

# Straw bale building update

## Straw bale workshops

*The Australasian Straw Bale Building Association (AUSBALE) promotes the use of straw bale construction.*

### Which workshop?

There are three types of workshops available in Australia that vary in length from one to five days.

If you have a general interest in straw bale wall construction then a one day information session or a wall building workshop might be sufficient. However if you want to be a hands-on builder or to gather information on construction techniques then the longer workshop is ideal. The third type of workshop is where an experienced straw bale builder holds sessions on various aspects of construction, sometimes called a working bee.

I would suggest that you select the workshop that best suits your needs. Research the notes provided with the registration form and talk to previous participants before you enrol.

Below are summaries of the different workshops currently available in Australia.

### Construction straw bale workshops

Some workshops can run for a period of about four to five days and these explore construction techniques in some detail. Advantages of such workshops include further skills development in areas such as carpentry, straw bale wall construction detailing

including stacking bales, notching/shaping bales, compressing bales, installation of services such as electrical, plumbing inside walls and rendering in lime, earth or cement renders depending on the provider.

### Straw bale wall construction workshops

This type of workshop is usually held over a weekend, typically for two to three days. These often explore theory such as architectural design, history of straw bale construction, costs, engineering and the practical hands-on aspects of straw bale wall construction, rendering and detailing around a door or window. These workshops are a great introduction to straw bale as a building medium. They also provide an introduction to professional builders, architects, engineers and other straw bale enthusiasts who may be involved in building a straw bale house at a later stage.

### TAFE straw bale workshops

In New South Wales straw bale construction techniques have been taught at the Ryde TAFE. I would encourage straw bale practitioners to approach TAFE colleges in their local areas and suggest such courses.

### Straw bale working bees/workshops

These run for about two to three days and involve various construction techniques on a 'living' site. They are particularly helpful for intending owner builders, as they can discuss problems and newly developed techniques





with the site hosts. Participants will contribute to building the host's house and so is a more practical experience rather than just a discussion of aspects of house design, engineering and construction detailing.

## Presenters

When shopping around for a workshop it is important to see who is presenting the workshop and check their experience and/or credentials.

### Builder

The builder should be currently licensed in the state or territory where the project is to be built. It is important that the builders have experience in building straw bale walls. It is also important to note that there are builders that claim to have a builder's general licence, but in some cases actually have a 'restricted licence' and their knowledge of construction is limited, particularly in areas of wet area detailing, structural aspects, rendering and waterproofing techniques (as you are no doubt aware moisture is straw bale construction's biggest enemy).

Check out the builder's licence through the state or territory's licensing board before you invest in a workshop.

The builder will usually have both hand tools and electric tools on site. Laws in some states will not allow the use of power tools such as chainsaws without certification.

### Architect/designer

The architect/designer should be registered in the state or territory, and have experience in designing straw bale buildings. In Australia, for persons to call themselves architects they need to be registered in the state or territory in which they choose to practice - it is illegal otherwise. There are many architects /



designers that claim straw bale detailing is simple and does not need to be a 'big deal.' My own experience is that construction detailing is crucial.

Questions to ask the architect/designer include:

- How many projects have they designed?
- How many have been built?
- How do they get their designs approved by local authorities?
- Look for a workshop with design input from architects who have a portfolio of environmentally sensitive building design.

### Engineer

The engineer should be registered with the local engineering association, and in particular have experience in designing straw bale buildings. There are too many engineers who claim that straw bale structure is the same as 'normal' construction. When I have spoken to our experienced engineers and builders they often relate criticism from clients of over designed post/beam structures and structural members, which in turn means more expensive building costs.

## Essential topics to be covered in a workshop

### Construction types, technical issues

During the workshop it is useful to understand the development and history of straw bale techniques: load

bearing versus post and beam with straw bale infill. A good workshop will direct you to where the latest information may be obtained, for example the AUSBAL website which has a wealth of information and an online forum. There is a list of builders and architects as well as news items of interest. Consider becoming a member of AUSBAL.

### Building, planning, sewer approvals

There should be information on how to get straw bale building approvals. This would include aspects of planning approvals, building approvals and approvals for alternative sewer systems. Again this would involve a builder, architect, engineer and possibly a building certifier or building surveyor. Some states now require a 'certificate of occupation' before the completed house can be occupied.

### Design considerations

A professional should cover aspects of design. So often, poor design will produce a building that does not perform to peak when aspects such as solar passive design, thermal mass, positioning of houses on site, microclimates, landscape design, permaculture and selection of materials are not covered.

### Structural considerations

During the workshop there should be references to the engineer's role that cover aspects of soils, wind loading,

# Moora Moora straw bale summer school

BY JEREMY LEE SHUB

In January this year I organised two straw bale workshops at the Moora Moora Community near Healesville. The workshops were designed so beginners could have practical experience with baling and rendering. There was also a section on passive solar design. We were working on a friend's house that was about three quarters complete. All the framing was done and some of the walls had already been rendered.

There were six participants in the first workshop. Most had no building experience or knowledge of straw bale. Everyone arrived on the Saturday morning and we started with a talk about what each participant wanted from the workshop. This helped to give me an idea about any adaptations needed to the weekend program.

