Staged western muddie

How the Howards earned their stripes

BY SHARYN MUNRO

In the wheat and sheep belt of western NSW, alternative building designs and materials are not common. Despite the seasonal extremes of the climate, standard brick veneer project homes are blithely plonked in the paddocks of rural blocks. They are not usually thoughtful passive solar, and certainly not made of mud brick.

Gilgandra farmer Chris Howard and his bookkeeper wife Robyn broke the local pattern and went looking far afield to see for themselves the alternatives they'd read about in magazines like this one, and to find out how it was done, hands-on when they could.

They were living in town while Chris worked away, but Robyn was keen to get a timbered block not too far out and build on it. They found a 36-hectare block, sandy soil, full of she-oaks and cypress pines, and the research began.

PHOTO: CHRIS & ROBYN'S ARCHIVES

Sturdy steel stairs to loft in stage one were the work of son Adam, then a 17-year-old apprentice.

Helpful muddies

Robyn had spare time, so she did a great deal of the research; reading, ringing and talking to experienced people like Rylstone's Mike Pridmore, noted and passionate muddie. They even travelled to Nowra on the NSW south coast to learn from 'Make it Mudbricks,' and to 'Starting Point' at Cockatoo in Victoria from Cherie Forrester. Robyn still marvels at how friendly and helpful every one of them was.

It took twelve months of such information gathering before they felt game to start on a small loft building, as a 'shed' or stage one. A friend, John Stevenson, drew up plans to put to council for a garage/studio. He suggested adding 1.2m in iron to the wall height above the wall plate and loft floor before beginning the gable roof, to give more head room.

Gaining experience

They liked the idea of using local and natural materials where possible. Mud brick seemed the go but they'd received conflicting advice on the content and method. Initially they were told they had to add cement, so they did, but their experimental bricks crumbled. Thinking it must be their soil, they got some from nearby Coonabarabran, but by now they had decided not to add cement. Unsieved, unstabilised, this soil made great bricks – as their own soil would have done.

A concrete mixer and a single steel mould were used to make the bricks, although they found that a ladder mould was handy to keep eager but inexperienced visitors occupied and out of trouble off to one side. Bricks are 380 x 250 x 100 mm and weigh 20 kg each.

They had several bursts of help with the brick making, from a group of young male friends of their daughter's. Unemployed at the time, the lads relished the chance to make something tangible and enjoyed country life for a change. All were inspired, and later found work back home on the coast. Each time they came to stay, many bricks were made, says Robyn, and the pizza oven was well used.

The initial small building took about 700 bricks but the Howards practised laying and rendering on an outdoor pizza oven first. Robyn figured that if they could lay bricks in the round it'd be a breeze to do them in the square.

To facilitate the building process by having a roof up first, they'd decided to do a pole frame with mud brick wall infill.

Cypress rules

As the local termites are ferocious, the poles had to be of local cypress pine, long proven to be unpalatable. Her brother, Greg, provided all the poles they needed from his own block. The poles are remarkably similar in colour to the mud bricks, a soft pinkish-amber, and the building looks very much at ease in its local habitat.

They used laminated and pressed *Hyspan* beams to span the 6m x 9m building. These are light, strong, easy to handle, and eco-friendly in that they use scrap timber. Cypress flooring was

PHOTO: CHRIS & ROBYN'S ARCHIVES

1. *The Howard's happily linked staged building: tall loft unit to the right came first, then proper 'house' to the left, then the breezeway in between.*
2. *Timber rules in the new kitchen, but harmonises with corrugated iron and mud brick.*
3. *Bathroom/laundry in the first little house – ripple iron and mud brick painted with turps and linseed oil.*
4. *Stage one under construction.*
5. *Large white cypress poles support verandah, look great with their nubbly branch ends, and famously defeat the local termites.*


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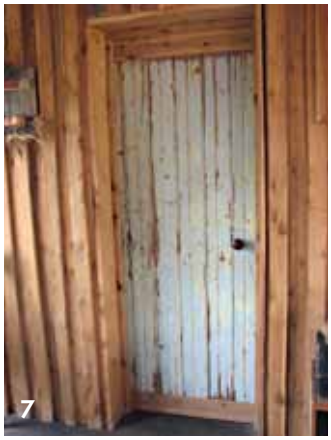
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6. *Simple, sunny and second-hand kitchen in first house.*
7. *Bathroom door: Robyn's family history preserved and carefully revealed.*
8. *Screened breezeway makes a spacious and airy entertainment area.*
9. *Timber and tin in effective contrast.*
10. *No flies or mossies, just breezes.*
11. *Main bedroom adjoins sunroom.*
12. *Colour matched cypress posts with mud brick infill– naturally beautiful.*
13. *Looking from 'new' kitchen to breezeway.*
14. *The practice mud brick pizza oven.*
15. *Something old, something ancient.*
16. *Grandmother's French doors; new pantry.*


