ECOS
SCIENCE FOR SUSTAINABILITY

www.ecosmagazine.com

Published: 12 December 2011

The world's green buildings progress – an interview with Tony Arnel

Tony Arnel is retiring Chairman of the World Green Building Council (WorldGBC), and remains Chair of the Green Building Council of Australia (GBCA). During his term, the WorldGBC has tripled in size and dramatically increased its influence around the world. James Porteous sought his unique perspective on the global green building industry, how it has moved from being 'boutique' to mainstream in just three years, and what it means for Australia.

Credit: Green Building Council of Australia

The WorldGBC was formally established in 2002 with eight member countries. Today, the council supports more than 90 green buildings councils around the world.

Why was the WorldGBC established, and what is its objective in the area of green building technology and engagement?

'The WorldGBC was established by some exceptional leaders in the property and construction industry who recognised that, while buildings play a significant part in the world's environmental problems, they can equally be a large part of the solution.

The global construction industry generates around US$4.7 trillion a year, constituting as much as 10 per cent of global GDP. In most countries, the building sector directly employs up to 10 per cent of the workforce.

The United Nations Environment Programme (UNEP) estimates that buildings consume between 30 and 40 per cent of global energy, and in some countries, such as the United Kingdom, buildings represent over 50 per cent of energy use.

However, UNEP has said that no other sector has such a high potential for drastic emission reductions.

With current technology, green buildings can not only halve energy use and cut carbon emissions by around one-third, they can also reduce waste output by 70 per cent, and water usage by 40 per cent.

Of course, green building is about more than energy efficiency, and the WorldGBC has been able to establish a good case for it. It is the WorldGBC's mantra that green building offers a stable investment with good financial payback from energy savings – just what is needed in the current turbulent financial period. Green building can also underpin productivity gains from modern and healthy workplaces that are a major preventative health opportunity.'

What are the key achievements and metrics of the WorldGBC in that context? Give us some numbers that people outside the green building sector can understand.

'The most significant achievement is the increase in the number of green buildings. In Australia alone we now have more than 380 Green Star-certified[1] buildings, and a further 600 are registered to achieve Green Star ratings. We've absolutely transformed the way the market thinks about green buildings.

Another achievement is the growth in green building councils, which echoes what is happening internationally. With more than 90 green building councils around the world, the WorldGBC now represents more than 30 000 property and construction companies.

There is no doubt that green building is a growth industry. McGraw-Hill Construction has found that, while just 13 per cent of global construction firms were dedicated to green building in 2003, more than half expect to be fully committed to green building by 2013.

This growth is underpinned by an increasing understanding of the long-term value of green buildings to not only the environment, but to business performance, productivity, community development and job creation.'

Can you describe the current layout of the international green building community – where are the hotspots and the 'not-spots'? Which countries are leading in terms of commitments, and technology?

'It's important to stress that the priorities of the many nations investing in green building councils are not homogeneous. In some mature markets, such as the USA, UK, Canada and Australia, the business case for green buildings has been firmly established. The US Green Building Council, for instance, is certifying around 1 million square feet of green building space a day.

In Australia, 18 per cent of our CBD commercial office sector is Green Star-rated – an amazing achievement in just nine years. A range of reports has found that Green Star buildings deliver higher return on investment and rental returns.

Just recently the Property Council of Australia (PCA) announced that the term 'Premium grade' would only be awarded to office towers with a NABERS Energy[2] and Five Star Green Star rating. The PCA's Chief Executive, Peter Verwer, told the *Australian Financial Review* that "The industry already knows it: sustainable design and management of office buildings has become part of the core business." It's clear that Green Star and the GBCA have had a massive influence on the commercial market in Australia.

In Europe, the focus is on investing in green buildings to stimulate economies still reeling from the ongoing global financial crisis, while in the UK, there is a dire need to retrofit 26 million existing homes, which represent some of the most energy-inefficient in Europe. The UK Green Building Council estimates that a major retrofit program could create around one job for every 10 homes upgraded.

