

Next Magazine - May 1995 - Home of the Month Feat of clay

Nestled amongst the hills and valleys of Upper Moutere is a house which has grown, literally, out of the hillside it was built on. Lynne Dunphy investigates.



Six weeks after they met, Kevin Johnston and Glenys West started planning their new home. Three and a half years and a great deal of back-breaking work later, they've created The Mudcastle on a section which they could hardly see the first time they went to visit, because it was submerged in gorse.

When they started designing their home, Glenys and Kevin had two considerations in mind - they wanted to use natural construction methods and they wanted their house to be energy efficient. Because they wanted a large house, the building site needed to be excavated. But rather than dumping all that wonderful Nelson clay they decided to make use of it. A one-day workshop with Richard and Bella Walker, local experts on clay house construction, convinced them that the method was for them. "The simplicity of the method appealed, as well as the fact that we could do it ourselves," Kevin says.

But the couple wanted more than a home. They wanted a house which would show off to its best advantage the antique furniture Glenys had been collecting for the last 20 years. "We just had to take a gamble that the old furniture would suit a mud brick house, which we feel it does very well," she says with some relief. And they also dreamed of offering quality accommodation as a boutique bed and breakfast "aimed at tourists who want something a little bit out of the ordinary."

Many trips to the library later, Glenys and Kevin had a fairly clear idea of what they wanted and went to structural engineer Gary Hodder, who's well acquainted with clay house construction. He transformed their ideas into a coherent plan acceptable to council building inspectors. Building requirements meant they could have clay only on the ground floor, so they plumped for batten and board on top.



They've come up with a design that incorporates passive solar heating by careful attention to where the bricks are open to the sun at different times of the year.

Since clay has no natural water repellent, that factor also had to go into the equation.

Glenys and Kevin had several trial runs before hitting on the most efficient way of producing the bricks. Clay brick (or adobe) houses are popular in the area, so there was plenty of expertise to draw upon. They started out going strictly by the book, tramping the clay mixture before forming it into

bricks. "That wasn't ideal," says Glenys ruefully. "We cut our feet to ribbons because of all the little sharp bits of rock, and after a day's work we'd get about 70 bricks and couldn't walk for two days!" Given that they ultimately made about 10,000 bricks for the walls and floors, this method went out the window fairly swiftly.

In the end, the couple went for a kind of cake-mixer method, using a rotary hoe in a clay pit full of water, clay and straw to produce a steady stream of bricks. "We'd walk up and down with the rotary hoe, then pick up a load with the front end loader and dump it into the moulds."

During the process, they exhausted three rotary hoes. "It was like mixing up about 1000 gardens - it was hard on the tools, even a concrete mixer wasn't up to it," says Glenys.

They used several moulds to provide the various brick shapes they needed, letting one lot set while the next was being poured. The bricks are sun-baked, but to avoid cracking during the drying process they had to be hosed down regularly. Then they had to withstand drop testing and compression testing for strength.

Living in cramped quarters during the building meant that moving into the finished house has been doubly satisfying. When they started work on the site, the couple shifted a single garage onto the section for them to live in. Glenys' father is an electrician so he rigged up the power. Kevin built an extension onto the garage so they'd have ventilation.

The garage was plonked down on gravel, so there wasn't a lot between them and the elements, and with no insulation the temperature inside was just the same as outside! The floor was reminiscent of the fairytale about the princess and the pea, but instead of a pile of mattresses, the couple piled layers of carpet over the gravel. An old wringer washing machine and a bathtub outside completed their abode for the next two and a half years.

There's no denying it was hard, but, says Glenys, "We coped because this was our dream. Keeping that in sight we put up with all sorts of conditions to achieve it."

The Wwoofer - that's Willing Workers On Organic Farms - scheme made the whole project possible. More than 100 people from all over the world donated their labour in exchange for room and board, and often English lessons as well! The couple qualified for help as at the time they were providing organically grown silverbeet to a local hospital, and believe the fact that so many people contributed their time and energy to building the house gives it a special quality. "It was amazing the way people with the skills we needed would come just at the right time," Kevin says. At times their energy flagged and it was then, says Kevin, that the Wwoofers proved their worth. "It was the energy from all the people coming in here saying this is really special that gave us the shot in the arm we needed."