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PHOTO: CHRIS & ROBYN'S ARCHIVES


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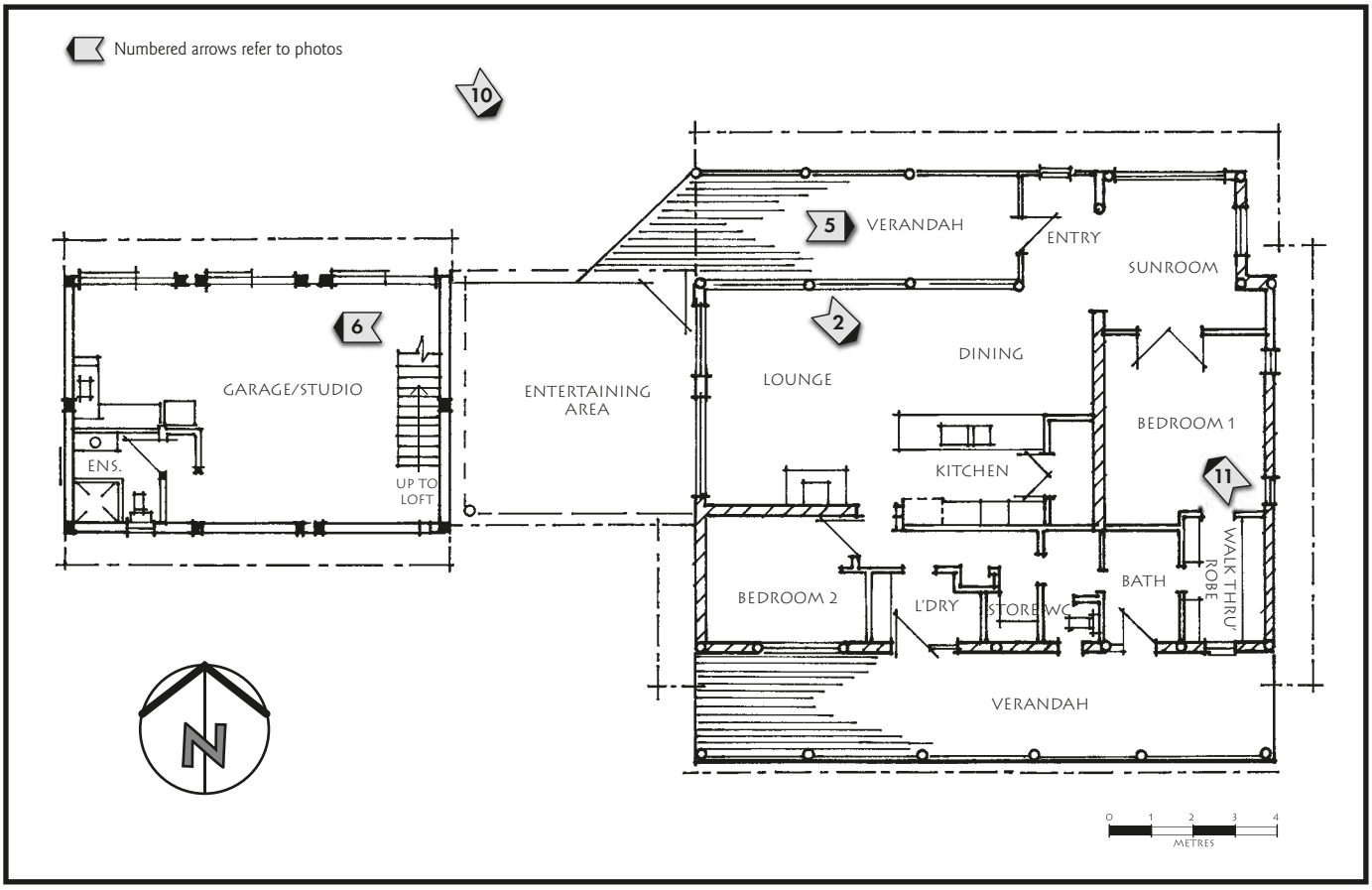

laid over these, but the ground floor is polished concrete, intended as a heat sink. It was poured inside concrete footings/skirtings.

