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# KZN's Ixopo building gets green kudos

Network Reporter

**T**HE NEW Sisonke District Office building in Ixopo for the provincial Department of Public Works has become the first provincial government building to get a five-star office v1 design rating from the Green Building Council of SA.

The building project received the sustainability rating thanks to the extensive use of local products such as bricks from Corobrik's nearby Eston Brick factory, and its environmentally sensitive design.

Architect Steve Kinsler specified the use of face bricks as well as concrete pavers and retaining blocks.

He pointed out that the Green Star rating system awarded points for materials sourced from within either a 50km radius of the site, or failing that a 400km radius.

"Burnt Apricot Satin face bricks and stock bricks were sourced from Corobrik's Eston Brick factory 70kms from the site," said Kinsler.

The Sisonke District Office is situated on the outskirts of Ixopo. It is the first of a four-phase project and comprises two single-storey buildings – an office block and conjoined maintenance block – as well as a separate garage block. The total floor area measures 858m<sup>2</sup>, the commercial office area 550m<sup>2</sup> and the car park 193m<sup>2</sup>.

"The office building has a long and narrow form with the north orientation increasing the solar gain in winter and reducing it in summer," Kinsler said, adding that eco-friendly and sustainable features predominated when it came to both practical features and aesthetics. One of the main stipulations was minimisation of energy usage.



"At the time of purchase, the site was covered with a mismanaged alien tree plantation infested with alien invasive weeds. The new office block has an extensive roof garden that is home to nearly 100 indigenous plant species.

"The insulation properties of the building were optimised through the roof garden over the main office spaces and the installation of insulation in the cavities of the brick external walls, below the floors and in the roof. All external windows are double glazed," he added.

Kinsler said while natural daylight minimised the amount of artificial light needed, natural air flow was maximised, removing the need for mechanical air conditioning. Solar water geysers provided hot

water, while lighting systems used high-efficiency lights fitted with motion sensors.

The offices were also naturally ventilated having no ducts for air supply or cooling. A heat-pump circulates warm water through the floors to meet winter space heating requirements. Because of the long narrow form of the building, 85 percent of the interior spaces was naturally lit, while motion sensors automatically switched lights off when no one was in the room.

Potable water consumption was reduced through the use of water-efficient sanitary fixtures and rain-water is harvested for washing cars and flushing toilets. This reduced the run-off from hard surfaces during storms. Cycling facilities were

provided for building users and visitors while preferential parking was reserved for fuel efficient cars and motorcycles.

The remainder of the site was being returned to its endemic Natal Mistbelt Grassland habitat. All plants were also dry land indigenous species with no irrigation requirements.

The Sisonke District Office was one of several "green" projects announced by KwaZulu-Natal Premier Zweli Mkhize during the inaugural meeting of the KZN Climate Change Council in September. The projects were part of a plan to reduce the impact of climate change and have gain impetus following Durban's hosting of the UN's climate change conference last year.