dedicated website to sustainable design in architecture and the built environment. The Sust Initiative was developed by the Lighthouse, Scotland's Centre for Architecture, Design and the City: www.thelighthouse.co.uk in collaboration with the Architecture Policy Unit at the Scottish 



Kings Road Primary school, Rosyth

Executive. One tangible output will be a series of client guides covering schools, office buildings and social and private housing. These have been commissioned from Gaia Research (director Sandy Halliday, who produced the excellent RIBA Green Guide to the Architects' Job Book). These Guides will be particularly important where procurement is by means of PPP where sustainability needs to be an explicit part of the clients' requirements. Experience to date in Scotland shows that it is unlikely to be a priority for PPP consortia.

In recent years, the Scottish Executive has produced a number of excellent documents including 'A Policy on Architecture for Scotland' which has as one of its objectives 'to promote a culture of quality in the procurement of publicly-funded buildings that embraces good design as a means of achieving value for money and sustainable development'. Guidance documents published by the Executive to assist local authorities in their preparation of Schools Estates Strategies and Asset Management Plans confirm the expectation that school design should be developed on environmentally friendly and ecologically sound principles and with genuine commitment to sustainability issues.

(www.scotland.gov.uk/library5/education/bofs-00.asp)

Many authorities have been gradually introducing sustainability reviews into their design processes, including the use of tools such as BREEAM, seeking to make incremental changes on an elemental basis rather than producing one-off exemplar green buildings. This is a logical low-risk strategy and allows new ideas and techniques to be monitored and results shared with others.

However, in the rebuilding of the severely fire-damaged 'A' Listed Morgan Academy, Dundee City Council has decided to prioritise sustainability in the design. Among the initiatives is the installation of a geothermal borehole system along with a heatpump powered by photovoltaics.

The City of Edinburgh Council is in the process of drafting a comprehensive Sustainable Design Guide to assist client departments and professionals in identifying many sustainability features of benefit in good design. It will provide a systematic approach to many key sustainability issues including energy, water, material specification etc.

One of the main outcomes of the sustainable design debate within Scottish local authorities, is the agreement that actually, good design and sustainable design mean the same thing! ■

"Many authorities have been gradually introducing sustainability reviews into their design processes."



Extension to Dunbar Primary school dining area, using pre-fabricated Warmcell insulated Masonite panels

Sustainability - What's that all about then?



Cliff Woodward

Has been actively involved in driving forward partnering at director level in both the Construction, Off Site Construction and Motor Vehicle industries and is an almost evangelic proponent of partnering.

He is currently working on a 'PPC200 and other contract forms for dummies' paper to assist practitioners in working their way through the contractual maze.

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Cliff Woodward consider 'the other sustainability'.

To a fully paid up tree-hugging hippie one would have thought that the answer to this question would be obvious. However, the media and manufacturers would have us believe that it is simply all about using materials and designs that would have the least adverse impact to our environment and the planet.

Well, that certainly is a big part of it but it is not the whole story. It is a laudable and economically healthy policy to make the very best use of our resources at the point of design and construction even to the point of expending a little more of the budget to get the designs and materials of least impact. However, what about the sustainability of those supply chains we rely upon to give us the 'green credentials'? Are they themselves sustainable? Will they be there in 10, 20, 50 years time?

How many flashes in the pans have there been in recent years catering for the latest 'eco-fad'? You could probably name a few off the top of your head. Lost in the mists of economic plausibility because they were ahead of their time, not suitable for the British market, pulled out of the inventive ether on a wave of good intent but little commercial acumen. Need I go on?

So here is the conundrum for today's market.

How do we as designers and deliverers of tomorrows built environments ensure that our targets and aspirations are met in an economically viable and sustainable way? When we look at the materials and methodologies used in our designs, are we dealing with the here and now or the future impact or just reacting to the current economic environment?

Allow me to offer an example. The modern methods and materials of construction employed today address key issues within the whole scope of sustainability, but not all of those elements are prioritised as intended.

For example, one of the principal drivers for using MMC in Britain today is not the basic fact that it can be the very best form of construction available, but because there is a dearth of suitable trades to deliver the volume of construction required today using traditional methods.

I am not against this driver per-se as it achieves something the Off Site Construction industry have been trying to achieve for years, making people aware of what is available. However, the principal advantages of OSC should be recognised and embraced as the principal drivers for adoption of OSC, not finding convenient ways around a short-term problem.

Now for another but. - Parts of the industry will evolve using the labour issue as prime driver and, as nature abhors a vacuum, the less scrupulous elements will appear, churning out units to satisfy a perceived demand for 'timber frame' or other such alternatives. Clearly this does not apply to the mature parts of the industry or those novel systems now fledgling, but it is going to be a serious issue and soon.

It is a little like the current situation in the refurbishment market, where the demand for products such as kitchens, heating systems, bathrooms and the like is so great a whole new industry is starting to emerge, churning out product to fill the void. Some of adequate quality, but much sadly not.

So back to the point in hand, when we specify and use our products are we sure that the manufacturer will be around in years to come to assist in maintenance, spares, design modification or even warranties? Notwithstanding the necessity of their supply chain being able to satisfy our need to be sustainable in the environmental way and the economic way.

This is the 'other sustainability'. The bit that as designers and deliverers we will be judged by. When our dreamy spires have the patina finishing the overall effect of our imaginations, where will our customers be going for parts and possibly even expertise on the products involved? The desire to use novel systems and products appropriately is a good thing, when tempered with a touch of the long view and ensuring the supply chain itself is sustainable, ecologically, economically and morally.

So what is sustainability all about then? - well, everything actually...





www.scala.org.uk

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