The crew ate well. Everybody took a turn in the cooking, which meant cuisine from around the world.

"The food bill was enormous but we had some good parties!" Glenys says.

Kevin's father is a blocklayer so he was able to help out, showing them how to make the arched doorways and circular walls.

After the combination of a prolapsed disc and redundancy forced her out of the workforce, Glenys became site manager. She didn't waste an instant though, and learned how to make stained glass windows and do stencilling. "I had to do something or I'd have gone mad," she says.

The second storey sits on top of the clay walls, which are reinforced vertically and horizontally with steel rods. It was built

using conventional construction methods, with batten and board exterior walls, wooden floors and gibbed interior walls. An enormous round window graces each side of the upper level's four faces. "It means it looks interesting from any side," says Glenys.

Now most of the hard work is done and The Mudcastle is open for business, with guests coming from all over the globe.



The house has a generous, expansive mood, helped along by its sheer size. At 464.5 square metres, there's plenty of room for everyone. The main entrance is a living area which has a conservatory feel to it, aided by the greenery twining up a large rough hewn log. Glenys has used indoor plants here and in the kitchen to enliven the clay walls and floor.



Downstairs she's used mainly calico, Indian cottons and dark green fabric in the curtaining. "I wanted colours that fitted with the natural tones of the clay." Persian rugs dotted about the floors add colour, as does her growing collection of pottery, glass and rugs made by local craftspeople. The clay floor in this area is in a spiderweb pattern, centring on a marble-topped circular table. "Whichever door you come out of, the floor comes in towards the dining table," says Glenys with a smile, "and in case you miss the point, we built a clay spider into the floor!"

When they were deciding how to tackle the floor, rammed earth was one option, but having tried it in the pantry they decided it wasn't logistically possible. "There would have been so much work in ramming it and repairing the cracks and drying it." Even polyurethaning the floor was a major undertaking, because the clay was so porous it soaked up 60 litres before it was sealed properly.

Heating such a large area would have been impractical with an open fire, so a combination of passive solar heating, a fan system and the woodburning wet-back stove was the answer. The picturesque

was abandoned in favour of efficiency, and the couple use an Ugly Duckling wood burner designed by the DSIR which has a solid front rather than glass. Glenys' father suggested they try a motor that pulls the warm air from the roof space and pumps it back down into the lounge to recycle the heat. In summer this works in reverse and removes the heat from the house. Eventually, the couple hope to use wind as another power source.

The kitchen is the only downstairs area with wooden walls, so Glenys took the opportunity to use colour boldly. She chose a colour scheme of electric blue with red highlights. Black slate flooring not only looks stylish but again hooks into passive solar heating.

With Glenys having had five years running her own restaurant, Glossops, in Wellington, gourmet cooking was always going to be a feature of their establishment. This is a real cook's kitchen, with masses of bench space and storage, and all the latest appliances.

The downstairs bathroom has a nautical theme, with old ships' portholes set into the walls along with two aquariums filled with cold-water fish. The old bath has been resurfaced and encased in clay for better heat retention. "That way you can stay in for longer!" says Glenys. Stained glass designed and made by Glenys adds to the marine feel of the room.



With guests using the vast living area downstairs, the couple decided their bedroom to be a hideaway where they could relax, so they created a self-contained bedroom and living area with an office and en suite bathroom accessible only through the bedroom.



While Glenys was recuperating from her back problems she made good use of her time, adding many of the decorative details around the house. Their private suite is painted in cream, dusky pink and dark green, with the dominant colour varied in each room and a stencilled grapevine design picked out in the accent colours.

Along the hall are three more guest bedrooms decorated in different styles and colours, and, upstairs, another two attic rooms. Glenys' antiques fill the house with an atmosphere of Victoriana.

Eventually, a self-contained adobe unit past the garage will also be turned to guest use and a pool is planned for the large hole left over from brick production.

after all their hard work, Glenys and Kevin are well pleased with the result. Kevin sums it all up, "We won't be shifting for a while - it's wonderful living in a house that lives and breathes!"