Talking about sustainability

Issues such as solar energy, water and passive housing concepts continued to engage attendees at the 6th World Sustainable Building Conference in Helsinki.

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The themes that dominated the 6th World Sustainable Building Conference (SB11) held in Helsinki, Finland, in October 2011 included retrofit programmes, urban design/rating tools and Passivhaus. With over 300 papers, 10 special forums and 50 countries represented, it provided an insight into global sustainable building issues.

Retrofits improve housing

Several retrofit programmes were presented, highlighting that improving the existing building stock is a priority for many countries. A UK programme, Retrofit for the future, for example, encouraged builders, architects and designers to develop their own plan to retrofit a house, with grants given if the plan was approved. Diaries kept by contractors during the retrofit recorded challenges and successes. Extensive energy and environmental monitoring is being carried out on the houses for 2 years following the retrofit as well as appliance audits and occupant interviews. All information, from the diaries through to the monitored data, is available to the public (see www.retrofitforthefuture.org).

Showcasing successful town planning

A number of site visits were arranged including a visit to Pakkalan Kartanonkoski, an example of successful town planning. Green avenues and narrow winding streets give a small-town feel, and although buildings are situated close to the common streets, they have space behind with private and semi-private courtyards.

Colour and design are used to make each street and building unique, with such a successful outcome that many people want to join the 4,000 already living in the town.

Rating the rating tools

Urban assessment and rating tools featured in many presentations. Three main tools were presented:

- LEED for neighbourhood development, from the USA (2010).
- BREEAM for communities, from the UK (2009).
- CASBEE for urban development (2006) and for cities (2011), from Japan.

The tools are seen as a convenient way to benchmark the sustainability of a neighbourhood. One paper assessed their use for urban planning in Finland – some of the learnings from this can also apply to New Zealand given our similar low population density and culture of detached housing, although Finland does have a much harsher climate.

This assessment found a lot of the criteria in the tools did not apply to the Finnish situation. The author suggested the best way to use the tools was to only take the criteria appropriate for the climate and conditions, even though this means it would not receive international certification.

Keynotes look forward

Keynote addresses looked at changes over time and looked forward to 2050. Speakers included Ray Cole from Canada, Alfred Ngowi from Botswana, Baizhan Li from China and Bill Bordass from the Usable Buildings Trust in the UK.

Ray Cole spoke about changes over the last 40 years and what he sees as being important in the next 40 – systems thinking, human and nature relationships, new partnerships, place and sustainability at the community level rather than the building level. He said performance goals would become community focused and assessment tools complemented or replaced by those that cover links and synergies at different scales.

Alfred Ngowi talked about concerns with the rapid urbanisation in developing Africa. As urban sprawl continues, productive land is being lost and more people are becoming dependent on cities’ resources rather than being self-sufficient. China faces similar challenges.

Meanwhile, Bill Bordass talked about how we are still designing and constructing new buildings that do not work, adding ‘stuff’ that does not work or solve a problem. He said that designers need to understand how their buildings actually perform – ideally for a couple of years – not just how they are rated and modelled to perform.

The usual concerns arise

Between the 2011 conference and the previous 2005 conference in Tokyo, the world has changed, but the changes in papers and posters presented have been much more subtle.

The range of subjects covered has not diversified dramatically – we’re still concerned with water, solar energy and passive design concepts. There has, however, been a shift towards greater robustness in the measurement and rating tools available – numerous tools that were available in 2005 have evolved into 2.0 or 3.1 versions. The primary difference between the old and new versions of these tools is in the quality of the research data that underpins them.

SB14

The next World Sustainable Building Conference (SB14) will be held in Barcelona, Spain, in 2014. The theme is ‘Sustainable building results... are we moving as quickly as we should?’.

Keynote presentations from SB11 are available for download from the conference website www.sb11.org.