



If you believe...

With no previous building experience, this mud brick home has been beautifully finished.

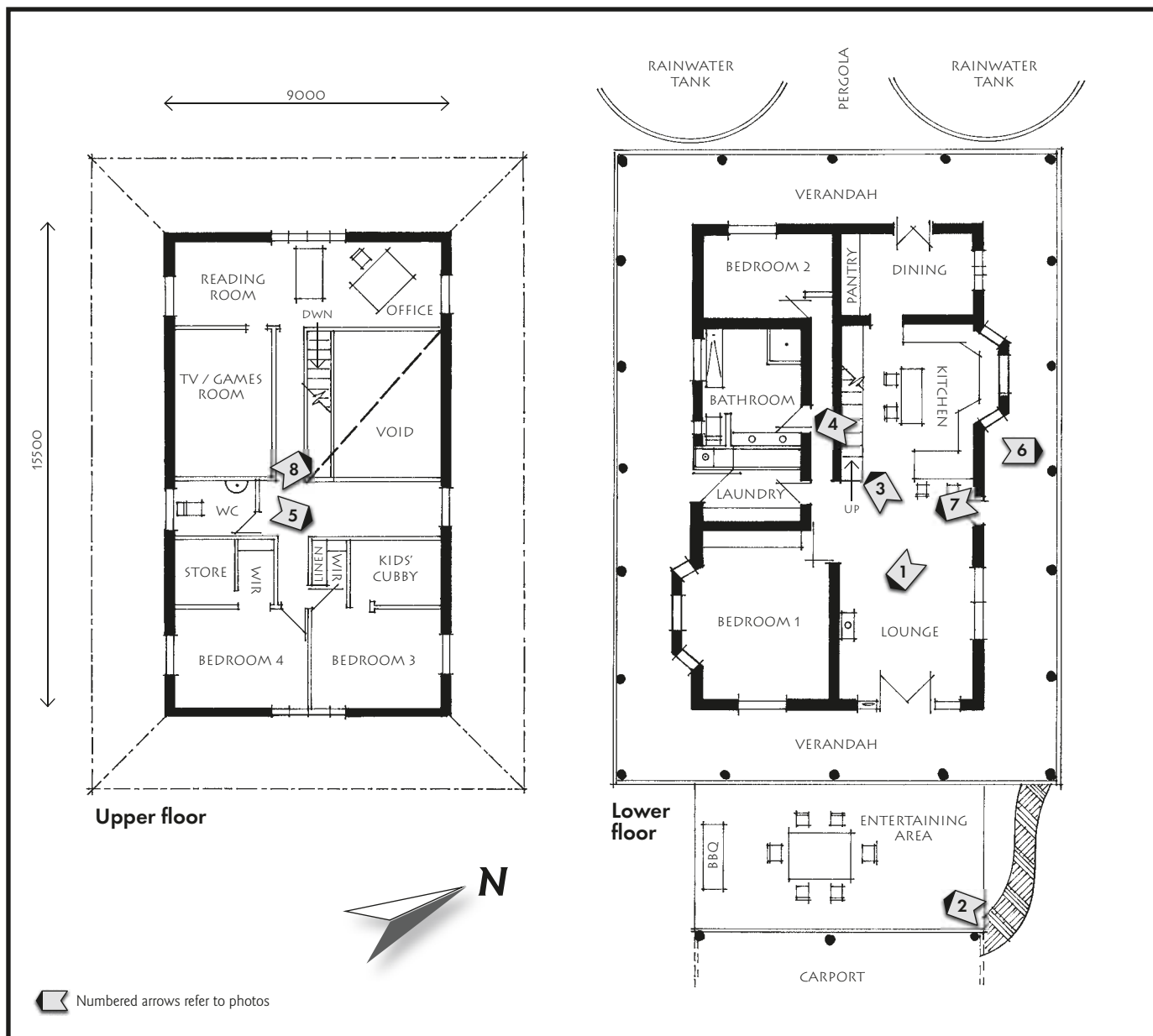
BY BOB MUIR

PHOTOS BY LYNDA WILSON





1. The Coonara up against an internal mud brick wall keeps the house cosy.
2. Covered BBQ/entertainment area.
3. Platform and staircase to upper floor.
4. Zincalume cladding and glass bricks.
5. Recycled oregon floorboards look great.
6. Deck overlooks gardens and water course.
7. Fired bricks form skirting and wall base.
8. The kitchen is at the heart of the house.



