

Forthcoming retail centre hopes to influence green rating

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Intro

Gugulethu Square, the R350 million retail development due to open in Gugulethu, Cape Town, in November, may help shape the rating tool to be applied to shopping centres by the Green Building Council of South Africa

South Africa has adapted the Australian Green Star rating system to assess buildings for their energy and resource efficiency and environmental friendliness, says a spokesman for the developers, Mzoli Ngcawuzele, of Mzoli Properties, part of a consortium comprising the IDEAS Fund, a partnership product between Old Mutual and Unity (a consortium of trade unions), Group Five, and Khula Finance.

"As only the office rating tool has been developed at this stage for South Africa, the design team has applied a combination of this and the Australian retail tool to the development of Gugulethu Square," he says.

"The rating system identifies measures that can be taken to produce a green building in the areas of management, indoor environmental quality, energy, transport, water, materials, land use and ecology, emissions and innovation. It sets targets to be achieved for the different measures, awards points for the achievement of targets, totals the points and then awards a rating on the basis of the score. "

Ngcawuzele says energy-saving alternatives applied to Gugulethu Square included an energy efficient water cooled air conditioning system, a rainwater system, intelligent lighting and tilt-up concrete façade construction requiring no external painting and less transport.

Other measures were the use of on-site material for backfilling, re-use of 4 000m² brick paving from the site on which the centre has been developed, salvaging of demolished material for community use, and the introduction of operational waste management systems.

"The former Eyona Centre on which Gugulethu Square has been developed was not demolished conventionally," he says. "It was dismantled at a higher cost so that materials and components from this building, with a value of R300 000, could be donated to and recycled by the immediate community.

"Apart from salvaging brick paving from Eyona, demolished concrete was set aside for re-use under roads and for some concrete work. Recycling crushed concrete in to bricks specified for the project also meant reduced waste to landfill and less new materials."

Ngcawuzele says the use of a concrete additive as a waterproofing agent eliminated the additional application of bitumen, acrylic or epoxy coatings, a layer of screed with either paving or tarmac.

"This meant fewer trades and materials and also reduced future costs of maintenance and replacement of material."

He says the water-cooled air conditioning system cost 21% more than an air cooled system, but its energy consumption was 30% less.

Better working and shopping conditions would be produced by an air conditioning monitoring system which converts to an economy cycle when external conditions are favourable.

"This will mean more fresh air circulating around the building, a clearing of carbon dioxide build-up after hours, and a reduction in thermal build-up."

Ngcawuzele says reduced energy consumption and air conditioning requirements will flow from the use of efficient light fittings to curb heat loads and sensors controlling light activation.

Gugulethu Square will also supply all irrigation for its landscaping from its own rainwater and grey water tanks.

It was also aiming to reduce the amount of waste transported to landfill sites through waste separation by retail tenants and collection of recyclable material by service providers.

Ngcawuzele says Gugulethu Square's offering as a major retail centre will mean less transport and time spent on shopping by residents.

"Also, since the centre accommodates most of its parking requirements on the main roof, less valuable land at ground level is dedicated to parking. Direct contact between the street and the centre will encourage foot traffic and make for a safer environment. "

"The introduction of bicycle racks and facilities for people working at Gugulethu Square is intended to reduce vehicle trips, make it economical for them to commute and give them a healthy alternative."