

Developers eye Green Star rating

INTENT on being the first Green Star SA-rated office building in KwaZulu-Natal, the 6 700m² Lincoln on the Lake mixed-use development in Durban's upscale Parkside Precinct of Umhlanga Ridge New Town Centre is poised to raise the bar on environmental standards for commercial projects throughout SA.

The project is being jointly developed by South Africa's largest JSE listed property company Growthpoint Properties, The Louis Group and Key Developments.

It has benefited from the innovative design expertise of Torbjorn Hanssen, of THA Architecture & Design, as well as sustainability consultants, WSP Green by Design, among others. On completion Lincoln on the Lake will be owned by Growthpoint.

The principles underpinning the design and construction of Lincoln on the Lake include environmental consciousness and sustainability.

"We made it a priority to identify ways to ensure efficiency," says Greg de Klerk, head of Growthpoint's Durban office. "Our corporate philosophy is to give preference to working with professionals who are dedicated to green building practices."

At Lincoln on the Lake, lighting is controlled by an individually addressable control system with motion and daylight sensing switches to monitor movement and light levels respectively. Sub-metering is provided for all substantive energy users in the building.

Air-cooled variable refrigerant volume systems provide an efficient means of air-conditioning, ensuring that the fresh air supply is 150 percent that of the minimum permissible ventilation rate legislated in the national building standard SANS 10400-O.

Alana Shuttleworth, sustainability consultant at WSP Green by Design and a Green Star accredited professional, says the aim is to counteract build-up of pollutants in the space. "High levels of carbon dioxide are an indication of inadequate ventilation which can have a negative impact on the quality of breathable air. At Lincoln on the Lake CO₂ sensors are located at all return points to air-conditioning systems to monitor levels. This ensures delivery of optimum quantities of out-



side air," says Shuttleworth.

Further ensuring that Lincoln on the Lake's environmental emissions are contained, only paints with low volatile organic compound levels have been selected. These are organic compounds that produce vapours at room temperature. Exposure to high concentrations of these vapours is a concern because the health implications are consistent with the effects of sick building syndrome.

Shuttleworth says the highest level of water efficiencies is as important as minimising energy consumption and pollution.

"Water collected from rain-water harvesting is used to flush toilets, which reduces the demand for

potable water. It also reduces the negative effects of storm water run-off.

She said "considerable" savings in potable water are made using air-cooled equipment instead of water-cooled equipment in the air-conditioning system. Further, about 80 percent of the routine fire protection system test water is captured and stored on site for reuse.

"Efficient fixtures such as dual flush toilets, low-flush urinals, low-flow shower heads and electronically controlled taps with flow restrictors are also used to reduce consumption of potable water."

She says even the materials selected for construction have contributed to the success of this exam-

ple of a green building.

The quantity of Portland cement has been reduced by 30 percent by replacing it with slag, an industrial waste product. About 20 percent of the total contract value is represented by materials or products used in the project's construction that have been sourced from within 400km of the site.

The design also encourages the use of alternative forms of transport. Five percent of parking spaces are dedicated for use by alternative fuel vehicles and a further five percent of the car parking spaces are dedicated for used by motorbikes, mopeds and scooters.

Bicycle storage facilities are provided for six percent of the building

staff. Practical as well as thoughtful, the building includes showers, change facilities and lockers for cyclists. Additional bicycle storage facilities are also provided for visitors to the building.

Because of its location, Lincoln on the Lake also benefits from its proximity to important services and facilities. The municipal bus service runs at an average interval of 10 minutes during peak hours on week days from a bus stop within 500m of the development.

"Lincoln on the Lake is also well-placed to take advantage of significantly improved road access once the planned Cornubia Interchange off the N2 freeway gets underway," says De Klerk.

ENVIRONMENT FRIENDLY: An artist's impression of Lincoln on the Lake, Growthpoint's new 'green' office block in Umhlanga Ridge, KwaZulu-Natal.

The main entrance to the development is within 400m of Gateway Theatre of Shopping. All these factors contribute to reducing dependence on automotive commuting, thereby empowering the building's occupants to reduce their carbon footprints.

"A roof garden is incorporated in the central courtyard of the site. This will improve the ecological value of the site and will aid in reducing storm-water run-off.

"Nearly 90 percent of the office area has a direct line of sight to external views which has been achieved by means of a narrow floor plate and strategically positioned vision glazing," says Shuttleworth.

Committed to the environment on every level, the contractor has aimed to reuse or recycle 30 percent of all construction waste to reduce the amount of waste going to landfill.

"The development underscores the fact that environmental sustainability does not mean sacrificing traditional principles of good development," says De Klerk. Sustainable design should not in any way compromise comfort, convenience or safety.

The building is described as "a modern take on the neo-classical style of architecture". Architect Tor Hanssen says this timeless design emphasises light and space, combining time-honoured design principles with a modern green mindset.

Set on a strong base, distinctive to this style, Lincoln on the Lake's double-volume main foyer is marked by a striking steel canopy on the exterior, guiding visitors in through electronically controlled access doors. Finishes include full body porcelain tiles, engineered stone counters, and mahogany doors with architraves.

The design also meets the commercial demand to provide flexible office space allowing single and multiple tenant environments on each floor. Hanssen says this allows the building to easily accommodate a variety of tenants with different size requirements. In ensuring the building runs as efficiently as intended, a building tuning programme will be implemented for one year after practical completion. This will include monthly monitoring, quarterly reporting and a full re-commissioning after 12 months.

