



1. Our whole house arrived on the back of one BIG truck!
2. A total of 70 stumps were put in over three sessions.
3. Hand lifter made installation of wall panels easier.
4. The arches begin to take shape.
5. Temporary props allow tired workers to take a break.
6. Nearing the end of the roof plumbing jigsaw.
7. Roof sheets over frame, insulation and sisalation.
8. The professionals helped to do the internal walls.
9. Internal framing starts to define the living areas.
10. Worm farm waste system ready to be hooked up.
11. Stumps, bearers and joists awaiting the ply sheet floor.

Kit home with curves

A house ready for extremes of temperature

BY ALLISON WALKER

Will and I started our building journey in 2007 after making the decision to live in Mansfield permanently (or as permanently as you can be in these times!). After moving here in May 2006, we decided that country life was far preferable to anything that we could experience in Melbourne, especially for our children. We found some land mid 2007 – four hectares, north facing and only 1.2 kilometres from the main street – and purchased (with a long settlement) in September of that year. After selling our house in Melbourne in Feb 2008 we finally owned the land by April 2008.

During this time we had been searching for our 'dream house' – drawing pictures, scribbling notes, clipping from newspapers and planning all of the things that had to go with the house. We had also walked the land from boundary to boundary many times, framing views and measuring the slopes. We knew that we had a wonderful opportunity ahead of us to be as environmentally aware as we could and to build a house that would allow us to reduce energy usage and be warm in winter (can be -5 degrees) and cool in summer (runs of 40 degrees plus as we are having this summer). Once we had chosen the design (a kit home from *RAL Homes*) we started the paper trail with council and were ready to start as soon as our house arrived!

Truck arrives

A big truck pulled up to our land on 12 November 2008 with our entire house on the back of it! I found it hard to believe that EVERYTHING for our

house (including nuts and bolts) was on the back of one truck (albeit a big one). I loved seeing the pile of insulation – no more cold winters for us! It was very exciting watching the unloading process with our four year old jumping up and down with excitement when she saw the roof (curved *Colorbond*).

Building starts

Now that the house had arrived we were very impatient to start the process. We were fortunate enough to have some wonderful friends who took time off work for a few days to help with the stump process. The crew of 'Daves' were both experienced house builders and renovators and their assistance was most appreciated. String lines and hurdles were set up and the boys camped beside the dam, using the time to catch up – one from Melbourne, one from Daylesford and our Will from Mansfield.

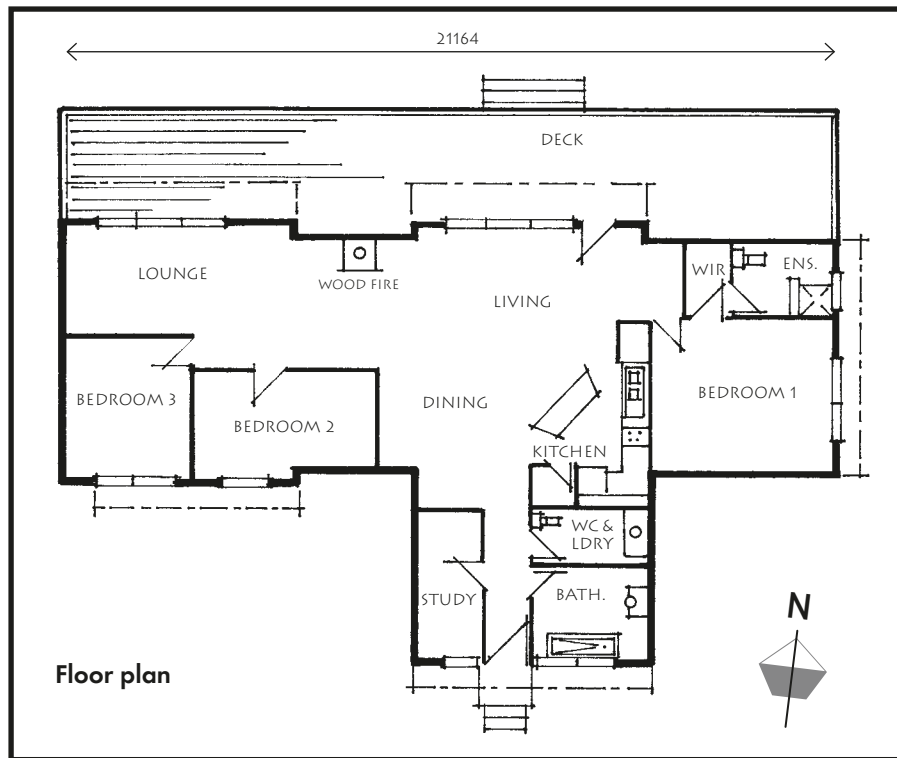
When it was time for the hole digger to arrive we had a forecast of LOTS of rain – no, couldn't possibly happen