With the majority of glazing on the northern wall, the lower storey works well, but they have found the loft gets too hot, despite the *Zincalume* roof and upper walls being well insulated (foil and fibreglass batts). They will one day extend the western roof to create a carport, which may help. In hindsight, they feel that the loft houses they looked at in Victoria may have been appropriate for that climate, but not for theirs, which ranges from –3 to 50 degrees.

Good use has been made of rough sawn cypress board and batten walls, both around the glazed double external doors and to form internal dividers downstairs, and for the two partly enclosed loft 'bedrooms.' This timber also came from Greg's place.

Something old...

Robyn loves old furniture and old building materials, especially when they have a family history. The door to the bathroom was the original back door to her great-grandmother's house in town; she lightly sanded the face lining boards, just enough to reveal the layers of paint it had gathered over its 90 years – including the favourites of blue and green and cream – and added extra 'ledges' top and bottom to make it fit, with the back bracing timbers a decorative zigzag.

That door leads to a simple *Mini Orb* and pine-clad bathroom/laundry. They installed a flushing loo, as they have both bore and tank water, and the cost of a proprietary composting toilet was beyond the budget at the time. Apart from the bathroom, the ground floor is open space. A second-hand kitchen was extended with plain pine shelves. Windows and doors are all recycled, but they chose second-hand aluminium windows, as maintenance-free.

The loft level is reached by sturdy checkerplate steps supported on a central square steel tube, made by their son Adam, then a 17-year-old apprentice mechanical engineer. Up to twelve family members helped put the high gable roof on, recalls Robyn. They lined it from inside later, using sage green *Mini Orb*. Beyond the large open floor area of the stairwell, the cypress partitions do not extend full height, and include open shelves and hanging spaces.

All timbers – and mud bricks – are finished with linseed oil and a little turps. The walls are not over-rendered, so the softened but clear shapes of the bricks make a gently undulating and very attractive wall.

Robyn drove out from town every day to work on this first building. Stage one, 'the little house,' took 12 months to build, and they lived in it for two years, recovering, collecting used or seconds building materials, and planning stage two.

Going bigger

Having heard of Gisela Duber from near Taree, as being experienced with mud brick buildings, they drew up roughly what they felt they wanted in the layout of their house and went to her to have the detailed plans drawn.

Very much designed for their particular lifestyle, as a couple whose children are all grown up, it would give them a simple two-bedroom house with a large open living/dining/kitchen area. To join the two stages visually Chris came up

Clockwise from below left: the verandah that could have been a pergola; lovely old door with original working doorbell; council rules that chains hold house down; antique mirror, modern basin.

with the idea of a covered and screened breezeway cum entertaining area.

Gisela told them they'd need about 2,000 bricks. They had a reserve store of bricks from the previous brickmaking, but needed to make about another 1,000. Having originally thought to pay to have the bricks laid for stage one, they'd made contact with Mike Pridmore after reading a story about a large house he'd built for someone. Then they'd decided to do it themselves, but now they knew they didn't have the time or the helpers to lay the bricks on stage two, as only Robyn was available, so they called Mike again.

Twelve rows of firebricks had been laid as footings, to raise the house above any possible flooding from the nearby small creek, as well as for inspection crawlspace under the timber floor. Mike arrived with two helpers and they laid the lot in ten days, with Robyn as offsider. Mud walls were tied to poles with brickies' ties, at the Howards' request. In stage one they'd used continuous bird wire netting strips laid in the mortar to join one pole to the next, having seen this method at the Nowra workshops.

Robyn went round filling the inevitable narrow gaps between wood and mud with a bottle fitted with a nozzle, in the same way that some people use a flexible icing bag and nozzle. Acting on advice, externally they sprayed the mud walls with diluted *Bondcryl*, internally with linseed oil, but now Robyn thinks she'd rather have used linseed oil on both sides, as she did in stage one, where it proved waterproof. Robyn loves mud bricks as the walls can be repaired so easily.

Prior to this they'd employed a builder to erect the poles and roof. In all they paid for 50 days' work, spread over several months, as and when needed, with Robyn as site manager, labourer and general dogsbody. She and Chris would do what bits they could manage in between.

The larger house took 12 months to 'complete' and in May 2007 they moved in. Like all owner built homes, there are still small things to do. When I visited, Chris was working on enclosing the subfloor of the breezeway, cleverly using leftover galvanised roof capping bent to shape to support short corrugated iron panels. I was intrigued to note that, beside all the brick piers, the deck bearers were chained to the concrete pads: council rules, said Chris with a shrug.

