

The possibilities of 'cargotecture'

Repurposed shipping containers have been in demand all over the world for decades. They have been used as clinics, schools, housing, storage, parking, apartments, shops and other meeting spaces. In this article, Umnyama Ikhaya shares with us their philosophy behind this alternative building technology and how it can be used in a creative and socially uplifting way – as an affordable housing option.

Sketch and renderings: © Grow Architecture

Umnnyama Ikhaya, meaning 'rainbow homes,' specializes in modular building, using high cube (HQ) shipping containers measuring 12,19m L x 2,44m W x 2,9m H. These containers offer more ceiling height and qualify in terms of permanent housing.

According to John Venter, Director of Umnyama Ikhaya, their modular housing concept can be applied to all aspects of society, from low- and medium-cost options to premium housing products – both *on* and *off* the grid. It is fully customizable and can be used to construct everything from an outside room, shop, apartment block or township to an upmarket house. All permanent structures will be fitted to a 6x concrete pier foundation with 40cm ground clearance. Only registered BEE contractors will be utilized for the work, and on a subcontractor basis. The depth of the foundation will be site-specific and will be quoted separately depending on accessibility, soil type and the slope of the site. The possibilities are endless, in line with the company's motto of "You dream it, we build it."

The company's main focus is completely off-the-grid green housing, integrating solar, wind, green wall façade, waterless toilets, rainwater harvesting systems, gas installations, sustainable fireplaces, LED lighting and more. Venter says the beauty of the concept is in its simplicity, yet it offers an unlimited diversity of applications and uses.

COSTING

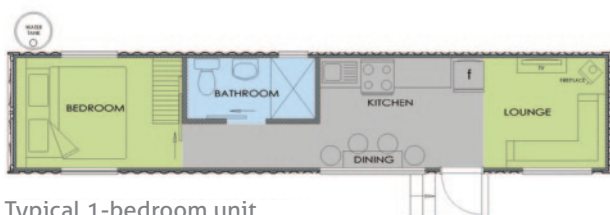
Umnyama Ikhaya's first factory opened its doors just outside of Cape Town in March 2016, ready to begin manufacturing the 30m² pod homes. The concept has officially been accepted by government as an official alternative building method, so there should be a fairly simple council approval structure in place with no delays.



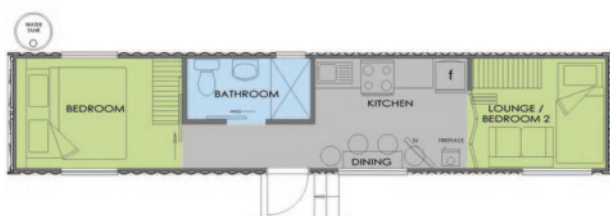


The 1-bed and 2-bed, completely off-the-grid pod homes are selling for R275,000 and R295,000, with up to 100% finance available, with zero deposit required and repayable over 99 months, through GreenFin Financial Services, a registered credit provider. Terms & Conditions apply. (Full inventory details available upon inquiry.)

Venter is firm that only repurposed high cube containers will be used at all times as building blocks. As a form of upcycling, this not only avoids the landfill, but saves 95% energy compared to recycling where the containers must be melted down. "Our aim is to get economies of scale involved and to bring the cost of green off-the-grid living down considerably. This technology must be available to everyone, not just the fortunate few," Venter states.



Typical 1-bedroom unit



Typical 2-bedroom unit

Container housing, 1 and 2-bed layouts – for informational purposes only.

BENEFITS OF CARGOTECTURE

Also referred to as 'cargotecture,' the question remains – why container homes? Venter offers the following reasons that make container homes an interesting consideration that could offer a viable housing solution whilst making green living more affordable:

- Affordable
- Stronger yet simpler
- Short manufacturing time; less labour intensive
- Space saving solution (stackable)
- Very small carbon footprint
- Mobility (originally designed for transport)
- Insurance savings

GOALS

Venter adds that his goals include the promotion of entrepreneurship and education by involving communities with skills development programmes – the basic homes will be built on this principle.

One challenge is to attract and convince local banks to supply mortgage finance for medium-cost container housing. This, in turn, will help South Africa with its housing shortage, and at the same time help to procure international and local government subsidies for such lower-cost housing programmes. "The same moment we can offer 20-year mortgages will be the day households can afford a home. A joint or single income of R10,000 per month will qualify for such a loan with a monthly bond repayment of under R3,000 per month."

Based in Cape Town, Venter says service will extend to all parts of South Africa, with long-term plans to expand into Africa as he believes the entire continent stands to benefit from this venture.

For more information, visit www.umnyamaikhaya.co.za.



John Venter, Director of Umnyama Ikhaya.