

## BUILD YOUR OWN

# Cob Oven

Dunja, who runs the strawbale 'Willows Muse' accommodation cottage near Daylesford in Victoria,\* describes how she built her own cob oven, and then an improved version which features alongside her and her strawbale garden seat on the cover of EG 116.



by Dunja Kuhr  
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**W**HAT is it about cob ovens that fuels our imagination, makes us feel at home, and gives us comfort? It must be a genetic memory that gives us the message of 'home and safe' somehow, and allows us to gather around, relax and cook within the earth.

It is a cold end summer day out there and here I sit pondering on cob oven versions one and two, while planning version three to be built soon. Will it be a 'make a cob oven in a day and eat pizza that night' or a 'three day' version? It won't matter — I'll still love it!

### Version 1 — 'The Wombat'

This cob oven was cute and small (one pizza), and we built it one winter afternoon in 1999 in a four-person workshop led by our friends Don and Sue (see tipi camping and strawbale workshop advertisements in 'Unclassifieds'). It was built around a slice of timber as a door. While we were building our strawbale cottage however, it fell victim to the weather, my wild nephews (over firing the poor thing until it cracked) and finally an out of control Bobcat reversing while installing the pond. Well, it was in the wrong spot anyhow: the strawbale garden seats later took this piece of ground.

**Below: ready to go – materials all collected.**  
**Right: Dunja shapes the damp earth into the final mound.**



### Version 2 — built winter 2000

Our friends Khane and Karmen wanted to come up for the weekend and help build version two — sure, the more, the merrier! I had already prepared the site with four posts for a roof this time and the required materials were on hand.

### Materials

A rock base made from large bluestones (excavated by the tonne during water treatment system installation), small gaps filled with crushed rock, a steel frame hammered into the base for the two old stove doors we had found, flat bricks, sand, and fine sand and of course presoaked buckets of clay and a large bag of chopped straw. We also had some builder's plastic, some thin plastic and a cement mixer.

The set Saturday came. Roland was as sick as a dog. Our friends arrived around lunchtime and Khane looked no better: they must have had the same virus which they then tried the rest of the day to cure with lots of beer . . .

Karmen and I were ready to roll and we started making cob while the boys set the bricks on a bed of fine sand in a sort of level fashion, filling the spaces between the bricks with more fine white sand.

We girls loaded the mixer with sand and added



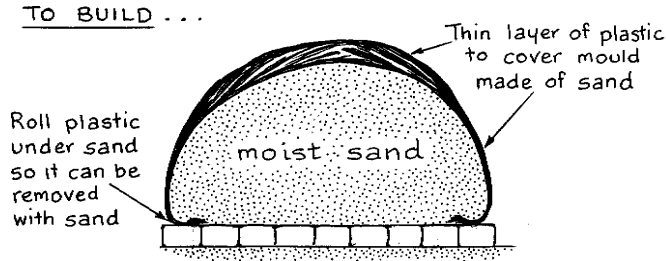
(while sieving out little rocks) the slurried clay. Simply presoak clay in large buckets for a day or two, then mix with shovel or a mixing blade welded to a rod, powered by your electric drill. (We had the latter and it makes it faster to really break it up, yet I began to render with the shovel and it works too: just soak as long as you can, here and there stirring it through). We then transferred the mix onto the plastic sheet until we had enough to start cobbing.

### The cobbing

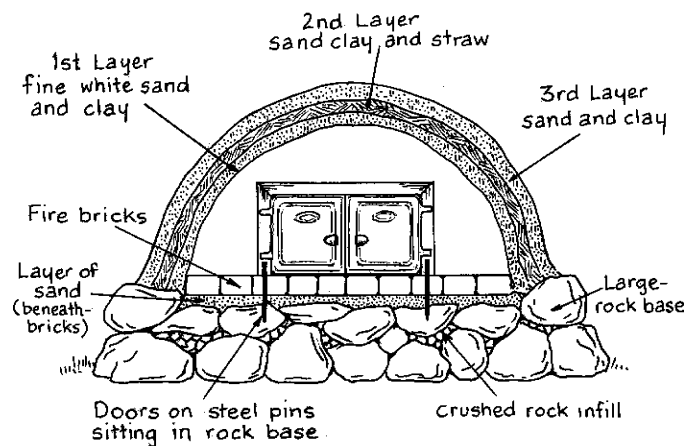
You'll need three layers of cob. The first layer is just sand and clay only, the second is the same with straw mixed into it, and the third is sand with a little clay only. When we had a few mixer loads (say three to four wheelbarrows?), we began making little cobs. This can be fairly high in clay content: sticky but not too wet. When is it right? What you want is a mix that you can pick up and throw because that comes next. Pick up small handfuls of the stuff, shape into a ball and throw it back and forth a few times. Collect it in a wheelbarrow or throw it to the laying crew if you have lots of helpers to put straight on.

