

CAPE NEWS

There's no place like a green home

Environmental experts suggest that the practice of sustainable green building should begin where you live, writes **Anna-Marie Smith**

INCREASED awareness of the long-term benefits of sustainable green building, as presented at the Green Building Council SA's (GBCSA's) recent annual convention in Cape Town, is in line with global trends.

In his key address, environmental expert Bill Reed, of US Leadership in Energy and Environmental Design, emphasised the need for a holistic environmental approach that cultivates an appreciation of the difference between carbon neutrality and the long-term sustainability of nature's whole evolving system.

Reed, founder of the US green-star rating system, said that homeowners can reduce their carbon footprint substantially for the greater protection of living systems by understanding the interrelationship between natural and built environments.

"Developing green building practices might start with design, but they extend all the way throughout the life cycle of a

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property," says Nicola Douglas, CEO of GBCSA, one of 20 World Green Building Council full-member councils.

"It would be wasteful to design and construct a green building, then follow with environmentally harmful management that contributes to wasting precious resources. The two disciplines, building and management, must work hand in hand."

The GBCSA defines a green building "as a building that is energy efficient, resource efficient and environmentally responsible, and that incorporates design, construction and operational practices that significantly reduce or eliminate its negative impact on the environment and its occupants", she says.

For the GBCSA, building green is an opportunity to use resources efficiently and address climate change while creating healthier and more productive environments for people to live and work in. Local industry professionals,



Straw bale construction and moon phased harvested timber projects designed by Eco Design Architects.

including architects, developers, builders, owners and materials suppliers, have access to an international standard rating-tool system adopted from the Australian green-star system.

Adapted to suit local circumstances, it is aimed at transforming the local property industry towards promoting, encouraging and facilitating green building.

The GBCSA's first green star SA tool-rating system for commercial and industrial buildings — Office V1 — was launched in 2008, followed by the retail centre V1 tool in 2010.

The latest addition will be the multi-unit residential tool (murt) currently under development and due to be released in pilot form in December. Murt will address various forms of multi-unit res-



idential developments — new or refurbished — from multistory buildings to cluster or single homes in single developments where there is a homeowner's association or body corporate managing the common areas.

Another GBCSA asset is the green star professional accreditation system, producing a sophisticated industry where skilled professionals not only practise the principles of green building, but also educate others about them.

Qualified professionals and members of GBCSA translate the green star rating tools into common language and a standard of measurement for green buildings to promote integrated whole-building design, raise awareness of green building benefits, recognise environmental leadership and

reduce the environmental impact of development.

Categories include management, indoor environmental quality, energy, transport, water, materials, land use and ecology, emissions and innovation.

Andy Horn, a Cape Town architect and lecturer at UCT's faculty of architecture, said that when building green homes owners should aim at achieving a holistic environmental approach in every principle of the design, as opposed to viewing different aspects in isolation.

He said that showing respect for the land by utilising what is available in the immediate surroundings ultimately integrates buildings into landscapes.

In teaching and practicing eco design he encourages using a variety of local natural materials, such as straw bales and earth building and masonry dome construction methods.

Horn says that reliance on municipal water from dams can be reduced by harvesting rain water and introducing grey and black water recycling where possible.

By working with nature's forces, such as gravity, natural water flow can be facilitated, as opposed to mechanical pumping.

To create a green home for optimum healthy living, the appointment of a 'green' contractor will result in planning ahead to implement simple construction changes, such as the non-toxic treatment of timber, roofing, bricks, cement, and paint, to reduce a potentially harmful toxic living space.

A skilled contractor will introduce an overall reduction in energy consumption, both during and after construction.

Careful planning of on-site orientation, maximizing sunlight during all seasons, plus the introduction of additional renewable energy sources, will achieve a marked reduction in the project's carbon footprint.

When compared with conventional buildings, once green buildings are constructed they provide lower operating and maintenance costs, therefore requiring less capital expenditure over the building's life cycle.