during November. Stump holes were dug in the morning, inspected early afternoon and then 19 of the 70 stumps were put in. Then the rain started and didn't stop for three days! While we would normally love the idea of over 50mm of rain this late in the year (and our dam loved it), we actually wanted it to stop (shhh, didn't say that). The rest of the stumps were put in the ground in two sessions when we were able to get more help (as the Daves had to return home).

At this time we also had a visit from the worm farm people. We had decided that we would install an *A&A Worm Farm Waste System* for our waste water. They had exhibited at a local expo earlier in the year where we had been able to ask many questions and watch the DVD on how it all worked. Another truck arrived – this time from Hastings. With a boiling hot day ahead (the rain had gone) the installer got stuck into digging a big hole. Unfortunately he didn't get very far as he hit a rock shelf and had to pack up and return home. We had to contact a 'bigger digger' to come and dig deeper before they could install the system. This



It was a bit like putting together a big Meccano set - with lots of unusual pieces!



was done quite quickly and we then had to go back on the list to wait for another installation date.

Bearers, joists and floor

Once the stumps were in, Will was able to make a start on the bearers and joists. We could see quite quickly where the house was going to sit and exactly how big it was going to be. Stakes in the ground didn't really do it for me when I was trying to envisage our new house. The girls loved the balance beams that Dad had set up especially for them (or so they thought) and spent most of their time on site walking the perimeter of the house on the various beams. This part of the job seemed to move quite quickly and our house was growing more and more each day.

Due to the nature of our house, the building order is a bit different. After the bearers and joists were done, the floor went on next. This came in big ply sheets and seemed to happen, again, very quickly. More friends were able to help out along the way, which made it much easier.

Moving on up

The floor was finished just before Christmas and we had a giant dance floor in place! It was very exciting to

be able to see the size of the house and views that we would have out of our northern windows, and of Mt Timbertop from the eastern main bedroom. This coincided with a 'week off' for Christmas festivities and trips to Melbourne. We were also able to order the water tanks (we are not on town water) for arrival late January.

Although Will was keen to make a start again on Boxing Day, unfortunately no one else was around. The vertical part of the house was started on 28 December with the help of a mate up here on holidays - thanks Macca. This involved bolting together large panels (approximately 2 metres long by 1.2 metres high) with angled strips in between to create the curved shape. The walls are made of eight panels bolted together to form an arch. In reality it was like a big Meccano set - however one that neither person had used before. With a few pauses along the way (especially when the three metre high double glazed windows were being installed - both of these requiring extra man power), progress was fairly steady. There were a few rainy days early on, some very windy ones when work stopped due to safety issues and then some really hot days.

We are building a RAL 5, which means that it has five arches. Two of these arches face north and are

completely filled in with windows and glass doors (double glazed) looking onto our deck. Of the other arches, two are south facing and one looks to the east. These will have much smaller windows (also double glazed) and will be filled in with insulated stud walls. This part of the building finished on 21 January. While there were a few things left to do before frame inspection (like cyclone straps and making sure the cross braces were all done), this stage was basically finished. We now had a house to walk inside and plan our internal walls. All external walls are curved, but the internal ones are straight. The external walls are self supporting and so our internal layout was entirely up to us. We drew lines on the floor to mark rooms, power points and light fittings.

