

08 May 2007

**Summary: Velux Conference Bilbao**

**Location: The Royal Maritime Club, Av. Zugazarte, 11, 48930 Las Arenas**

**Duration: ca. 30 mins**

David H. Cook, RIBA

Partner, Behnisch Architekten, Stuttgart, Germany

**Title: Developing stimulating, healthy buildings with low energy consumption.**

Any undertaking, as substantial as the construction and operation of a building, naturally consumes considerable amounts of energy in one form or another. The question of how we, as architects, can create buildings that are better integrated into our world, and how we can place less strain on our environment through the process of building can be addressed in many, more or less, logical ways. We believe that we, as architects, are charged with making a balanced and considered response to the basic necessity of providing shelter and respectfully tempering the natural environment to suit the needs of contemporary society.

Increasingly misused the term 'Sustainability' has come to mean all things to all men and is in danger of becoming a mere label attached to certain building projects as nothing more than a marketing ploy. The Bruntland Report illustrated the widespread concern for the state of the environment and popularised the phrase 'sustainable development', which it defined as a way to meet 'the needs of the present without compromising the ability of future generations to meet their own needs'. The political definition of sustainable development has, however, been subsequently extended to include social development and economic progress.

New buildings can only be truly sustainable if they suit their purpose, are well-used and are efficient to operate, otherwise they risk consuming unnecessary resources, becoming a burden on their owners and future generations. For us the philosophy of sustainability advocates the consideration of the whole life cost of a building, both in terms of economics and environmental impact. It follows that for buildings with a design life of just 60 years, the cost of ownership and operation substantially exceeds the cost of construction. It therefore follows that the construction of any new facility should seek to maximise the efficiency of the building fabric in order to conserve resources once in operation. This may lead to slightly higher initial capital

expenditure, but such investments are prudent and may be easily offset by reducing or eliminating the need for expensive mechanical and electrical systems, etc. This in turn gives rise to substantial savings in running costs, the cost of maintenance of the systems and ultimately to the cost of their replacement.

For us, as architects, sustainability is really about qualities and appreciating and responding appropriately to different patterns of use. Indeed it could be argued that you could build a highly energy-efficient building as a hostile architectural environment that is hardly used. Objectively considered, it would be a highly sustainable building, at least in terms of today's common understanding. But relatively seen, it is not sustainable at all, for if it is not extensively used then it cannot be considered to be an efficient building and as such must be considered as a waste of resources. In this context we believe it our role to create and promote extensively used environments; in order for this to occur then buildings must be pleasurable, stimulating and enduring.

With each project, no matter at which scale, it is quickly apparent that it is the users of a building who have the greatest influence upon its ecological value through their daily behavioural patterns. Paradoxically in seeking to provide so-called "idealised conditions" the second half of the last century saw the rhythms of nature increasingly ignored and perceived advances in building technologies lead to an exponential growth in the installation of technical equipment and with it, numerous examples of stagnant, often inhospitable spaces, with obvious consequences for occupant satisfaction levels, staff efficiency and attendance levels. In short many buildings which stand in our cities today promote anything but intensive use, instead they are a continuing drain on resources.

Technical equipment is often not only noisy, consumes vast amounts of energy but produces considerable heat as a by-product, thus contributing to overheating in summer and greater dependence upon cooling systems. It is an example of a vicious circle which is often difficult to break. Just as the "wrongly buttoned shirt" is, once commenced, impossible to correct without starting all over, it is now essential that, in the development of modern buildings, we return to the very basic principles. Many of our own projects are developed according to such basic principles, none the less resulting in sophisticated environmental concepts which respond to the manifold needs of the individual, recognising fluctuations in seasonal conditions and affording a degree of individual control. We do not claim that any of the concepts are revolutionary, but they certainly go a long way to creating user-friendly environments, which promote well-being and personal enjoyment.

Although such efforts in individual projects are undoubtedly honourable it is important to recognise that issues of sustainability must be properly addressed at source, where the potential impact is greatest — in the infrastructure, city planning,

transportation, and energy sourcing. However the ongoing privatisation of the energy sector continues to hinder an efficient, centralized approach.

From the actions of some of the multi-national companies, one gains the impression that the energy market remains uncontrollable, and that until recently the limits of our natural resources were never properly acknowledged. As long as energy remains subsidized — with the world continuing to actually pay for the environmental damages caused by the reckless generation and use of energy — there is no pressure for such companies to act in a truly responsible manner, instead we are currently reliant upon 'good will' gestures. Once we have a more responsibility-driven demand, the industry would themselves start promoting more sustainable standards forcefully.

For us the development of architecture is very much like a concert, with the architect leading a team of diverse disciplines whose task it is to respond in a balanced manner to quite diverse and often contradictory demands of which environmental responsibility is just one albeit an important one. Challenges in contemporary urban planning are more complex still with ongoing changes in living and working patterns continuing to have a dramatic impact upon the western world's urban landscape.

This brief presentation will illustrate how such wide ranging concerns are addressed in current and completed architectural projects of varying scale - from a free-standing pavilion through to an entire city district.

#### Author

David Cook, RIBA (Manchester, UK, 1966) was educated at Manchester Polytechnic and the University of East London, graduating in 1992 with distinction and being nominated for the RIBA Silver Medal in Education. He joined the practice in 1993 working as Project Architect on the Landesversicherungsanstalt (LVA) Schleswig-Holstein. As Project Partner he was responsible for the designs of both The Bristol Harbourside Centre, Bristol, UK, The National and Provincial Archives in Copenhagen, DK, Centre for Cellular & Biomolecular Research at the University of Toronto, Canada and both the Moscow City Transport Terminal and the Tsvetnoy Boulevard Project, Moscow, Russia.

In 2005 David Cook became Partner in Behnisch Architekten, working out of Stuttgart. Together with numerous international competitions, works currently under his supervision include: Therme Bad Aibling, Bavaria; National Cancer Clinic, Heidelberg; Laboratories for Yale New Haven Hospital, New Haven, CT. David Cook has taught at the University of Stuttgart, has served as visiting critic at a number of architectural schools and regularly gives lectures and workshops throughout Europe and North America.

Contact: [buero@behnisch.com](mailto:buero@behnisch.com)  
Web: [www.behnisch.com](http://www.behnisch.com)