

Breathe easy

A healthy home was the focus when Tony and Wanda Brljevič designed their new eco-home on the heights of Whangapoua.

There was plenty of inspiration in the site alone – a spectacular north-facing piece of land overlooking Whangapoua village with sweeping views of the beach and out to Ahuahu – Great Mercury Island.

It is Wanda's ancestral land, where her iwi, Ngāti Huarere, have lived since the arrival of the Te Arawa waka.

The Brljevičs wanted to build a home there that was strong, kind to the earth, and created a healthy environment for them to live in.

Since earthworks began in February 2017, the couple has worked every available day building the house, which is designed to be fully compostable, is solar energy-ready and, with a rain water collection system, allows them to be fully self-sufficient if required.

When *Our Coromandel* went to print, there was still interior work and landscaping to be done, but the Brljevičs were on track to be in the house by Christmas 2019.

Throughout the build, Tony and Wanda have travelled to the site each day from Coromandel Town, where Wanda grew up and Tony was a former Coromandel-Colville ward Councillor and our previous Deputy Mayor.

It's the fifth house Tony, a sheet metal engineer by trade, has built. For this project, he taught himself to use architectural software so he could draw up his own plans to achieve their vision for the modernist, 340m², four-bedroom house.

Before work got underway, he spent hours researching the principles of health-based building and the latest sustainable building products on the market.

Christchurch company Health Based Building was a key source



Tony and Wanda Brljevič.

of information and guidance on sustainable materials, supplying the Magnum Board sheets that line all parts of the house and deliver what is essentially 'breathable walls'.

The board itself is CO2 negative, which means it consumes CO2 in the manufacturing process, is free from chemicals and is vapour-permeable and mould proof.

With Magnum Board used for the interior walls, the rigid air barrier and the exterior layer the cladding was adhered to, the wall system meets Health Based Building's 'Foreverbreathe™ Specification' for being airtight and vapour-permeable.

The Brljevičs used breathable paint throughout the house and opted for a wool-based insulation layer, which holds 30 per cent of its weight in moisture and contributes to a drier living environment.

The house 'breathes' through the walls, Tony says. "It will exhale 11 litres of moisture each day. When we are working here we always remark the atmosphere is 'soft' and there's a dry, warm feeling, even on the coldest winter mornings," Tony says.

"A drier environment is easier to heat and cool. We are expecting an average humidity inside the house of less than 50 per cent, well below the 80 per cent level in many modern homes."

Steering away from a traditional polystyrene raft slab for the foundation, the Brljevičs built on an eco-friendly system developed by concrete company Firth, consisting of a network of stackable polystyrene-free, recycled plastic 'pods' that connect together to form a grid. The system is becoming popular in Christchurch due to its strength.

The choice of materials throughout the house contributes to a



Above left: The house is built on Wanda's ancestral land.

Above and left: The house is designed to be almost fully recyclable and 'breathes' through the walls.

Far left: Tony Brljevič.



low volatile organic compound (VOC), which means there are fewer toxins in the air.

One of the hardest parts of the project was the plaster cladding, which the couple did themselves, working through the summer of 2018/2019 to apply three layers of a breathable plaster imported from the US.

"We were getting up at 5am to get to the site before the heat of the day, which made the plastering more difficult," Tony says. "That's a job that would usually be done by a team of four-to-five workers, so for two people it meant long hours and heavy work."

Throughout the build, Tony has bounced ideas off a builder friend and friends and family have lent a hand at certain points. One of the couple's sons took time off work to help his Dad with the framing. The plumbing, electrical and drainage work required licensed professionals and Tony and Wanda have used locals, who they say have been great.

Tony juggled the project around his previous Council and Community Board commitments, and stayed on top of Council reading and work in the evenings. Wanda has worked alongside Tony, while also keeping up her cultural and environmental consulting work.

"Tony is a machine and just keeps going and doesn't leave things unfinished," Wanda says. "He's very fussy."

Tony agrees: "One of the reasons I wanted to build this myself is because I knew I could not afford to pay anyone to be as fussy as I am."

There were days where Tony felt a bit anxious about the project. "I just had to trust and take it one nail at a time," Tony says.

He also kept coming back to their belief in being good stewards of the environment and the guiding principle of Tiaki. "We don't live

in the environment, we are a part of the environment. Everything we do reflects back to us," Tony says. "Fortunately, what is healthy for us is also healthy for the environment, so all the materials are environmentally friendly."

All parts of the house, except the laminated wooden frames, are fully recyclable.

Robin Curtis at Health Based Building says Tony's approach to his build challenges current construction methods on all levels.

"Tony looked deeply into every product and what it delivers to his sustainable development focus. He has put everything under the microscope," Robin says. "As an independent home owner, he should be applauded for his focus on sustainable development."

Tony does not think the cost to build a 'healthy home' was hugely more expensive than building with traditional building products, although there were logistical challenges with sourcing the alternative materials from Whangapoua, and getting them to the site.

"You can't just duck down to the local hardware store and get these products," he says.

The reward for the hard work is living in a house they know is 'healthy'.

"We know every single millimetre of this house and what has gone into it," Wanda says.

The Brljevičs are looking forward to spending the summer of 2019/2020 working on the finishing touches and landscaping to achieve a tropical and coastal feel.

Then they can enjoy their hard work.

"2020 will be time for a rest," Wanda says. ●