

A faster, cheaper, greener solution to South Africa's housing shortage

South Africa's housing shortage may be solved faster, cheaper, and environmentally friendlier. By mixing cement with polystyrene, and an additive – a technique that is widely used in Scandinavia and northern Europe – Selcrete wants to do just that. The company's pilot project, phase one of a revamped daycare centre in Khayelitsha, recently became fully operational.

One of the problems at Noluthando daycare centre, which cares for over 265 children aged two months to six years, is that its timber structures don't offer adequate protection against the summer heat, cold winters, and fires. "For phase 1, we have helped build a small utility hall, an administration block, and a starter kindergarten classroom using our product – blocks made of cement, expanded polystyrene beads, water, and a binding agent," says Graeme Horwood, Selcrete's CEO. "Twelve new structures will be built in total."

Improved protection against fires, to which the densely populated township is prone, and superior insulation are two main improvements at Noluthando, Horwood says. "Selcrete makes a building two to three times better insulated compared to structures made of bricks and mortar. It offers better protection against fires and fungus too," he says. "The product is thus very suitable for South Africa's cold and often wet winters and hot summers. Selcrete is inspired by techniques used in Norway, a country where weather conditions are really extreme. If it works there, it works everywhere."

Noluthando might be the first, it certainly isn't the last Selcrete project. "We are negotiating a number of commercial and residential projects in Gauteng, KwaZulu-Natal, and also the Western Cape. In Knysna, we are currently building an upmarket residence. On behalf of Rotary for the Knysna Educational Trust, we are working on a social responsibility rebuild in Khayaletu, a township near Knysna," says Horwood.

Selcrete is relevant for the South African market because projects can be realised in half the time of conventional homes. This could translate to a 25% cost reduction, Horwood says. "It is an attractive solution for budget-conscious projects like Noluthando, or even for the low-cost housing sector, where



Children from the Noluthando daycare centre celebrate the opening of the new building.

quality, affordability, and time efficiency are very important factors. Delivery of low-cost homes in South Africa needs to take place, and quickly too," he continues, referring to Stats SA's latest General Household Survey.

Published in April 2016, the report suggests that 13.1% of South Africans live in informal settlements. "We can deliver better quality homes, and other buildings too, more efficiently and cost-competitively, while being better for the environment."

Selcrete is a greener product due to the use of recycled polystyrene. "Because our blocks are made on site, they don't have to be transported, saving energy and minimising carbon emissions," he says. "Better insulation means that Selcrete buildings require less energy for heating and cooling. This has a positive impact on carbon emissions, but also on people's financial situation," Horwood says, noting that low income households typically spend more of their income on electricity than mid- or high-income households.

Mavis Mbaba, who founded Noluthando 22 years ago when she opened her home to 45 children who needed care while their parents were at work, is excited by the improvements to her daycare centre. She says: "These new buildings will change everything at Noluthando. From now on, the children can do activities in a safe environment, without the risk of fires. Fires are a risk when working in a wooden building. These new buildings don't require as much maintenance as the wooden ones. Maintenance costs a lot of money. So yes, I am very, very happy indeed." ■

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Mavis Mbaba (Owner of Nolunthando daycare centre) holding a Selcrete block at the opening ceremony in Khayelitsha.

About Selcrete:

Selcrete was inspired by and named after the Selvaag Group. Founded in the 1950s by Norwegian engineer Olav Selvaag, the company pioneered innovative construction techniques that achieved substantial cost and time savings compared with traditional construction techniques. In December 2015, after four years of development, Selcrete received the Agrément South Africa stamp of approval.