



The sixty-square-metre Othalo houses will incorporate around eight tonnes of plastic waste | Photo source Othalo

Innovation > Architecture & Design > Partnership designs modular houses to be constructed from recycled plastic

PARTNERSHIP DESIGNS MODULAR HOUSES TO BE CONSTRUCTED FROM RECYCLED PLASTIC

 ARCHITECTURE & DESIGN

The homes, which incorporate around eight tonnes of plastic waste, have been designed to be a low-cost option for sub-Saharan Africa

Spotted: A partnership between the UN-Habitat (the United Nations’ programme for sustainable urban development), Architect Julien de Smedt and Norwegian startup Othalo has designed a range of modular houses to be made mostly using recycled plastic.

The sixty-square-metre Othalo houses will use a patented system for the main structure and incorporate around eight tonnes of plastic waste, most of which will be collected from near the building sites.

The homes have been designed to be a low-cost option for sub-Saharan Africa. Eventually, however, the designers hope to build temperature-controlled mobile storage units for food and medicine, as well as refugee shelters and larger modular buildings such as schools and hospitals. The designers hope that the system will allow millions of tonnes of plastic waste to become useful building material.

“We believe this is one of the ways to deal with a shortage of building materials in these areas of the world where there is an urgent need for housing,” said **De Smedt**. “Just as cities are formed by buildings of wood, of concrete, clay, steel, they could very well contain a building constructed from plastic waste, as long as it’s done in a safe and sustainable way,” he added.

For the initial design, they looked at fast-growing cities such as Nairobi in Kenya and started analysing the types of buildings people live in, what kind of jobs people have, as well as how people do business and interact between each other inside the community. As a result, the houses feature

a variety of interconnected covered spaces, loggias and terraces that provide a sheltered outdoor area.

Othalo expects to begin producing the houses by the beginning of 2022.

Written By: Katrina Lane

Explore more: [Architecture & Design Innovations](#) | [Sustainability Innovations](#)

26th October 2020

Website: othalo.com

Takeaway:

According to a report by Leeds University, an estimated 1.3 billion tonnes of plastic will end up in the environment by 2040, unless significant action is taken. Considering the amount of waste worldwide, plastic could provide an entirely new material resource to make use of. With Smedt and Othalo's method of recycling, millions, or even billions, of houses could be built and simultaneously alleviate the toll of plastic on the environment.