At the same time, the challenge for developing countries is to transform their built environments while addressing the legitimate aspirations of millions of people who still have no access to electricity, clean water or adequate shelter.

Many of our most inspirational green building councils are in these developing nations. The South African GBC, in partnership with the WorldGBC, has recently embarked on a project to green an entire street in one of Durban's disadvantaged communities. The Cator Manor project is part of our participation in the UN COP17 climate change summit in Durban and we are retrofitting an entire street with green building technologies such as solar hot water systems and rainwater collection tanks.

The project will deliver a range of socio-economic, health and environmental benefits such as lower energy costs, reduced illness and safety risks, skills training and job creation for disadvantaged members of the community, as well as reduced greenhouse gas emissions and environmental impact.'

Credit: Green Building Council of Australia

Australia has a big involvement and influence in international green building progress through yourself and early founders like Ché Wall. Describe that contribution to date and our country's ongoing involvement.

'I'm very proud to work alongside some visionary and talented green leaders, such as Ché Wall and Maria Atkinson. They championed the green building movement from its infancy, and as a result Australia is now considered an international leader. The skills, technologies and approaches developed in Australia are now being sought around the world, as our nation's innovative designers and developers gain an international reputation for their green building achievements.

Just some of the Australian companies delivering green projects globally include PTW Architects, designer of the Watercube National Swimming Centre for the Beijing Olympics; and Lend Lease's 313@somerset development on Orchard Road in Singapore, which has achieved the highest sustainability recognition in Singapore with a Platinum Green Mark rating.

The GBCA takes its leadership role very seriously, and we are working closely with our regional neighbours to embed green building practices throughout the Asia–Pacific. The GBCA also co-chairs the WorldGBC's Asia Pacific Network, and in the last 12 months has made headway with our Chinese counterparts to support the ChinaGBC by establishing the ChinaGBC Foreign Membership Scheme.'

From your now-international perspective, what do you see as the top three most critical imperatives from here on?

'Certainly, the rise of the 'mega city' is one of our most pressing challenges. Nearly one million people across Asia migrate from rural to urban areas each week – the equivalent of building a medium-sized city every seven days. Given our need to reduce global greenhouse gas emissions, hyper-urbanisation will be a major focus. Thoughtful consideration of sustainability at the earliest stages of design and construction will deliver the best economic and environmental outcomes to address this challenge.

Moving beyond buildings and engaging in a conversation about how we green communities, precincts and cities is also a focus area. The WorldGBC has recently launched the Government Leadership Awards to showcase how leadership and policies at the city level can minimise our greenhouse gas emissions, improve the liveability of our communities and boost local economies.

And of course, with the ongoing financial turmoil around the world, we need to remember that green building practices can deliver on a range of economic priorities. Energy savings from building upgrades can rapidly pay back the costs. Some measures have paybacks of less than a year, while others offer good returns over the medium term. And this positive return comes with job creation. The UNEP has found that investments in improved energy efficiency in buildings could generate an additional 3.5 million green jobs in Europe and the USA alone. This is the message we are taking to governments.'

Is there anything else you would like to highlight?

‘As strange as it sounds, I hope that one day the WorldGBC will be redundant. It’s my vision that, in the not-too-distant future, all buildings will be carbon, energy and water positive[3] and environmentally sustainable. It will be the way buildings are constructed. We know we can do it – we have the technology, the skills and many examples of cost-neutral, environmentally positive buildings now. The challenge is for this way of building to become ‘business as usual.’

1 Green Star is a comprehensive, national, voluntary environmental rating system developed by the GBCA that evaluates the environmental design and construction of buildings.

2 NABERS (the National Australian Built Environment Rating System) is a performance-based rating system for existing buildings. NABERS rates a commercial office, hotel or residential building on the basis of its measured operational impacts on the environment. It is managed by the NSW Government.

3 Positive’ here refers to the ability of a building to generate more energy and water than it consumes, or to reduce carbon , beyond its net carbon emissions.

From **ECOS** online http://www.ecosmagazine.com/?paper=EC11131