



Even the art is environmentally friendly. This piece by internationally acclaimed artist Bongani Buthelezi is made with recycled plastic melted onto the canvas with a blowtorch.



# Eco inspiration

Celebrating its rich Edwardian past and its environmentally-friendly future, this Joburg house, aptly named Treetops, proves that building and renovating using sustainable methods can be as glamorous as it is green. By **Elizabeth Donaldson**

The house was beautiful. Built in 1910, the simple Edwardian-style house perched above the Joburg Zoo included a columned wraparound veranda, pressed ceilings, wooden floors and a magnificent terraced garden. Fast forward 100 years and the veranda had been closed in, the pressed ceilings had started to sag and the wooden floors were covered in carpets. Built-in cupboards threw the proportions of the rooms out and steel windows had replaced the wooden sash ones. The once magnificent stone terraces had crumbled and the garden was densely overgrown.

However, the new owners were determined to restore it to its former glory. Not only that, they were determined to complete the renovation using strict environmentally-acceptable and sustainable methods and materials.

The first, and most important, renovation was the roof, which had been designed in such a way that the east and west sides of the house were

flooded during heavy rain. In addition, the walls had rising damp. Originally corrugated iron, the owners had to find the most carbon neutral option. Safintra Roofing recommended an aluminium-zinc coated steel option which has a longer life than galvanised steel so it uses less resources. It's also 100 percent recyclable and allows for simple integration of green technologies such as water harvesting and solar panel installation. The roof also matches the original profile which completed the authentic look of the restoration.

Then came a lengthy building process, as certain walls were raised to accommodate the new roof. Bricks were sourced locally and only Afrisam cement was used. Paint was another challenge because they could only use the low volatile organic compounds (VOC) types. Thinners and turpentine are toxic, so only Plascon water-based paints were used as they meet the strict criteria of the Green Building Council of South Africa. Ivory Parchment, a dove





grey colour, was used in the reception rooms and Lemon Drizzle, a soft off-white, was used in the bedrooms and passage. The effect is a timeless, neutral shell into which any style of décor is perfectly placed, and colour schemes and trends can be played out in fabrics and furnishings without having to paint again. This is an important element of creating a sustainable, eco lifestyle; you don't want to be repainting or redoing unnecessarily.

Then came the critical process of insulating the house. Keeping a house cool in summer and warm in winter is every homeowner's concern. It is also one of the most energy intensive elements, yet the basic foundations of this process are usually ignored. A home's heat is lost through the ceiling, windows and walls and the most effective way to keep warm in winter is to insulate the building. Polystyrene sheets were built into the walls and Eco-insulation, made out of recycled plastic bottles, was installed in the roof. Windows were all fitted with a special shutters produced by a local manufacturer, The Plantation Shutter Co. These traditional plantation shutters are available in wood and aluminium and provide solid insulation against heat and cold. The aluminium options also provide excellent security as well because they are impenetrable even if the windows are open.

When it came to furnishing, the owners used all their existing furniture, and added locally sourced soft furnishings. House and Homeware sofas and armchairs in white bull denim and colourful bed linen by Cabbage & Roses were selected. Both these décor designers produce beautiful products that are all made locally.

Art is a characteristic feature in house and one particular piece by Joburg artist, Mbongeni 'Richman' Buthelezi dominates the living area. What is interesting about this particular piece is that it is made out of recycled plastic. As a struggling student, Buthelezi had no money for materials so he collected plastic litter, and melted it onto a canvas using a blowtorch. The effect was striking and so he developed the technique and is now a global phenomenon. In fact, German tool giant, Bosch designed a special

blowtorch just for him.

The original wooden floors were stripped and sanded in the entrance hall, living room and passage while Belgotex carpets were laid in the bedrooms for insulation and to make the sleeping areas quieter as wooden floors can be very noisy. Belgotex was selected because the company has made a notable commitment to sustainable development. The floor coverings are designed and developed to be long lasting and are made from recycled content wherever possible. Plus, the raw materials can be recycled at the end of their useful life.