### Progress

The day was getting on and two carloads of Khane's friends rolled up to have a sticky-beak at the cottage in progress while they were visiting Daylesford for the week-



### COB OVEN



end: "And what the hell are you doing there?" Well, lots of talk, more beer, a fire to sit around, but not in the oven yet. If you don't use the ready little cobs or premade cob mixture immediately, then moisten and cover them, THEN sit down for a chat. Khane however still got the lump of sand onto the base, which is then, the formwork for the next stage . . . tomorrow.

### Sunday

I shaped the sand lump that forms the mould for the cob, and we covered it with thin plastic. This stops the cob sticking to the sand and makes removal of the sand later much easier. Avoid large folds and thick plastic as the cob has a tendency to catch underneath the fold

and rip the foil or damage the layers as you remove it.

Next we started to cob up the oven with our premade cobs. Remember that you have three layers, and leave clearance around the doors. Start at the bottom door end and work around the base and upwards. If you use a timber door (version one) set it in place and cob around it, remembering that you will want it tight yet need to be able to remove it without breaking the layers.

Simply place your cobs onto the base, keep adding, and pound and knead them to each other with your fingers as you continue (ever made sausage rolled clay pots in school?). Cover the entire oven trying to somehow keep an even thickness and leaving fingerprints and dents and grooves if you like. This 'keying' will then make the next layer adhere better. Make allowance for your 'vent hole' and leave it free. Ours is at the back/top of the oven, yet this may change in version three. This really is a nice job and very relaxing if you're not working with the virally-infected . . .

### Second coat

When you're finished, add the second coat. We girls started mixing chopped straw into the leftover mix on the groundsheet (a whipper snipper and garden mulcher are great for chopping). To mix thoroughly, we stomped on the mix, rolled the sheet back and forwards by lifting each side and folding the mix again and again while adding more straw.

It should hold together nicely and the force of catching



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will compress or 'de-air' the mix. Again collect the cobs in a wheelbarrow or throw them straight to the laying crew. Lay them as previously, making sure of good bond to the basecoat.

## Monday

Today I used the premade straw, sand, and clay cobs and cobbled up the second coat. If you like decorations make shapes around the venthole, and doors (eyes and ears?). Then I revved up the mixer again and made another load of mix for the cobs of the final coat. This time no straw and finer sand if you have any. This layer should be a more sandy mix: just add enough clay slurry to hold the mix together. Less clay means less cracking, and better protection. As there was no straw to be added I formed the cobs straight out of the barrow and pounded them between my hands a little to remove trapped air. Then I cobbled up the third layer like the others, making sure that I maintained a good bond.

I let the oven dry for the rest of the week and then started to remove the sand inside which had acted as a form. All went well in the beginning but I found that the oven was very deep and my arms pretty short and the door too narrow for my humble shape: I never thought of that one! I used small garden shovels carefully so not to hit the side or backwall and Roland finally turned up with his much longer arm reach — and no virus . . . Godsend! Luckily no cob had stuck to the plastic liner and we removed it easily. Pizza time!

## Eighteen months later

The oven has a roof and partial walls (some 'stick-cover' to the north and east). We had a few fierce storms and I found that the third coat is starting to wear from the driving rain (west, which has no cover). Some cracks appear on the surface but none have gone right through the approximately 4 to 5 cm thick layer. As the unsealed third coat of our strawbale cottage has also been affected by this western exposure I will re-render this side before winter. Then I will also add another layer of cob to the oven and maybe trial a lime render/wash which Don and Sue have just added to their own cob oven.



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## Version three

We are building again — another strawbale house of course, but this time for us to live in rather than to rent to visitors. In front of the caravan (our present shelter and later to become the wwoofers'/visitors' quarters) I have the bases for two very large strawbale seats, which will be rendered in earth/lime render this time. They have severe weather exposure and are to be the test for our house render. There will also be another cob oven near these seats. This time it will be a little different.

The base will be much higher, about waist height. This makes access much easier for firing and getting food in and out — much more user friendly. I am still looking for an easy way (I like it simple as no engineering degree is in my pocket) to also create a space underneath for wood storage. Maybe extra large rocks in mortar as a rim, more mortar to a level top, then a 10mm steel plate, then another layer of rock for the base as previously? Any other ideas? I am searching for some actual firebricks (not just fired bricks) as used for kilns and the like for the base. They should retain the heat better and cook the food more efficiently from underneath.

We shall follow Roland's idea of placing the venthole to the top at the front. His theory is that the oven draws from the door then the heat will curl around the base and top and will circulate better if vented at the front — I will let you know.

Depending on the lime render trial I will give the oven a final lime coat to weather protect it. Any helpers? Version four will then end up being made in our outside area when the house is finished. What will it be?

*\*Willows Muse strawbale cottage can be booked by phoning Dunja on (03) 5476 4445, fax (03) 5476 4429, or email <dunatdac@netcon.net.au>.*

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