Gayle and I decided, in our mid 40s, that we wanted to build our own home on a bit of land. There wasn't much land available in the area, and we didn't want to stray too far, but we found a plot we liked and the planning could begin. We decided on a steel frame with infill mud brick walls.

The initial plan had three of the four bedrooms at the west end of the house, until we realised that they would get far too hot in the summer. Gayle came up with a simple solution 'Instead of redrawing the plans, why don't we just end-for-end them?' A woman's logic, you just can't beat it.

We drew up the plans and submitted them to council.

Based in the Indigo Valley in Victoria, our temperature range is 14–31 degrees in summer and 2–13 degrees in winter. Our house is positioned to face 30 degrees east of north. It was designed to accept through breezes on both the ground and first floor levels.

Timber!!!

We personally preferred to use, where possible, the big old timbers of yesteryear as quite often they had their own story to tell. Their strength of character and natural ambience is clear (to us) above other mediums such as steel or manufactured timbers.

Some of the large 200 x 200mm bridge timbers in our home are from

Dargo Victoria. Others, like the 200 x 75mm x 5m long exposed beams, were originally from a demolished warehouse in Albury NSW, and the timber we sourced for the first floor is from a demolished warehouse in Port Melbourne. We were also fortunate to acquire 200 sticks of 6.8m oregon 125 x 40mm tongue and groove floorboards - with a clean up and two coats of tung oil, they have provided a floor to die for.

But alas, older timbers are getting progressively more difficult to source, so we opted for the next best solution and purchased a lot of red stringybark (*Eucalyptus macrorhyncha*) from our neighbour Des Varker's portable sawmill; main uses being 250 x 100mm



stair stringers, 200mm x 2.7m verandah posts, and about 50m of picket fencing around the house.

Another rare find came in the form of an old white ant ridden farmhouse we purchased for \$1000, with the proviso that we remove it. Luckily for us the white ants had long since vacated, leaving behind stacks of cypress pine (*Cupressus macrocarpa*) ceiling and dado lining, a bountiful supply of air dried 75 x 50mm framing, several thousand old red fired bricks from two chimneys, and an assortment of useful building materials that would have cost a fortune at retail prices.

It pays to keep your ear to the ground.

Construction

The house is a total of 280m², over two levels, built with around 4500 mud bricks (125 x 250 x 375mm). These were pressed on site, using the soil cleared earlier. The brick compression unit had a hopper on the top of it, which was periodically topped up with a front-end loader. As each brick was pressed, it was released and rolled out by a conveyor belt – at a rate of around 1000 a day! After initial experimentation we decided not to include any binding agents such as straw or cement, as we felt the bricks could well and truly hold their own. And we haven't been disappointed.

The basic construction began with a 15.5 x 9m raft slab. Along the external edges and down the centre wall we placed 17 RHS sleeves (80 x 80 x 800mm), 400mm into the concrete and with 400mm above. Once the slab was set and cured, we inserted our 75 x 75mm posts into the sleeves (400mm into the slab). On top of each post I had welded a flat 6mm plate with four bolt holes, and at 2.5m up the post I had welded

Above left: Open mezzanine allows entry to rooms tucked under the roof.

Above right: Office has a great view.

a 6mm right angle bracket to the inside face of the post. These brackets would carry 150 x 100mm timbers around the external walls so that I could bracket to them for the 200 x 75mm exposed beams. The three centre posts had the same lower brackets but the top brackets were U-shaped to carry the 200 x 150mm centre ridge. At that point, we installed all the exposed beams, and got a roof plumber in to do what he does best.

I personally found this particular method of frame construction simple, easy to build and very strong.

With a hat on the house, I could now lay bricks come rain, hail or shine – and I did, all 4500 of the suckers! At 20kg each, I looked like the Incredible Hulk by the time I'd finished.

As our walls are 250mm thick, we laid the fired bricks two along and two high, with a gap down the centre that made a great channel for running the electrical cables all the way around the house. Before laying the first row of mud bricks, we placed a 250mm wide moisture barrier along the top of the fired bricks. Cleaned and varnished, the outer face of the 'old reds' create the best looking skirting you ever set eyes on.

I used crushed bricks to make up the mortar and render, thereby binding the bricks together perfectly – with exactly the same mix as the bricks themselves.