The owner builders, Simon and Bindi, started with preparing a barrow load of first coat render. Each part of the workshop was a mix of practical demonstration with detailed explanation. Bindi is very knowledgeable and told us all about the three different renders and their ingredients. There were a number of walls that needed the first render and some needing second render. We spent the rest of that day rendering and watching demonstrations by the owners on flashing windows and baling. Everyone got to have a chance at every part of the process.

After lunch we went for a walk around Moora Moora and viewed half of the thirty owner built houses. The buildings cover all styles of materials from poured earth, mud brick, stone and timber. We met some of the owners and looked inside the houses. I had arranged for a demonstration at this time from my friend Ollie on his *Lucas Mill*. The workshop participants were very impressed by how the mill could create timber useful for building.



The Sunday was similar to the first day with a morning of rendering. By this time the participants had become familiar with the process, gaining confidence quickly. After lunch we finished off all the walls that we'd started – much to the delight of Simon and Bindi. We ended the day with a question and answer session with Simon, who specialises in passive solar design, and Dr Bob Rich, who has been deeply involved with owner building for the last thirty years. This was a great time for the participants to ask more general questions about building and design considerations.

We all shook hands and hugged in the evening. The workshop had been a great success. The feedback I received spoke of the clear message that everyone can build with straw and how great a material it is to work with. The group all went their own ways home with fond feelings from the workshop. ■

## • Moora Moora Co-operative Community

A residential community made up of a diverse group of about 50 adults and 20 children, who have chosen to live together in six small hamlets located on 245 hectares on Mount Toolebewong.  
03 5962 4090, 03 5962 3875,  
[www.mooramooraa.org.au](http://www.mooramooraa.org.au)

## Workshop feedback from participants:

'I had a great time learning both practical skills and being in a group with similar interests – community, sustainability and passive solar design'

**John, Barham**

'It was fun and inspiring – write a book'

**Catherine, Hawthorn**

'I loved that the workshop was residential and provided the opportunity to meet others thinking about the same things. All of you were great to be around – open, friendly and informative, so appreciated all the tea and cake.'

**Sophie, Kew**

'The workshop was very good. Simon was fantastic and informative, I could have listened to him for hours. I enjoyed the information and theory. Also the practical aspects, baling and rendering'

**Brett, Woori Yallock**

'Loved it! Very different to the other workshop we went to, good to see different ways to do things. A good mix of practical and theory/talking. For me a big part of it is getting the confidence to go ahead, so speaking to 'normal' people doing it is great encouragement and motivation. P.S. thanks for accommodating our son and making him feel so welcome.'

**Rachel, Hoppers Crossing**

'I really enjoyed the workshop – good fellowship encouraged among participants – important and valuable. Also great to hear the overview of passive solar design – concise and plain language.'

**Harold, Kyabram**

'It was great fun, and actually getting to put into practice a lot of what I'd only read about was very exciting. It has made me even more enthused about building with straw.'

**Michelle, Launching Place**

'I think there was a good balance between theory and practice. The 'giving' nature of the two facilitators all during the weekend was great. Working on a great home was stimulating. Thanks.'

**Judi, NSW**



structural design and engineering inspections during construction. An experienced engineer usually collaborates with the architect and gets feedback from the builder. The engineer's documents are critical in the building process.

### Building costs – borrowing money from lending authorities

Building a house is usually the biggest investment in people's lives. The workshop should discuss what building costs there may be. This can be covered with examples of previous projects and what current cost trends are. Reference to some applications for loans – 'contractor built' versus 'owner built' – can be very useful.

Too many owner builders are misinformed about costs, particularly when some estimates do not take into consideration building work which has been done through 'hands on' workshops or the hours/costs of food, accommodation etc. that owner builders pay.

### Insurance

A workshop should include discussion on what insurance is required. Insurance for owner builders should include public risk and liability and also theft of materials. Each state has specific requirements. A number of

articles in *The Owner Builder*, starting with #147 June/July 2008 have covered these points.

### Occupational health and safety on site

During the workshop there should be reference to legal issues regarding occupational health and safety on building sites. An induction prior to a workshop can be particularly useful. Does the presenter have insurance for any injuries that may occur? Are gloves, safety glasses provided or are participants required to bring their own to attend the site construction. First-aid kits should be on all building sites – and an experienced safety officer available.

### Examples of built projects, site visits

A site visit to a completed or under construction building is always a good break away from theory. A site visit is valuable particularly if clients are available for discussions about their experiences during the consultation and building process.

### Follow up workshops

Following a workshop there should be an opportunity to attend a follow-up construction day to hone skills in rendering, stacking bales, placing services in walls, etc.

Choose what workshop will suit you and what time you have available. Costs will vary from free 'hands on' workshops to \$720 for a four to five day workshop. Remember that you will only get out of a workshop as much as you put in. Have fun! ■

### AUSBALE

*The Australasian Straw Bale Building Association is an organisation that promotes the use of straw bale construction as a sustainable building material.*

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