Plumbing

Our roof plumber and his apprentice spent a number of days putting the roof puzzle together to finally install our curved roof. Each section of the roof over the arch has three pieces that needed to be carefully fitted together - one on each side and one over the top. Combine that with the 'four way' and 'three way' at each end (imagine a T shape and cross fitting) that also had different shaped pieces of curved *Colorbond* - and you can see why the entire process was a challenging one! Now that it is all complete, we can see how the house blends into its surroundings with the 'Pale Eucalypt' steel roof and walls. With a few fittings left to do (namely the gutters) the roof is all but complete. Two layers of insulation were put in: batts with an air gap, then reflective sisalation and then the roof sheeting. We also plan to insulate under the floor later.

The main internal plumbing is also finished and the water tanks arrived in late February (2 x 24,000 litres to start, more to come later) - finally we have water on the block, as the dam is now a sad mud puddle. We still have to plan the greywater diverter to flush the toilets from the bathroom wastes, but all of the pipes have been installed with this in mind. All pipe work is easily accessible under the house as we are on stumps. We were very fortunate to have both a plumber and electrician who were open to us helping where we could to reduce costs and also to tackle something that was a bit out of the ordinary!

We have future plans to install grid feed solar electricity and have recently joined a 'solar neighbourhood' plan to help with the costs of such.

Internal fitout

We decided to use a registered builder for the internal walls – by this stage Will was growing weary of the constant building (full time for more than three months) and we decided that someone 'in the know' could get things done much quicker. This thinking preceded a number of our decisions – weighing up the benefits of paying someone else to do work (expensive but quicker) vs. doing it ourselves (cheaper but much slower). As we are renting while building we have to factor in our rental payments as well.

In just over a week we had internal walls and three end walls (two to the south and one to the east) all framed in. Our girls love the way that they can now find their bedrooms and have started planning the rest of the furniture placement. The plasterers are due to start soon and then there will just be the painting (Will) and sanding and polishing the floor (also Will!) to do.

The double glazed panels, that we were lucky to pick up very cheaply from the glazier, are at the timber framers being completed, so the external cladding on the south and east walls also has to wait. Our front door followed us from our house in Melbourne – it has a very special stained glass insert that our wonderful friend Cherie made for us.

Kitchen and bathrooms

Our main bathroom is the smaller of the two and will be finished first. Measuring only 2 x 2.5m, it will hold

a bath with shower above and a vanity (homemade from a slab of wood from Will's dad's backyard in Melbourne). We also have a second bathroom planned for next to the main bedroom – with an entrance separate to the bedroom so that others can access it more easily. While all of the plumbing has been put through the floor and walls, we will not be fitting this one out until we have moved in (and hopefully have more funds).

The kitchen will also be finished as we go. Although the internal walls are straight, they adjoin curved walls so we have some creative cupboards to build. There is a large pantry to plan and a kitchen island bench. We hope to build a separate cupboard with a floor vent (that can be closed in winter to keep out ice) to store our fruit and veggies in with wire shelves and baskets. We will move in with our sink and 900mm stove (brought from Melbourne – a wedding present that we couldn't leave behind) but the remainder of the kitchen fittings will be done after a much needed holiday!

Future growth

With our house plans we have looked to the future with room sizes and placement. Although our girls are still only four and six years old, they will grow and we will possibly need more space. With the modular RAL system we have several options available to us to add another module if need be. We also have a living space that allows for two separate areas without having too many internal walls.

Our shed plans that we put through council are on hold. Originally we were going with a 'shed package' that was going to go up before the house. As this didn't happen when we wanted it to (ran out of time) we have changed our minds



Fixing the cyclone straps to base.

and are now discussing the option of a straw bale shed to go beside the house. And there is the natural swimming pool to plan as well...

However, it seems we will achieve our goal of having the house finished by 3 May (and hopefully long before) so that it can be part of the Sustainable House Tour. ■



- **A Sustainable World Expo**
2 May 2009, 10am to 4pm.
Mansfield Showgrounds Vic.

Exhibitors who are actively involved in creating an environmentally friendly place to live. An open house Sustainable House Tour is also planned for Sunday 3 May. 0417 319 879, www.asustainableworld.com.au

- **RAL Homes**

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