

## Property Market Must Get 'Greener'

According to property economist and university lecturer Francois Viruly, South Africa's architects, developers, construction companies and curricula are "not handling green issues".

"The real estate industry curricula tell their students to close the tap at best," he says. "The finance courses don't go into the financial implications of good practice. So the question that has to be addressed is how do we bring 'green' issues into our curricula and general consciousness."

This news does not bode well in view of what Huston Eubank, a registered architect specialising in the sustainable design of buildings, communities and businesses, and who served as executive director of the World Green Building Council from 2005 to 2007, has to say on the green movement, and in particular green buildings. His focus is on buildings because they contribute to approximately 20% of global carbon dioxide emissions.

"For some bizarre reason the building sector was excluded from the Kyoto Protocol. However, there has been substantial effort in US and UK to reverse situation," he says.

Eubank stresses that there is a need to show businesses that green buildings are profitable in order to avert the increasing of carbon content into the earth's atmosphere, which is already at an unprecedented high. He says that Al Gore's film "An Inconvenient Truth" deserves its Nobel Prize for pointing out that the benefits of strong early action against carbon dioxide emissions and therefore climate change considerably outweigh the cost.

Eubank elaborates that the Stern Review on the Economics of Climate Change shows that ignoring climate change will eventually damage economic growth. It says, "Our actions over the coming few decades could create risks of major disruption to economic and social activity, later in this century and in the next, on a scale similar to the great wars and the great depression...It will be difficult or impossible to revert these changes."

"Tackling climate change is the pro-growth strategy for the longer term, and it can be done without capping the aspirations for growth of rich or poor countries," he says. "The evidence leads to a simple conclusion: the benefits of strong, early actions considerably outweigh the cost."

Eubank further explains that unless measures are taken, there will be increasingly violent storms and shifts in weather patterns, and recurring droughts and floods. "The Stern Review shows that through the economics of climate change, the poorest countries will suffer the most," he says. "The conclusion of the review is essentially the optimistic role of green building in mitigating the global climate change crisis."

This brings to the fore the question as to what a green building is exactly? It is when a building's design and construction practices meet specified standards, resolving much of the negative impact of buildings on their occupants and on the environment.

"The average savings of green buildings are 30% in energy, 35% in carbon, 30 to 50% in water usage and 50 to 90% in waste cost," says Eubank.

"The triple bottom line of green buildings are reduced environment impact, peak efficiency, improved capitalisation rates, increased marketability, higher lease rates, improved productivity, and reduced worker absenteeism."

Eubank points out that green buildings lead to 20% better test performance in schools; earlier discharge in hospitals; increase in sales per square foot in retail; increased production in factories; and a two to 16% productivity increase in offices.

Electricity "load-shedding" and sewerage infrastructure problems in South Africa are contributing to interest in green building concepts.

According to research conducted at the Nelson Mandela Metropolitan University, solar water heating could save a household about 32% of the energy normally required to heat water. In addition, it was recently proven that a post-graduate residence in South Africa that had 10 solar water heaters installed saved 3 600 kWh over three months and that one day of sunshine can provide up to four hours of additional lighting in building common areas.

"An \$4 investment per square foot in building green nets a \$58 benefit per square foot over 20 years," adds Eubank.

As a Leadership in Energy and Environmental Design (LEED) accredited Professional, Eubank advocates this system. "This is a system for certifying design, construction and operations of the greenest buildings in the world," he says.

"Scores are tallied for different aspects of efficiency and design in appropriate categories.

"For instance, LEED assesses in detail site planning, water management, energy management, material use, indoor environmental air quality and innovation and design process."

According to David Langdon's comprehensive cost database and budgeting methodology, there is "no statistically significant difference between average costs for LEED-seeking and non-LEED for similar programme types." It does note though that on an "apples-to-apples" basis, additional quality and additional capabilities do cost more.

Eubank also points out that the green movement provides additional opportunities for employment. "There is a considerable amount of work to be done on affordable green buildings," he says.

Eubank stresses that when it comes to design, all the really important mistakes are made on the first day. "So the design must be right at inception, whole systems thinking must take place, the design must be front loaded and teamwork must be the order of the day."

And to conclude, not all is gloom in South Africa on the "green" front as evidenced in the planned construction of a R100 million blue-chip office park, The Offices of Hyde Park, which will feature green building design features.

To be situated at 37 William Nicol Drive, Hyde Park, the building will have solar water heating and water-efficient sanitary systems. Its park will also be self sufficient, with its own electricity provided by back-up generators and water storage tanks.

Redefine Income Fund is also working on a green mixed-use development in Cape town called Upper East Side. The second phase of this development in Cape Town's Woodstock area, comprising 50 000 m<sup>2</sup>, has been launched after the successful sale of the first phase. This development has been more expensive to construct in the short term, but the savings in the longer term are being kept in mind.

According to a recent article in The Philadelphia Inquirer by John Norquist, the president and CEO of Congress for New Urbanism, "we would use less energy living closer together." Mixed-use schemes fit the bill in this regard because they reduce the carbon footprint of the residents, reduce traffic congestion and reduce the strain on infrastructure in that they are geared to people living, working and playing in the same area.

Eskom has also come to the party by launching a R2 billion fund to subsidise "green" building efforts.