The breezeway is large (9m x 6m) and uncluttered, with cypress pine floorboards – a great summer space with uninterrupted views of garden and bush. They were very lucky in finding enough matching second-hand aluminium framed screen windows for just $400; hardly any cutting to fit was needed. Its *Zincalume* roof is lined with foil-backed *Air-cell* insulation only.

Blending in

The breezeway opens into the new house, which also has three other external doors. Once again, timber and mud meet corrugated iron with ease as linings, and old pieces are fitted in to their new lives with grace.

Windows are aluminium and all but the toilet one are seconds from a Dubbo manufacturer's yard. The Howards had given Gisela the sizes of what they had, to work into the design. Garage sales had yielded treasures and the owner of the local Chinese restaurant had given them a beautiful old 1860s panelled door, complete with working door bell. The builder thought they ought to have a 'proper' new door, but Robyn stood firm, well aware of what gives character to a home.

Some of the internal walls are lined with 75mm seconds floorboards, weathered on one side, so put through a thicknesser, and used back to front, with new grooves added. Ceilings are *Zincalume* or *Colorbond*, to avoid painting – and cheaper than the narrower profile *Mini Orb*.

In the main open space, the slow combustion 'Gourmet' heater/stovetop/oven backs against an internal mud wall. It heats the house and their water in winter and the solar hot water

system takes over in summer. They highly recommend their *Solartech* hot water unit, with no pipes to burst in their frosty winters. They varied from standard installations by using a plastic *Solartech* tank, as their bore water would have reacted with metal.

Whilst they'd have liked flitch-edged bench tops, the open kitchen is of standard timber-faced melamine shells, with granite tops. The individual stamp was made by using a slab of old red box found in Robyn's uncle's shed as a counter top. Leading to the very spacious pantry – for Robyn's preserves – is a pair of old French doors that were from her grandmother's house.

Two matching pairs of 1940s bubble-glazed doors lead from their east-facing bedroom to sunroom and dressing room respectively. Another old door opens from sunroom to verandah.

Placing special items like this takes forethought and fiddling, but is so worth it!

With all materials they considered the most sustainable options, and while they could not always afford them financially or time wise, they chose the next best and hoped to be able to retrofit later on. Being aware is a major achievement.

Solar dilemma

The aforementioned sunroom is an enclosed extension of the verandah. The latter had been meant to provide passive solar heating for the living areas. However the builders convinced them that the timber deck had to be covered by a solid roof rather than simply having a pergola over. This might save the timber, but it stopped the winter sun. I suggested that perhaps in the future it could be replaced with a clear polycarbonate roof over a timber solar pergola, such as John Basden uses (see *TOB #134* pg 54 for an article on designing a solar pergola).

The floor the sun would reach is not a slab, the ideal for a heat sink, because they really wanted the softer feel of timber, after their experience in the little house/shed.

And the decking has been a problem anyway, because of the finish used. Robyn had thought she'd bought straight tung oil, but it proved to have a sealer in it. This forms a skin that will deteriorate and need sanding to rejuvenate.

Personal touches

The bathroom has dual access, mainly from their walk-though wardrobe, but also from the hall beyond. Natural colours were used, with walls of tall plain glazed tiles, and floors of smooth Australian pebbles set in tiles. This treatment is carried though to the adjoining basin alcove and separate WC. The round basin sits on a large ironbark slab, below an old etched mirror that Robyn had held onto for years.

The deep bath is meant to be used for relaxing, with views out to the bush when the lovely old external door is open and nobody else is around. This is potentially an entry door when steps are built to the verandah. In the country why limit the bathroom view to a window? I am a big fan of this sort of specific individual designing, where pre-conceptions and norms are dismissed.

The Howards enjoyed the owner building experience, although it was tiring. They did not find it any more stressful working with more tradespeople on the second stage, when perhaps living on site helped too. Their perseverance and creativity has achieved a uniquely personal and charming home, exactly geared to their needs.

In fact, Robyn has some leftover mud bricks and is planning another small building for herself, this time incorporating an earth floor. Seems the OB bug is thriving in this small pocket of the west at least. ■

- **Walter and Gisela Duber Design and Construction**
Taree, *02 6551 3151, www.duber.com.au*

- **Hyspan**
Laminated veneer lumber beams. Supplied by Westruss, Orange; *02 6361 4777.*
A number of product brochures, covering design, use and installation, are available to download from the futurebuild website. *1800 808 131, www.chhfuturebuild.com*

- **Western Plains Windows & Glass**
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