Indigo Shire Council was very helpful throughout. The only real challenge I experienced was that the exposed beams, at 1.4m centres, were not close enough to legally carry the upstairs loads. These had to be brought closer together, to 600–700mm centres. A lesson well learned.

Comfort

Mud or clay bricks, being of a non-toxic medium and breathing naturally, have great thermal qualities. They take in warmth from the sun and fireplace during the day, and release that warmth back into the house at night. How good is that? Turn the heater off and most conventionally built houses turn into meat chillers in no time at all.

Even though I consider our winters to be somewhat mild in north-east Victoria, it is just beautiful to light a fire in the *Coonara* on a cold winter's night and sit sipping a nice Baileys or a good red wine. There is a bedroom directly above the heater, which the flue goes through thereby warming it up.

On the other hand, we've found that no airconditioning is required in the summer, by opening windows and doors at night and closing the house up in the day. We manage to maintain a constant temperature of around 23 degrees year round.

Services

Our water system consists of 3 x 22,500–litre *Bushman* tanks, fed off the house and verandah roofs (approximately 300m²), and encouraged into the house by a *Davey Dynaflo* pressure pump. We also have a large spring-fed dam, with a firefighting pump.

Greywater and blackwater is piped into a septic system, over a baffle and filtered into a 100m long gravel trench about 400mm wide and 400mm deep. Stormwater around the house is collected from the ground surface and tank overflow, and then piped into a natural water course that runs through the property.

The house is served by the power grid, which involved installing a transformer

on a power pole approximately 150m from our boundary and then trenching the power cable underground to our property and into a pit. We then laid cable underground from the pit, to a pole I had set up with a meter box, and then a further 10m underground to a fuse box on the house.

Termimesh has been installed around all slab entry points, and an exposed 100mm surface all the way around the slab allows for a more user-friendly way of inspection for control. These measures are approved as viable alternatives to using dangerous pesticides that I believe have a rather limited lifespan these days.

Precautions

As we live in a bushfire zone, as do the vast majority of country folk in rural Victoria and southern NSW, we felt it wise to comply with all specified regulations, plus a few more of our own. When implementing fire safety precautions, a little common sense can go a long way.

We installed steel flyscreens, and made sure all eave and ridge spaces were sealed to keep sparks and embers out. From the dam firefighter pump, we've run a 40mm loop system all around the property boundaries, with about two dozen 20mm taps. The polyethylene piping is trenched 300-400mm underground with all taps having galvanised stems, thereby reducing the chance of melting or burning.

Have a plan and know what you will do in case of an emergency.

Learning curve

To start with, we only had basic hammer and nails skills, and tools for that matter, but a mean determination.



We gained an awful lot of knowledge on the how to's from reading about other peoples experiences in *The Owner Builder*, and by picking other people's brains – people love to tell you stuff! We built up a collection of average tools, like an electric saw, drill, angle grinder, sander, hammer, ladder... mixed with lots of elbow grease they worked well.

Our advice would be to build safely by hiring the appropriate scaffolding, harnessing etc. – it is really hard to lay bricks from a hospital bed.

Making a living and building a house at the same time does have its challenges. We lived on site, about 40km from town, so on workdays there was not a lot of time left for building. I believed that if I got just one small job done each day, then that was one small task out of the way.

It took us a total of 10 years to build our lovely home. In that time, we also built a business, among other things. In actual building time it took about four to five years of part-time building. Other than small loans for completing three stages, we financed the project on a week-to-week basis ourselves.

The main people involved in our project were Gayle and myself, our

electrician Terry, our plumber Alf, three to four concreters, and last – but certainly not least – our cherished occasional handyman mate Bill.

Would we build again? Yes, we've done our apprenticeship, so why not! In a different medium, a kit home perhaps; being empty nesters makes it somewhat easier. I believe we've learned patience, determination and more self-discipline. We started building in our mid 40s, and my message to anyone starting out is:

**If you believe you can, you can
If you believe you can't,
you're right. ■**

Where to now for these owner builders? Time for a seachange to Kangaroo Island for yet another project. Hmmm, maybe a RAL Homes kit this time? So we are putting our mud brick home, on two hectares in the Indigo Valley Victoria, on the market. Genuine enquiries welcome, 02 6026 9399.



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PHOTO: FROM GAYLE & BOB'S ARCHIVES