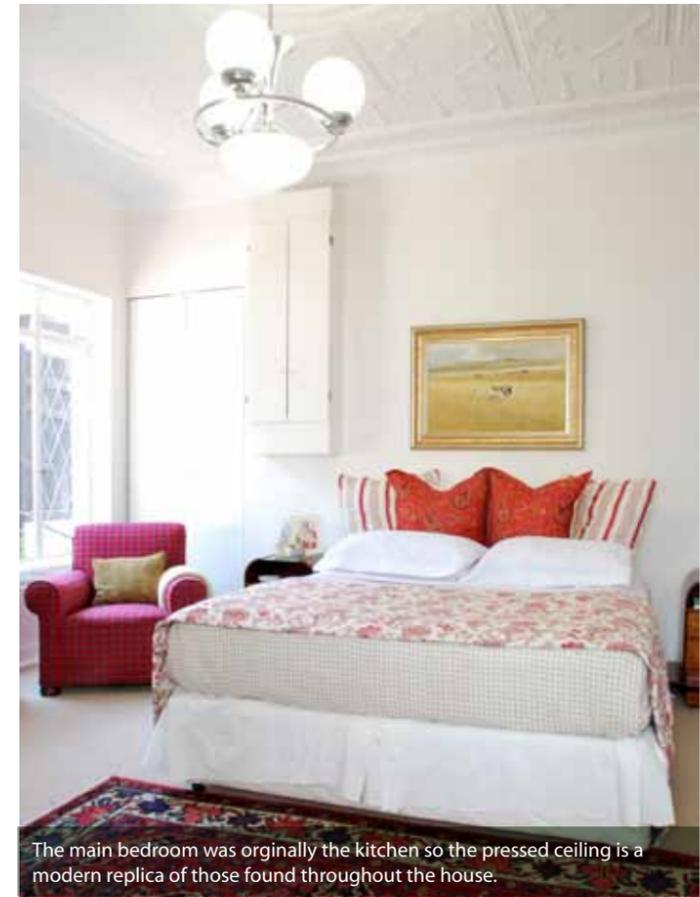
The kitchen floor was a particularly difficult challenge because one half was wood and the other (the part that was once a veranda) cement. The owners wanted to keep the wood but were warned against using wood in a kitchen because of the high traffic and the constant use of water. They settled on Belgotex's wood-look vinyl, which blends beautifully with the Oregon

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pine floors. The vinyl is even textured like wood.

The kitchen leads out onto a deck, which is built out of a faux wood plastic composite by Envirodeck. From the entrance hallway of the house you can see into the kitchen and out onto the deck. Three types of floors are clearly visible; one is the original wooden floor, one is vinyl in the kitchen and the deck outside is a plastic composite mould, yet to the naked eye, it looks like a long sweep of wood. The Envirodeck comes with a 20-year guarantee, which is music to the ears of anyone wanting an eco-friendly house, as it will not have to be replaced or treated with chemicals. Although the product is American, which impacts negatively on its carbon footprint, the company has not cut down a single tree in more than 20 years of business.

There are three ways of looking at the greenness of a product. There is the process, the longevity and locality. Some products have all three qualities, some





only one or two. What is important is to try to find the product that has as many green qualities as possible.

Gas was installed in the kitchen and the drainage system is based on the traditional French drain in which waste water passes through a series of filters before pouring directly into the garden. In this case the kitchen water feeds a flower bed and lawned terrace. Lawns are notoriously thirsty and in many eco gardens are replaced by xeriscaping, which uses stones and succulents to replace a traditional garden. By reusing household water and harvested rain water, the English country-style garden at Treetops has been preserved.

Back inside the house, the bathrooms were also preserved despite decidedly dodgy fixtures. One bathroom had a pretty, original basin and loo, but



The four-year-old son's bedroom displays his own artwork, as well as a portrait by Robert Hodgins.



The basin in the main bathroom was re-enamelled and simple, grey floor in recyclable vinyl was laid.

both were badly stained. The second bathroom had been built on in the 60s and had bright green fixtures. Both bathroom suites were re-enameled in white and Belgotex recycled vinyl was used on the floors. Slow-flow shower heads and dual flush toilets were installed to reduce water consumption and one of the geysers was removed.

Rubbish removal at the house is managed by Mama She's recycling and large compost pits and worm farms take care of the kitchen waste. During the building process, rubble was removed by companies that use landfill – you could try Red Bins or Interwaste – as opposed to 'the bakkie brigade' who tend to dump it wherever they can. This is often more expensive but your green conscience will be clean.



The shutters in the living room provide insulation and security. The carpet was bought by the owner's grandfather in Russia shortly after the Marxist Revolution in 1917. Badly worn and damaged, the carpet was almost discarded but instead it was restored and resized and now takes pride of place in the house.